GENDER INEQUALITY INDEX (GII) IN RELATION TO NATION AND GUJARAT STATE

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ABSTRACT

'If Development is not engendered, it is endangered', this rightly focuses on development –human development that would be complete only if both the gender is offered equal opportunities to grow. Development is defunct, redundant and incomplete if half of the millions of population remain voiceless, undervalued and underutilized. The present study is an attempt to gauge gender related development –proposed by HDR 1995 and reformulated in 2010. The measurement index viz Gender inequality Index (GII) encompassing Gender development index and Gender empowerment index is used in the study for understanding gender inequality across states of India with special reference to Gujarat. The indicators used for developing GII for states are same as that in HDR 2010. Owing to unavailability of adolescent fertility rate (AFR) across states of India, total fertility rate (TFR) is used.

Keywords: Gender inequality, education attainments, labour force participation rate, gender empowerment measure

I.   INTRODUCTION

Gender relations are the key to understanding the inequalities between men and women. These inequalities are expressed in many ways – explicit and implicit. The explicit measures are well known and are revealed in statistics depicting differences in the sex ratio, child infanticide, literacy rates, health and nutrition, wage differentials, ownership of land and property. The implicit measures are embedded in power and culture. These intra-household inequalities result in unequal distribution of power, unequal control over resources and decision-making; dependence rather than self-reliance; and unfair, unequal distribution of work, drudgery, and even food.

United Nations Development Programmer's (UNDP) annual Human Development Reports (HDRs) have successfully shifted the development debates and attention from uni-dimensional, income or Gross Domestic Product based indices to the inclusion of non-income and multi-dimensional variables in measurement of development. In 1995, the UNDP introduced two new indices: a Gender-related Development Index (GDI) and a Gender Empowerment Measure

(GEM). Since 1995, GDI and GEM is measured and recorded every year. The Gender Empowerment Measure focuses on opportunities and captures gender inequality in three key areas: 'Political participation and decision-making power', as measured by women's and men's percentage shares of parliamentary seats; 'Economic participation and decision-making power', as measured by two indicators – women's and men's percentage shares of positions as legislators, senior officials and managers and women's and men's percentage shares of professional and technical positions; and 'Power over economic resources', as measured by women's and men's estimated earned income (PPP US$). The GEM was intended to measure women's and men's abilities to participate actively in economic and political life and their command over economic resources. In 2010 UNDP's, HDR has introduced new indices where inequality at sub group level is captured. For gender inequality -Gender Inequality Index (GII) was introduced which substituted GDI and GEM. Under this measure maternal mortality rate and adolescent fertility rate is used to determine health dimension of GEM as well as G_F. Share of each gender in parliamentary seat is used in aggregation formula to make GII association sensitive. LFPR is used for calculating both GEM and aggregation of dimension. In the present study the GII for 15 states of India is developed. The related data for Chhattisgarh, Himachal Pradesh and Jharkhand is not available so they are omitted. The GII for states of India has been developed on the same lines as that of UNDP's HDR 2010. However, as Adult Fertility Rate (AFR) for states are not available, Total Fertility Rate (TFR) is used instead. Before analyzing GII, indicators like MMR, secondary education attainment rate, share of each gender in Lokshabha and labour force participation rate is worth understanding in depth in order to have in depth understanding of gender inequality.

II. METHODOLOGY

The GII for states of Indian has been developed with Health, empowerment and LFPR. The methodology used is similar to that of HDR 2010. However Adolescent Fertility rate (AFR) is surrogated with Total fertility rate (TFR), rest of the parameters is same.

$$G_F = \left[1/MMR * 1/TFR \right]^{½} \times \left[PR_F \times SE_F \right]^{½} \times LFPR_F^{⅓} \quad \text{………………………………..(1)}$$

$$G_M = \left[1 \times \left[PR_M \times SE_M \right]^{½} \times LFPR_M \right]^{⅓} \text{……………………………………………….(2)}$$

$$Harm\left\{ G_F, G_M \right\} = \left[\frac{(G_F)^{-1} + (G_M)^{-1}}{2} \right] \text{……………………………………….(3)}$$

$$G_{EM} = \sqrt[3]{Health \times Empowerment \times LFPR}$$

$$\text{Where } Health = \left[\frac{1/MMR \times 1/TFR + 1}{2} \right]^{½} \text{……………………………………….(4)}$$

$$Empowerment = \left[\frac{PR_F \times SE_F + PR_M \times SE_M}{2} \right]^{½} \text{…………………………………..(5)}$$

$$LFPR = \left\{ \frac{LFPR_F + LFPR_M}{2} \right\} \text{………………………………………………..(6)}$$

$$GII = 1 - \frac{Harm \; GF, G_M}{G_{EM}} \text{……………………………………………………….(7)}$$

III. MMR AND TFR OF STATES OF INDIA

Please refer table.1

Amongst states of India highest maternal mortality rate is at Assam of 390, it means at 1000 mothers 390 dies while lowest is at Kerala of 81. MMR in Gujarat is of 148, which is less than all India average of 212. Total fertility rate is highest at Bihar of 3.6 and lowest at Tamil Nadu of 1.7. Gujarat records TFR of 2.5, which is almost equal to all India average.

