Covid19 and Gender Budgeting: Applying a "gender lens" to Union Budget in India

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Abstract

Gender budgeting is a public financial management (PFM) tool for transparency and accountability. Against the backdrop of covid-19 pandemic, this paper analyses the Union Budget 2021-22 through a "gender lens" to understand the intensity of gender in the budgetary allocations. The analysis of specifically targeted programmes for women and the intrinsic gender components in the mainstream spending revealed that the gender budgeting hovered around only 5 per cent of total budget. The sectoral analysis revealed that higher budgetary allocations per se do not ensure higher spending. The analysis of fiscal marksmanship – the deviation between what is budgeted and what is actual – revealed significant fiscal slippages in various sectoral spending. The economic stimulus package in India has given significance to gender budgeting in energy infrastructure and increased allocation on gender budgeting in a prima facie gender neutral ministry like Petroleum is welcome. However, the framework of gender budgeting as a PFM tool can be explored further to ensure sustainable gender equality outcomes, when economic stimulus packages are short run and there is fiscal normalization procedure. Given the accommodative fiscal stance in times of pandemic, reflected in the flexibility of deficit thresholds, prioritization of spending on gender budgeting can lessen widening inequalities.

Gender budgeting is a fiscal innovation that translates gender commitments into budgetary commitments through ex-ante and ex-post processes. Ex-ante gender budgeting process involves identification of gender needs and integrate them into budget through appropriate costing methodologies. Ex-post gender budgeting process is applying a "gender lens" to the existing budgets to analyse the intensity of gender in the budgetary allocations. This paper is an ex-post gender budgeting analysis, applying a gender lens to the first pandemic Union Budget in India.

Against the backdrop of macroeconomic uncertainties due to covid pandemic, public financial management tools like gender budgeting have added relevance when a country re-strategies the fiscal space to tackle the dual crisis – a public health crisis and financial crisis. When the economic stimulus packages are short run in nature, we need to identify the public financial management tools for fiscal transparency and accountability to ensure sustainable human development outcomes. Gender budgeting is one such potential PFM tool to ensure sustainable gender equality, especially in the context of fiscal rules and constrained fiscal space. This paper analyses the political economy backdrop of the Union Budget 2021-22 prior to applying a "gender lens" to the budget to arrive at the magnitude of gender budgeting.

The paper is organized into four sections. Section 1 deals with the political economy backdrop of the Union Budget, while section 2 deals with the gender budgeting components of the budget. Section 3 analyses the fiscal marksmanship of gender budgeting. Section 4 concludes.

1.   The Political Economy of Union Budget 2021-22

The striking feature of Union Budget 2021-22 was the announcement of a high fiscal deficit to GDP ratio. As against the fiscal deficit of 6.8 per cent of GDP in Budget Estimates of 2020-21, the revised Estimates of fiscal deficit-GDP ratio peaked to 9.5 per cent (Table 1). The political economy imperatives of this high fiscal deficit number is based on the argument that high deficits and debt has no fiscal costs if real rate of interest is not greater than real rate of growth of economy (Blanchard, 2019).

It was also highlighted in the chapter 2 of Economic Survey 2021 that high public debt is not catastrophic if more debt can be justified by clear benefits like public investment or output gap reduction. This is a fundamental rethinking about the political economy of fiscal consolidation measures. This argument is refreshing, as adhering to numeric threshold ratios of deficit may not be growth enhancing, if the path to fiscal consolidation is through expenditure compression than revenue buoyancy paths.

The high fiscal deficit number announced in the Union Budget 2021 is a combination of revenue shortfall, and new expenditure priorities. Fiscal transparency was given importance in the Budget by eliminating the Food Corporation of India's borrowing from the National Small Savings Funds. The revenue deficit in 2021-22 BE was 5.1 per cent of GDP. This is an aberration to "golden rule" of fiscal responsibility and budget management that revenue deficit needs to be phased out. The primary deficit (the fiscal deficit minus

interest payments) is the current fiscal stance of the government, which is 3.1 per cent of GDP (Table 1).

