

Global Women: Equality, Empowerment and Human Development

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ABSTRACT

The present paper aims to analyse the status of women globally using the approach of gender equality, women empowerment and human development and also their inter relationships. The study finds that gender inequality, women empowerment and human development are mutually interdependent and efforts to eliminate gender inequality leads to increased level of women empowerment and human development.

Introduction

The past few decades have witnessed a steady rise in awareness of the need to empower women and to achieve gender equality through various measures to increase social, economic and political equity, to broaden their access to fundamental human rights, and to improve their nutrition, basic health and education. The concept of gender equality has been gaining importance because of continued existence of relatively poor status of women as against men in almost every facets of life. Gap between men and women in the achievement of human development also exists in every country. This gap as elaborated in the report of World Economic Forum is mostly seen in four fundamental categories such as economic participation and opportunity, educational attainment, political empowerment and health and survival. (WEF, 2005).

Realizing the extent of gender inequality and the potential need to empower women throughout the world, the United Nations Development Fund for Women (UNIFEM) was created as a separate fund within the United Nations Development Program (UNDP) in 1984. As a result of the Beijing conference and many years of work leading up to it, more than 100 countries announced new initiatives to improve the status of women. The gender factor was considered to be no longer a supplement to development but central to the practice of development. In 2000, the follow-up Beijing +5 Conference further strengthened the application of the mainstreaming concept, and used it to highlight the need for more progress in reaching equality worldwide.

Similarly in human development front, it was gradually realized that if the women, who constituted almost half of the population, remained passive, human development in its real sense would not be possible. Therefore in 1995 Human Development Report, the main emphasis was given on gender equality and construction of gender indices such as Gender related Development Index and the Gender Empowerment Measure (UNDP, 1995). However it is increasingly felt that these two measures fail to capture the inequalities confronted by women. Researchers criticized these measures and suggested various new measures of gender inequality. Human Development Report 2010 introduced a new measure of inequality, namely, Gender Inequality Index (GII) and Inequality adjusted HDI (IHDI) with an objective to better expose differences in the distribution of achievements between women and men (UNDP, 2010). The GII estimated for 160 countries in the report based on data relating to the year 2018-19 revealed gender disparities in reproductive health, empowerment and labor market participation. It showed tremendous variation of inequalities across countries. Countries with unequal distribution of human development also experienced high inequality between women and men, and countries with high gender inequality also experienced unequal distribution of human development. Among the countries doing very badly on both fronts were Central African Republic, Haiti and

Mozambique. To address the issues of gender inequality again in 2014 global human development report constructed male and female HDI separately.

Data and Methodology: In the present study we used HDI of UNDP and GGGI of World Economic Forum and constructed women empowerment index (WEI) and gender differential index (GDI) to address the issues like human development, women empowerment and gender inequality. Women empowerment index was constructed by using three simple indices like female literacy measured by percentage of female to total literates, female work participation rate measured by percentage of female workers to total workforce and women's political participation measured by percentage of seats occupied by women in national parliament. Women empowerment index was finally calculated as a simple arithmetic average of these three equally weighted indices. Similarly GDI was used to measure the extent of gender equality/inequality confronted by women. It was constructed by using the indicators like ratio of female to male literacy rate, ratio of female to male work participation rate, ratio of female to male share in national politics and the ratio of female to male sex ratio. GDI was a simple average of these four indices. The countries were grouped on the basis of region, level of human development and level of income and estimated development indices for each group. Correlation and regression analysis were carried out to find out the interrelationship among those indicators and the factors responsible for the change in the magnitude of those indicators.

Global Status on Gender Gap, Women Empowerment and Human Development

Global Status on Gender Gap

The World Economic Forum made the first attempt to assess the size of gender gap around the world (WEF, 2005). In its report five critical areas were examined, viz., economic participation, economic opportunity, political empowerment, educational attainment, and health & well-being. The report was prepared for 58 countries including India. No country was observed to have managed to eliminate the gender gap. Those countries that succeeded to a great extent in narrowing the gap were the Nordic countries, with Sweden standing out as the most advanced in the world followed by New Zealand (6), Canada (7), United Kingdom (8), Germany (9) and Australia (10). France (13) ranked ahead of the United States (17). Since 2005 every year one report is published by the WEF and the numbers of participating countries have also simultaneously increased from 58 in 2005 to 145 in 2015. Gradually the world has managed to reduce the gender gap to a great extent. 96% of the gap in health outcome and 59% of the gap in economic achievement have also been eliminated. However huge gap in the field of political empowerment persists.

Let us have a look on the trend of gender gap index (GGI). From Table 1.1 it is clear that each region has showed an improvement in terms of GGI from 2006 to 2015. The global average has recorded a change of 5.02 per cent during the period. However both in absolute and percentage terms the changes during the period were the highest for the region Sub Saharan Africa and the lowest for Middle East & North Africa. If we have a look on the GGI for 2015 we find that it was the highest for North America followed by Europe and Central Asia and Latin America and Caribbean. There was a marginal difference of GGI between Sub Saharan Africa (0.6825) and Asia & Pacific (0.6796). The GGI was the lowest for Middle East & North Africa (0.6135). There are few factors which are hindering gender equality in Middle East and North Africa (MENA). Rise in extremist movement, traditional gender norms, discriminatory law and social institution, demographic changes and high rate of female illiteracy in countries like Morocco and Yemen are responsible for the widespread gender inequality in the region. [OECD, 2014]. North America, Europe and Central Asia and Latin America and Caribbean have the higher GGI value and Middle East & North Africa, Asia and Pacific and Sub Saharan Africa have the lower GGI value than the global average.