IV. PARLIAMENT REPRESENTATION IN STATE OF INDIA

Please refer table.2

High level of inequality is recorded amongst the state of India in share of each sex for decision making dimension as measured by share of seat in Lokshabha. Out of total 552 seats at all India level only 60 seats are for women, which accounts for only 11%. Surprisingly in states Kerala, Orissa, Himachal Pradesh and Jharkhand no seat is allocated for women. Highest number of seat for women is in Uttar Pradesh. Uttar Pradesh accounts to 15 % (12 seats)for women. Number seats for women in Gujarat are 4 out of 26 which also accounts to 15%. The scenario clearly indicates high incidence of gender inequality.

V. EDUCATION ATTAINMENTS IN STATE IF INDIA
Please refer table.3

Skewed scenario also exists in case of educational attainments in states of India. In all states except Kerala educational attainment for girl child is less than that of boys. Gujarat records lowest secondary educational attainments among girl child. Only 9% of Guajarati girls attain secondary school against 18.6% boys. Highest educational attainment for girl child is in Kerala followed by Karnataka and Assam. Rest all states exhibit low educational attainment for girl child. However, dismal scenario exists in overall secondary education attainments across India. Attainments at primary level are high but drop out rate being equally high, attainment at secondary level is pathetic for both the gender but more in case girls, owing to various social reasons as well.

VI. LABOUR FORCE PARTICIPATION RATE IN STATE OF INDIA
Please refer table.4

Labour force Participation Rate (LFPR) is defined as the number of persons in the labor force per 1000 persons. LFPR across the states of India for women is less than that of males. LFPR (F) is lowest in Punjab. Only 98 women out of 1000 enter in economic activity. Amongst the states of India highest LFPR (F) is in Himachal Pradesh. Gujarat is on the 12th rank with 279 out of 1000 women participating in economic activity against 808 males out of 1000.Gujarat records low labor force participation rate for women, meaning women are not economically independent in Gujarat. Only 27.9 % of total women falling in age group of employable females are economically independent.

Gender Inequality Index for states of India has been worked out in the Table 5. Although data for each dimension does not correspond to same year as

complementary data for the same year for all indicators from authentic source is unavailable.

VII. GENDER INEQUALITY INDEX (GII) OF STATES OF INDIA

The female gender index (GF), the male gender index (GM), the Gender empowerment measure (GEM) and Gender inequality index (GII) has been calculated in this section. Please refer table.5

As already mentioned previously GII and all other measures for the states of India is calculated on the same lines as in HDR 2010, except that AFR is substituted by TFR. All the Indian states records inequality of 45% and above. Highest inequality is in Orissa of 74% and lowest is in Andhra Pradesh of 43%.Gujarat records gender inequality of 47%. Gujarat ranks 5th amongst 15 states of India (for which ranking is done) in gender inequality indicating comparatively less biased state. It would be interesting to categorize states as low gender inequality, medium gender inequality and high gender inequality states. States with GII in range of 40% to 50% is identified as states with low gender inequality. States with GII in range of 51% to 60% is identified as states with medium gender inequality and states with GII 61% and above are most biased states and are identified as high gender inequality states. Table 6 exhibits the category wise gender inequality amongst states of India. Please refer table 6.

Gujarat is amongst low gender inequality state indicating that the state provide relatively equal choice to both the genders. Other states that fall in this category are Andhra Pradesh, Haryana. Maharashtra, Punjab, Tamil Nadu and West Bengal. Surprisingly, Kerala falls in high gender inequality state inspite of 100% literacy.

Human development hence we conclude cannot be uni dimensional, it is multi dimensional and without curbing gender inequality human development cannot be achieved. No country, state or region can have growth unless both the genders grow with equality in opportunities, rewards and respect. A state if, injects equality may be if not to the fullest but at least to a desirable level development would be unstoppable, glaring and welcoming. And such development would be development in real sense. Admittedly, such development could be a reality if all the stakeholders of the society – we all, invest truthfully in human development dynamics with unbiased mind, full trust and freedom to our daughters as well. Hence I conclude my work with hopes

that such gender disparities will be demolished and eventually eliminated soon and India and Gujarat shall become an example where *'Equal world and equal spaces'* exist for both the genders.