Table 1: Deficits as per cent of GDP

Deficits	2019-20	2020-21	2020-21	2021-22
	Actuals	Budget Estimates	Revised Estimates	Budget Estimates
Fiscal Deficit	4.6	3.5	9.5	6.8
Revenue Deficit	3.3	2.7	7.5	5.1
Primary Deficit	1.6	0.4	5.9	3.1

Source: Government of India (2021), Union Budget documents

Gross market borrowing constitutes the predominant source of financing the fiscal deficit in Union Budget 2012 (Table 2). The National Small Savings Fund constitutes around 26 per cent of the total borrowings 2. The deficit incurred through off-budget borrowings through public sector enterprises is not the part of fiscal deficit. The details of such extra budget borrowings are still kept in an Annexure in the Union budget document.

In the Union Budget 2021, the asset monetization programme was announced in to generate revenue proceeds of around 5 per cent of total. (Table 3). The shortfall of revenue from the disinvestment proceeds is the highest. In other words, the fiscal marksmanship ratio (BE to RE ratio) is highest for disinvestment proceeds (last column of Table 3). The revenue shortfalls of tax and non-tax revenue are also significant. The gross tax revenue constitutes around 64 per cent of total receipts budget, as per 2021-22 BE.

Table 2: Sources of Financing Fiscal Deficit (Rs crores)

	2019-20		2020-21		2020-21		2021-22	
	Actual	% of Total	Budget Estimates	% of Total	Revised Estimates	% of Total	Budget Estimates	% of Total
Debt Deficit (Net)								
Market Borrowings (G-Sec + T Bills)	624089	66.84	535870	67.29	1273788	68.9	967708	64.22
Securities against Small Savings	240000	25.71	240000	30.14	480574	26	391927	26.01
State Provident Funds	11635	1.25	18000	2.26	18000	0.97	20000	1.33

Other Receipts (Internal Debt and Public Account)	44273	4.74	50848	6.39	39129	2.12	54280	3.6
External Debt	8682	0.93	4622	0.58	54522	2.95	1514	0.1
Draw Down of Cash Balance	4971	0.53	(-)53003	(-)6.66	(-)17358	(-)0.94	71383	4.74
Grand Total	933651	100	796337	100	1848655	100	1506812	100

Source: Government of India (2021), Union Budget documents

Public expenditure for 2021-22 was Rs 34.50 lakh crore. In FY22, total expenditure is pegged at Rs 35 lakh crore. Out of total expenditure by the central government, defence constitutes around 10 per cent of the total, while interest payments constitute 23 per cent of total (Table 4). The food subsidy is 12.25 per cent of total central government revenue expenditure in 2021 RE as compared to only 3.80 per cent in 2020 BE. The fiscal slippage numbers above one reveal that RE is less than BE , in the sectors including agriculture, education, energy, and home affairs. Intertemporally, the budget credibility analysis of macro-fiscal variables at national and subnational government levels revealed that the reasons for fiscal forecasting errors can be bias, variation or random (Chakraborty, Chakraborty, & Shrestha, 2020).

Table 3: The Composition of Revenue Receipts

In per cent					
	2019-20	2020-21	2020-21	2021-22	2020-21
	Actuals	Budget Estimates	Revised Estimates	Budget Estimates	Fiscal marks-manship/fiscal slippage
Gross Tax Revenue	74.96	78.28	54.8	64.98	1.28
a. Corporation Tax	20.77	22	12.86	16.03	1.53
b. Taxes on Income	18.37	20.61	13.24	16.44	1.39
c. Wealth Tax	0				
d. Customs	4.08	4.46	3.23	3.99	1.23
e. Union Excise Duties	8.97	8.63	10.41	9.82	0.74
f. Service Tax	0.22	0.03	0.04	0.03	0.73
g. GST	22.33	22.31	14.85	18.47	1.34
- CGST	18.43	18.74	12.43	15.53	1.35
- IGST	0.34				
- GST Compensation Cess	3.56	3.57	2.43	2.93	1.31
h. Taxes of Union Territories	0.22	0.24	0.17	0.21	1.3
Less - NCCD transferred to the NCCF/NDRF	0.09	0.09	0.17	0.18	0.5

Less - State's share	24.27	25.34	15.86	19.51	1.43
1a Centre's Net Tax Revenue	50.6	52.85	38.77	45.29	1.22
2. Non-Tax Revenue	12.2	12.44	6.07	7.12	1.83
Interest receipts	0.46	0.36	0.4	0.34	0.79
Dividends and Profits	6.94	5.02	2.78	3.03	1.61
External Grants	0.01	0.03	0.04	0.02	0.57
Other Non Tax Revenue	4.72	6.96	2.79	3.65	2.23
Receipts of Union Territories	0.07	0.07	0.06	0.07	1.11
Total- Revenue Receipts (1a + 2)	62.81	65.29	44.85	52.42	1.3
3. CAPITAL RECEIPTS	0		0		
A. Non-debt Receipts	2.56	7.27	1.34	5.51	4.84
(i) Recoveries of loans and advances@	0.68	0.48	0.42	0.38	1.03
(ii) Disinvestment Receipts	1.88	6.78	0.92	5.13	6.56
B. Debt Receipts*	34.63	27.44	53.81	42.07	0.46
Total Capital Receipts (A+B)	37.19	34.71	55.15	47.58	0.56
4. Draw-Down of Cash Balance	0.19		-0.5	2.09	
Total Receipts (1a+2+3)	100	100	100	100	0.89

Source: Government of India (2021), (Basic Data), Union Budget documents

Table 4: Anatomy of Revenue Expenditure

In per cent					
	2019-20	**2020-21**	**2020-21**	**2021-22**	**2020-21 BE/RE**
	Actuals	**Budget Estimates**	**Revised Estimates**	**Budget Estimates**	**Fiscal Slippage**
Subsidy -	0	0	0	0	
Fertiliser	3.02	2.34	3.88	2.28	0.53
Food	4.05	3.8	12.25	6.97	0.27
Petroleum	1.43	1.34	1.12	0.37	1.05
Agriculture and Allied Activities	4.19	5.09	4.21	4.26	1.06
Commerce and Industry	1.02	0.89	0.68	0.99	1.16
Development of North East	0.1	0.1	0.05	0.08	1.64
Education	3.33	3.26	2.47	2.68	1.17
Energy	1.62	1.4	0.97	1.23	1.28
External Affairs	0.64	0.57	0.43	0.52	1.16
Finance	0.69	1.37	1.47	2.64	0.83
Health	2.36	2.22	2.39	2.14	0.82

Home Affairs	4.46	3.76	2.84	3.26	1.17
Interest	22.78	23.28	20.08	23.25	1.02
IT and Telecom	0.77	1.95	0.93	1.52	1.84
Others	2.96	2.77	2.74	2.51	0.89
Planning and Statistics	0.2	0.2	0.06	0.07	2.82
Rural Development	5.3	4.76	6.27	5.59	0.67
Scientific Departments	1.02	0.99	0.65	0.88	1.34
Social Welfare	1.66	1.77	1.15	1.39	1.36
Tax Administration	6.3	5.03	4.28	3.76	1.04
of which Transfer to GST Compensation Fund	5.73	4.45	3.08	2.87	1.27
Transfer to States	5.54	6.59	6	8.42	0.97
Transport	5.71	5.58	6.34	6.69	0.78
Union Territories	0.56	1.74	1.49	1.52	1.03
Urban Development	1.57	1.64	1.36	1.57	1.07
Grand Total	100	100	100	100	0.88

Source: Government of India (2021), (Basic Data), Union Budget documents

There is a transition in the structure of intergovernmental fiscal transfers from conditional grants to formula-based (tax transfers) unconditional transfers (which is 41 per cent of tax pool as recommended by the Fifteenth Finance Commission) (Table 5). The tax transfers provide greater flexibility in fiscal space to State governments. The grants constitutes around 22.96 per cent (BE 2021-22) of the total transfers in India. As per the 2020-21 Revised Estimates, the tax transfer share (41.86 per cent), GST compensation (8.39 per cent), Finance Commission grants including the local body grants and revenue deficit grants (13.88 per cent) and centrally sponsored schemes (23.99 per cent) are the significant components of intergovernmental fiscal transfers to the States in India (Table 5). The rest 4 per cent is the intergovernmental fiscal transfers to the Union Territories (UT) including Delhi, Jammu and Kashmir and Puducherry.

In the time of macroeconomic uncertainty, high fiscal deficit announced in Union Budget 2021 is welcome. Against this backdrop, the Union Budget 2021-22 is analysed through a "gender lens" to understand the magnitude of gender budgeting and its fiscal marksmanship in the next section.