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FIGURES AND TABLES

Table : 1 MMR and TFR of states of India

States	MMR(2009)	TFR(2010)
Andhra Pradesh	134	1.8
Assam	390	2.5
Bihar	261	3.7
Chhattisgarh	269	2.8
Gujarat	148	2.5
Haryana	153	2.3
Himachal Pradesh	-NA	1.8
Jharkhand	261	3.0
Karnataka	178	2.0
Kerala	81	1,8
Madhya Pradesh	269	3.2
Maharashtra	104	1.9
Orissa	258	2.3
Punjab	172	1.8
Rajasthan	318	3.1
Tamil Nadu	97	1.7
Uttar Pradesh	359	3.5

West Bengal	145	1.8
India	212	2.5

Source : censusindia.gov.in/vital_statistics/SRS_Bulletins/MMR

   http://cbhidghs.nic.in//TFR

Table : 2 Share in Lokshabha seat by sex

States	PR (M)	PR (F)
Andhra Pradesh	37	5
Assam	12	2
Bihar	9	5
Chhattisgarh	37	3
Gujarat	22	4
Haryana	8	2
Himachal Pradesh	4	0
Jharkhand	14	0
Karnataka	27	1
Kerala	20	0
Madhya Pradesh	23	6
Maharashtra	45	3
Orissa	21	0
Punjab	9	4
Rajasthan	23	3
Tamil Nadu	38	1
Uttar Pradesh	68	12
West Bengal	35	7
India	552	60

Source : www.mapsofindia.com/election/members-of-parliament.html

   PR= Parliament Representation.

Table : 3 Secondary education attainments in states of India 2011

States	Edu Attain Sec (M)	Edu Attain Sec (F)
Andhra Pradesh	0.19	0.12
Assam	0.19	0.15
Bihar	0.19	0.`14
Chhattisgarh	NA	NA
Gujarat	0.19	0.10
Haryana	0.19	0.11
Himachal Pradesh	NA	NA
Jharkhand	NA	NA
Karnataka	0.20	0.16
Kerala	0.18	0.19
Madhya Pradesh	0.17	0.10
Maharashtra	0.21	0.13
Orissa	0.19	0.13
Punjab	0.19	0.14
Rajasthan	0.18	0.12
Tamil Nadu	0.19	0.14
Uttar Pradesh	0.19	0.13
West Bengal	0.18	0.12

Source: Indiastat 2011

Edu Attain Sec = Secondary Educational Attainment

Table : 4 Labour Force Participation Rate in states of India, 2011

States	LFPR (M)	LFPR (F)	LFPR (F) Rank
Andhra Pradesh	788	527	3
Assam	820	291	10
Bihar	788	227	15

Chhattisgarh	826	548	2
Gujarat	808	279	12
Haryana	704	147	16
Himachal Pradesh	813	631	1
Jharkhand	827	389	5
Karnataka	791	372	7
Kerala	721	282	11
Madhya Pradesh	805	334	8
Maharashtra	766	381	6
Orissa	789	254	13
Punjab	726	98	18
Rajasthan	738	304	9
Tamil Nadu	790	414	4
Uttar Pradesh	769	126	17
West Bengal	802	246	14
India	779	300	

LFPR = Labour force participation rate

Source: 'Report on Employment and unemployment survey 2011 by GOI,
            Ministry of education Chandigarh

Table : 5 G_F , G_M , HARM (G_F, G_M) , G_{EM}, GII for states of India

States	G_F	G_M	HARM (G_F, G_M)	G_{EM}	GII	GII Rank
Andhra Pradesh	0.30	1.28	0.48	0.86	0.44	1
Assam	0.17	1.07	0.30	0.61	0.51	11
Bihar	0.18	1.01	0.31	0.62	0.50	8
Chhattisgarh	NA	NA	NA	NA	NA	-
Gujarat	0.21	1.18	0.36	0.68	0.48	5
Haryana	0.15	0.95	0.27	0.49	0.46	2
Himachal Pradesh	NA	NA	NA	NA	NA	-

Jharkhand	NA	NA	NA	NA	NA	-
Karnataka	0.20	1.23	0.34	0.69	0.50	9
Kerala	0.10	1.11	0.18	0.52	0.65	12
Madhya Pradesh	0.21	1.16	0.35	0.72	0.51	10
Maharashtra	0.26	1.33	0.43	0.81	0.47	3
Orissa	0.07	1.17	0.14	0.53	0.74	15
Punjab	0.16	0.98	0.28	0.55	0.50	7
Rajasthan	0.09	1.15	0.17	0.54	0.69	14
Tamil Nadu	0.23	1.29	0.39	0.75	0.48	6
Uttar Pradesh	0.16	1.40	0.29	0.83	0.65	13
West Bengal	0.24	1.26	0.41	0.78	0.47	4

Source Calculated

Table : 6 Category wise gender inequality amongst states of India

Low gender inequality states	Medium gender inequality states	High gender inequality states
Andhra Pradesh	Assam	Kerala
Gujarat	Bihar	Orissa
Haryana	Karnataka	Rajasthan
Maharashtra	Madhya Pradesh	Uttar Pradesh
Punjab		
Tamil Nadu		
West Bengal		

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Dr. Nasheman Bandookwala, is an Assistant Professor in Shanti Business School. Her teaching experience is about 15 years. She deals with subjects of economics. She published three books and several papers in national and international journal. Her research interest is in Human development and gender inequality.