Table 5 Intergovernmental Fiscal Transfers

(In ₹ crore)	(in per cent)		
	2019-20	**2020-21**	**2021-22**
	Actuals	**Revised Estimates**	**Budget Estimates**
I. Devolution of States share in taxes	56.8	41.86	47.93
II. Some Important Items of Transfer	4.69	13.08	6.49
III. Finance Commission Grants	10.8	13.88	15.91
IV. Total Transfer to States [Other than (I)+(II)+(III)]	25.25	27.31	26.17
V. Total Transfer to Delhi, Puducherry and Jammu & Kashmir	2.46	3.88	3.51
Total Transfer to States/UTs	100	100	100

Source: Government of India (2021), (Basic Data), Union Budget documents

2.   Applying "gender lens" to Union Budget 2021-22

Gender budgeting is made mandatory in India through Budget Call Circulars. Since 2005-06, gender budget statements (GBS) are published in Expenditure Budgets. The analytical matrices for gender budgeting were provided by the Classification of Budgetary Transactions Committee of Ministry of Finance based on the pioneering study by NIPFP on gender budgeting (Chakraborty, 2016). Following NIPFP methodology of gender budgeting, the GBS is dichotamised into two parts – Part A presents the specifically targeted programmes, while Part B identifies the intrinsic gender components of mainstream spending. The trends in gender budget allocations (Part A and B) during the period 2005-06 to 2021-22 are shown in Figure 1. The fluctuating trend in the allocation in the graph is not exclusively due to an increase in the allocation of the budget on women-oriented spending because the number of Demands for Grants/programs included in the gender budgeting statement changed over time. Over the years, gender budgeting hovered around 5 per cent of total Union Budgets (Figure 1).

Gender-disaggregated public expenditure benefit incidence analysis though was stated in the first Gender Budget in India, as recommended by the Classification of Budgetary Transactions committee of Ministry of Finance, it was hardly undertaken by the Ministries for specific schemes. Public expenditure benefit incidence analysis – based on unit costs and units utilized – can provide the distributional impact of public spending.

Figure.1: Distribution of the Gender Budget in the Total Budget, India
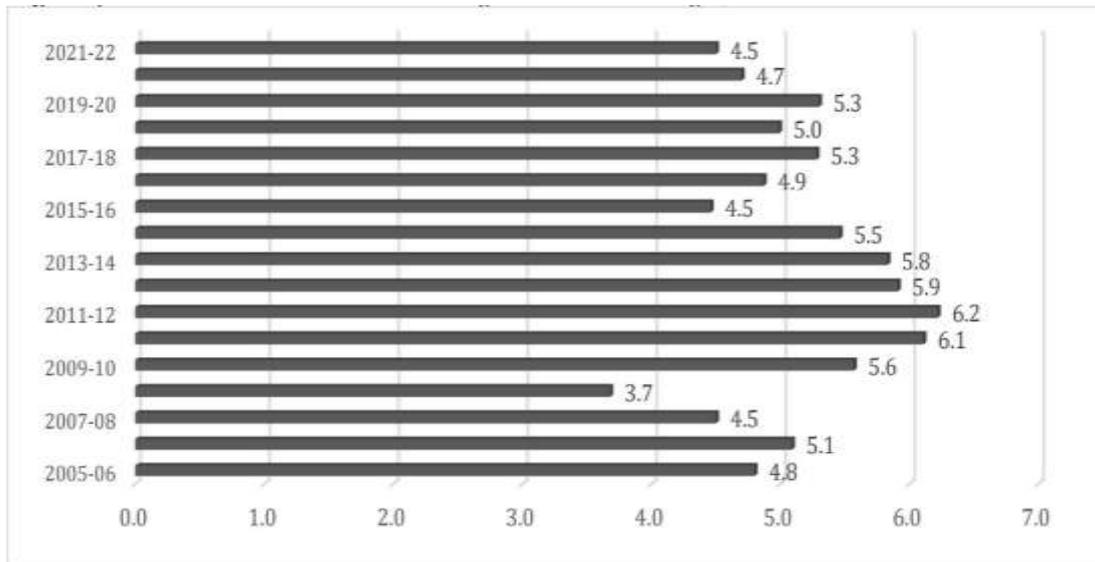
Source: (Basic Data), Expenditure Budgets Union Budget 2021-22, Government of India

As mentioned above, the Gender Budget Statement of Union Budget presents two components of spending in terms of the intensity of gender allocations. Part A of gender budgeting presents the specifically targeted programmes for women (Table 6) and Part 2 of gender budget statement presents the intrinsic gender allocation of mainstream spending (Table 7). Out of 24 Demand for Grants, in which the specifically targeted programmes were identified, around 80 per cent of the allocations pertain to rural development. The Ministry of Women and Child Development (MWCD) constitute only around 10 per cent of total specifically targeted programmes as per the BE over the years; however, there is a huge deviation between the BE and RE in the gender budget allocations in MWCD. The Ministry of Petroleum and Natural Gas also has around 14 per cent of the total Part A of gender budget as per the Budget Estimates, however the Revised Estimates revealed only 4 per cent of the total Part A of the gender budgeting in the year 2020-21. Other than these three Departments/Ministries – rural development, women and child development and petroleum and natural gas – other departments/ministries where specifically targeted programmes were identified has constituted only less than one per cent of total Part A of gender budget. The gender budgeting in energy infrastructure is a crucial intervention by the government to provide clean fuel for the women in low income households. The department of police allocates Rs1000 crores under Nirbhaya Funds in BE 2020-21. However in the Revised Estimates for 2020-21 it was only Rs 10 crores. In the BE 2021-22, Nirbhaya fund was only Rs 12.25 crores. The Bill of Rights framed in the Justice Verma Committee Report can form the foundation for gender budgeting in a "law and order" context. Gender budgeting in criminal justice is a public good and needs effective planning and financing strategies, but it has so far been limited to the creation of the "Nirbhaya Fund" (designed to fund new schemes for the safety and security for women, with an initial allocation of Rs. 1,000 crores), which has been unused since 2013.

Table 6: Part A: Specifically Targeted programmes for Women in Union Budget 2021-22, India

In Rs. Crores				
	2019-2020	2020-2021	2020-2021	2021-2022
	Actuals	Budget Estimates	Revised Estimates	Budget Estimates
Ministries/Departments				
Agricultural Research and Education	13.04	13.04	10.64	13.25
Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy (AYUSH)		36.2	22.83	23.69
Posts				0.15
Development of North Eastern Region	18.18	7.67	7.67	3.84
School Education and Literacy	8.56	110	1	1
Higher Education	20	20	20	20
External Affairs	4.55	2.15	4.34	15.8
Health Research		40.68	36.88	41.52
Police	13	1004.07	10.28	12.25
Andaman and Nicobar Islands	26.25	29.24	27.54	28.66
Chandigarh	68.2	74.63	74.54	76.81
Dadra and Nagar Haveli and Daman and Diu	10.78	15.75	15.8	16.2
Ladakh		4.98	3.73	4.78
Lakshadweep	5.57	3.75	3.75	4.2
Law and justice		150		
Micro, Small and Medium Enterprises		2.01		
Minority Affairs	7.1	10	6	8
Petroleum and Natural Gas	3724	1118	9690	
Railways		250		
Road Transport and Highways	66.42	174.36	140	100
Rural Development	19890.96	21437.79	52981.78	21438.8
Science and Technology	79.1	100	95	100
Skill Development and Entrepreneurship		45	42	42
Women and Child Development	2775.6	3919	2820.55	3310
PART A Total :	26731.31	28568.32	66014.33	25260.95

*__Source:__(Basic Data), Expenditure, Union Budget 2021-22, Government of India

In the Part B of gender budgeting, the higher allocation was reported in the ministries/departments of rural development, health and family welfare, education and housing and urban affairs. The rest of the ministries/departments identified have only less than one per cent of total gender budget allocation.

Table 7: Part B: Sectoral Composition of Gender Budgeting, 2021-22

	2019-20	2020-21	2020-21	2021-22
	Actuals	Budget Estimates	Revised Estimates	Budget Estimates
PART B: 30% Women specific programmes				
Demand No. 1: Department of Agriculture, Cooperation and Farmers'	0	4.15	2.51	3.76
Demand No. 3: Atomic Energy	0.02	0.03	0.01	0.02
Demand4: (AYUSH)	0	0.04	0.01	0.02
Demand No. 10:Department of Commerce	0	0	0	0
Demand No. 17: Ministry of Culture	0.03	0.03	0.02	0.03
Demand No: 22 Ministry of Development of North Eastern Region	0.1	0.04	0.03	0.02
Demand No. 23-Ministry of Earth Sciences	0	0.11	0.04	0.1
Demand No. 24-Department of School Education and Literacy	15.79	15.35	10.85	12.45
Demand No. 25-Department of Higher Education	9.66	9.88	7.17	9.6
Demand No. 26Ministry of Electronics and Information Technology	0	0	0	0.09
Demand No. 28Ministry of External Affairs	0.24	0.26	0.02	0.23
Demand No. 41Department of Fisheries	0	0.49	0.5	0.78
Demand No. 42Department of Animal Husbandry and Dairying	0	0.32	0.3	0.27
Demand No. 44Department of Health and Family Welfare	25.32	23.74	19.96	23.6
Demand No. 45Department of Health Research	0.01	0.05	0.05	0.06
Demand No. 50Police	0	0	0	0
Demand No. 51Andaman and Nicobar Islands	0.05	0.04	0.03	0.04
Demand No. 52Chandigarh	0.03	0.01	0.02	0.02
Demand No. 53Dadra and Nagar Haveli and Daman and Diu	0.01	0.01	0	0.01
Demand No. 55Lakshadweep	0.01	0	0	0

	2019-20	2020-21	2020-21	2021-22
	Actuals	Budget Estimates	Revised Estimates	Budget Estimates
Demand No. 59Ministry of Housing and Urban Affairs	0	2.47	15.04	5.97
Demand No. 62Department of Drinking Water and Sanitation	0	0	1.09	2.17
Demand No. 63Ministry of Labour and Employment	0.08	0.1	0.04	0.09
Demand No. 69Ministry of Minority Affairs	1.26	1.19	0.78	1.01
Demand No. 70Ministry of New and Renewable Energ	0.1	0.05	0.05	0.1
Demand No. 75Ministry of Petroleum and Natural Gas	0	0.01	0	0
Demand No. 85Ministry of Road Transport and Highways	0.07	0	0.1	0.08
Demand No. 86Department of Rural Development	28.81	21.86	29.58	24.18
Demand No. 90Department of Scientific and Industrial Research	0	0	0	0
Demand No. 91Ministry of Skill Development and Entrepreneurship	0	0.06	0	0
Demand No. 92Department of Social Justice and Empowerment	2.52	2.51	1.66	2.3
Demand No. 93Department of Empowerment of Persons with Disabilities	0.3	0.31	0.19	0.27
Demand No. 97Ministry of Textiles	0.38	0.33	0.22	0.34
Demand No. 99Ministry of Tribal Affairs	2.06	1.77	1.11	1.64
Demand No. 100Ministry of Women and Child Development	12.95	14.61	8.53	10.55
Demand No. 101Ministry of Youth Affairs and Sports	0.2	0.17	0.09	0.15
PART B Total:	100	100	100	100

Source: (Basic Data), Expenditure Budgets, Union Budget 2021-22, Government of India

3. Fiscal Marksmanship

Fiscal marksmanship is the accuracy of budgetary forecasting. It can be a crucial information about how the fiscal agents form expectations. The significant variations between actual revenue and expenditure from the forecasted budgetary magnitudes could be an indicative of non-optimization or non-attainment of set objectives of fiscal policy. The difference between the budget estimates and actual expenditure gives the extent of

fiscal marksmanship. Underestimation/overestimation of the budget is of critical importance to drive home the point of accountability of the government. Table 8 elaborates upon the budgetary estimates, revised estimates and the fiscal marksmanship of gender budgeting. The 100% women-specific programmes implemented by Department of Agricultural Research and Education, Ministry of Women and Child development, Ministry of Petroleum and Gas had overestimated their budget. Programmes with 30% allocation for women for the above-mentioned programmes, too were having poor fiscal marksmanship. Fiscal Marksmanship – deviation between budgeted and actual - for petroleum and natural gas was as high as Rs. 988 Crore, while Ministry of External Affairs performed marvelous. The fiscal marksmanship of 1 is perfect forecast, while other deviations are either underestimates or overestimates (Table 8). The fiscal marksmanship is calculated through the Root Mean Square Error and Theil's U coefficients. The root mean squared error (RMSE) is a measure of the relative size of the forecast error. In this paper, to calculate the RMSE, the mean squared error (MSE) is taken over the reference period after which the square root of the MSE is calculated. While this will give us the magnitude of error, it will not give any information on the direction of the error, i.e., whether the error is positive or negative. We have taken the RMSE as a proportion of the sum of actuals of the reference period. It reflects the fact that large forecast errors are more significant than small differences.

Theil's inequality coefficient (U) is used to analyze the measure of accuracy of the budget forecasts. Theil's inequality coefficient is based on the MSE (U1). The forecast error of Theil (1958) is defined as:

$$U_1 = \frac{\sqrt{1/n \sum (P_t - A_t)^2}}{\sqrt{1/n \sum P_t^2} + \sqrt{1/n \sum A_t^2}} \tag{1}$$

Where U_1 = inequality coefficient, P_t = predicted value, A_t = actual value, and n = the number of years.

This inequality coefficient ranges from zero to one. When P_t = At for all observations (a perfect forecast), U_1 equals zero

U_1 has been decomposed in order to indicate systematic and random sources of error. The systematic component is further divided into the proportion of the total forecast error due to bias and the proportion of total forecast error attributable to unequal variation. The derivation of equation 4 is given in detail in Davis (1980).

$$1 = \frac{(\bar{P} - \bar{A})^2}{1/n \sum (P_t - A_t)^2} + \frac{(Sp - Sa)^2}{1/n \sum (P_t - A_t)^2} + \frac{2(1-r)Sp.Sa}{1/n \sum (P_t - A_t)^2} \tag{2}$$

In equation (2), P and A are mean predicted and mean actual changes, respectively; Sp and Sa are the standard deviations of predicted and actual values, respectively; and r is the coefficient of correlation between predicted and actual values.

The first expression of RHS in equation (2) is the proportion of the total forecast error due to bias. It represents a measure of the proportion of error due to overprediction or underprediction of the average value. The second expression of the RHS in equation (2) is the proportion of total forecast error attributable to unequal variation. In other words, it measures the proportion of error due to overprediction or underprediction of

the variance of the values. The third expression of the RHS in equation (2) measures the proportion of forecasting error due to random variation. The first two sources of error are systematic; presumably they can be reduced by improved forecasting techniques, while the random component is beyond the control of the forecaster (Intriligator 1978; Theil 1958). Given the magnitude of each of the components of gender budgeting, a ratio of fiscal marksmanship is used instead of these elaborate Theil's U methodology. The fiscal marksmanship ratio of two departments/ministries showed wide volatility, viz, school education and literacy, and police, for the year 2020-21. The wide deviation in the BE and RE of Nirbhaya fund was the reason for fiscal forecasting errors in the department of police.

Table 8: Fiscal marksmanship: The Sources of Fiscal Forecasting Errors

Ex ante fiscal rules	*Bias*	Unequal variation	Random
Revenue receipts	0.24	0.07	0.69
Capital receipts	0.45	0.14	0.41
Revenue expenditure	0.05	0.15	0.80
Capital expenditure	0.06	0.22	0.72
Revenue deficit	0.36	0.01	0.63
Fiscal deficit	0.31	0.01	0.68
Primary deficit	0.32	0.00	0.67
Ex post fiscal rules	*Bias*	Unequal variation	Random
Revenue receipts	0.01	0.04	0.95
Revenue expenditure	0.00	0.31	0.69
Capital expenditure	0.00	0.02	0.98
Revenue deficit	0.04	0.01	0.96
Fiscal deficit	0.02	0.01	0.97
Primary deficit	0.05	0.02	0.93

Source: Chakraborty and Sinha

Technically, researchers can analyze the magnitude of the macro-fiscal variable errors and the source of errors (whether it is a "random error" and beyond the control of fiscal forecaster, or whether the errors are systemic and biased) (Chakraborty and Sinha, 2019). We can also analyze whether the magnitude of the errors was greater for revenue or expenditure, as well as for the capital or revenue budget. The source of errors in forecasting the parameters is largely random in nature (table 8), which is beyond the purview of policymakers.

Table 9: Fiscal marksmanship of Gender Budgeting: Part A

MINISTRY/DEPARTMENT	2020-21
	Fiscal Marksmanship
PART A:	
Agricultural Research and Education	1.23
Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy (AYUSH)	1.59
Posts	0.0
Development of North Eastern Region	1.00
School Education and Literacy	110
Higher Education	1.00
External Affairs	0.50
Health Research	1.10
Police	97.67
Andaman and Nicobar Islands	1.06
Chandigarh	1
Dadra and Nagar Haveli and Daman and Diu	1
Ladakh	1.34
Lakshadweep	1
Law and justice	0
Micro, Small and Medium Enterprises	0
Minority Affairs	1.67
Petroleum and Natural Gas	0.12
Railways	0
Road Transport and Highways	1.25
Rural Development	0.4
Science and Technology	1.05
Skill Development and Entrepreneurship	1.07
Women and Child Development	1.39
PART A Total :	0.43
Grand Total	0.69

Source: (Basic Data), Expenditure Budgets, Union Budget 2021-22

In the Part B of gender budgeting, the fiscal marksmanship of the departments/ministries like External Affairs, AYUSH, Earth Sciences, Atomic Energy and labour and employment has shown wide deviations (Table 9).

Table 10: Fiscal Marksmanship of Part B Allocations of Gender Budgeting, 2020-21

	2020-21
	FM
Demand No. 1: Department of Agriculture, Cooperation and Farmers'	1.35
Demand No. 3: Atomic Energy	3.33
Demand4: (AYUSH)	2.85
Demand No. 10:Department of Commerce	0
Demand No. 17: Ministry of Culture	1
Demand No: 22 Ministry of Development of North Eastern Region	1
Demand No. 23-Ministry of Earth Sciences	2.17
Demand No. 24-Department of School Education and Literacy	1.15
Demand No. 25-Department of Higher Education	1.12
Demand No. 26Ministry of Electronics and Information Technology	1.65
Demand No. 28Ministry of External Affairs	13.68
Demand No. 41Department of Fisheries	0.8
Demand No. 42Department of Animal Husbandry and Dairying	0.87
Demand No. 44Department of Health and Family Welfare	0.97
Demand No. 45Department of Health Research	0.82
Demand No. 50Police	0.23
Demand No. 51Andaman and Nicobar Islands	1.11
Demand No. 52Chandigarh	0.46
Demand No. 53Dadra and Nagar Haveli and Daman and Diu	1
Demand No. 55Lakshadweep	1
Demand No. 59Ministry of Housing and Urban Affairs	0.13
Demand No. 62Department of Drinking Water and Sanitation	0
Demand No. 63Ministry of Labour and Employment	2.4
Demand No. 69Ministry of Minority Affairs	1.23
Demand No. 70Ministry of New and Renewable Energy	0.9
Demand No. 75Ministry of Petroleum and Natural Gas	0
Demand No. 85Ministry of Road Transport and Highways	0
Demand No. 86Department of Rural Development	0.6
Demand No. 90Department of Scientific and Industrial Research	0
Demand No. 91Ministry of Skill Development and Entrepreneurship	0

Demand No. 92Department of Social Justice and Empowerment	1.23
Demand No. 93Department of Empowerment of Persons with Disabilities	1.34
Demand No. 97Ministry of Textiles	1.25
Demand No. 99Ministry of Tribal Affairs	1.3
Demand No. 100Ministry of Women and Child Development	1.39
Demand No. 101Ministry of Youth Affairs and Sports	1.45
PART B Total :	0.81
Grand Total (A+B)	0.69

Source: (Basic Data), Expenditure Budgets, Union Budget 2021-22

The gender budgeting as a fiscal innovation framework has not been effectively used in India to formulate programme design relate to ex-ante identification of gender needs. Applying a gender lens to the existing budgets reveal that gender budget hovered around 5 per cent of total budget in the period 2005-06 to 2021-22. The fiscal marksmanship – the budget forecasting errors – is a matter of concern for macro-fiscal variables and gender budgeting. Too many programmes are designed with too little money (Table 10).

5. Conclusion

This paper analyses the Union Budget 2021-22 through a "gender lens" to understand the intensity of gender in the budgetary allocations. Higher budgetary allocations per se do not ensure higher spending. The fiscal marksmanship – the deviation between what is budgeted and what is actual - is analysed for the sectoral expenditure under gender budgeting and found significant fiscal slippages. The overall gender budgeting constitutes only around 5 per cent of the total budget and it remained almost constant since 2005-06. The relatively higher allocation of gender budgeting in a prima facie gender neutral sector like Petroleum highlights the priority of gender lens in energy infrastructure to provide clean fuel to women in the poor income households. Strengthening of gender budgeting in energy infrastructure, as part of economic stimulus programme is welcome.

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