Region	GGI in		Change during 2006-15	
	2006	2015	Absolute Change	Percentage Change
Asia & Pacific	0.6505	0.6796	0.0291	4.47
Latin America & Caribbean	0.6638	0.708	0.0442	6.66
Middle East & North Africa	0.5895	0.6135	0.024	4.07
Sub Saharan Africa	0.6360	0.6825	0.0465	7.31
North America	0.7104	0.74	0.0296	4.17
Europe and Central Asia	0.6983	0.7305	0.032	4.58
Global Average	0.6618	0.6950	0.0332	5.02

Source: World Economic Forum, Global Gender Gap Report 2006 & 2015

The performance of few selected economies of the world in respect of change of GGI from 2006 to 2015 is presented in Table 1.2. From the table it is seen that all the countries in discussion except showed an improvement in GGI during the period. In other words, the performances of all the countries except Iran, in reducing global gender gap increased. However the top performers in this respect were Saudi Arabia whose percentage change in score in those nine years period was 15.43 per cent and the bottom place was occupied by Australia with small improvement of 2.33 per cent. However Iran showed a marginal decrease in score (0.03 percent) during this period. Except the countries like Australia, Germany, China and Russia and of course Iran,, all other countries in discussion experienced improvement higher than the world average.

Country	GGI in		Change during 2006-15	
	2006	2015	Absolute Change	Percentage Change
Norway	0.7994	0.85	0.0506	6.33
Australia	0.7163	0.733	0.0167	2.33
Germany	0.7524	0.779	0.0266	3.54
Singapore	0.655	0.711	0.056	8.55
Russia	0.6770	0.694	0.017	2.51
Saudi Arabia	0.5241	0.605	0.0809	15.43
Iran	0.5802	0.58	-0.0002	-0.03
China	0.656	0.682	0.026	3.96
India	0.601	0.664	0.063	10.48

Ghana	0.6652	0.704	0.0388	5.83
Yemen	0.4595	0.484	0.0245	5.33
Global Average	0.6618	0.6950	0.0332	5.02

Source: World Economic Forum, Global Gender Gap Report 2006 & 2015

The GGI scores for different countries further has been presented according to their levels of human development in Table 1.3. All the groups showed an improvement in 2015 over 2006. The highest improvement was witnessed in case of low human development group, both in absolute and in percentage terms. The improvement was the least in high human development group. There was a marginal difference in the improvement in very high and medium human development group. The table further revealed that GGI score for 2015 varied according to human development index scores with some minor deviations. GGI was the highest for the group with very high human development (0.7282) followed by medium human development group (0.6915) and high human development group (0.6837). It was the lowest for low human development group (0.6616). Except very high human development countries all other countries had lower GGI scores than the global average as a whole.

Group of Countries	GGI in		Change during 2006-15	
	2006	2015	Absolute Change	Percentage Change
Very High HDI Countries	0.6903	0.7282	0.0379	5.49
High HDI Countries	0.6626	0.6837	0.0211	3.18
Medium HDI Countries	0.6559	0.6915	0.0356	5.43
Low HDI Countries	0.6052	0.6616	0.0564	9.32
Global Average	0.6618	0.6950	0.0332	5.02

Source: World Economic Forum, Global Gender Gap Report 2006 & 2014

According to the World Bank classification, countries have been divided into four income groups such as low income, lower middle income, upper middle income and high income countries. Let us have a look on the GGI scores of these countries for 2006 and 2015 (Table 1.4). All the income groups and the world as a whole had shown an improvement in terms of GGI in 2015 over 2006. The change both in absolute and percentage terms was the highest for the low income countries. Not much variation in change was observed in case of lower middle and high income countries. The lowest change was seen in case of upper middle income countries. When we look at the GGI scores for 2015 we find that GGI Varied with income with minor deviation as for the low income countries GGI was slightly higher than that of the lower middle income countries. The GGI score was the lowest (0.6731) for the lower middle income countries. For high income countries it was as high as 0.7244. Excepting high income countries, all other countries in different income groups had lower GGI scores as compared to the global average.

Table 1.4: Change of GGI of Countries by Level of Income (2006-15)

Income	GGI in		Change during 2006-15	
	2006	2015	Absolute Change	Percentage Change
High Income Countries	0.6886	0.7244	0.0358	5.20
Upper Middle Income Countries	0.6600	0.6847	0.0247	3.74
Lower Middle Income Countries	0.6378	0.6731	0.0353	5.53
Low Income Countries	0.6165	0.6764	0.0599	9.72
Global Average	0.6618	0.6950	0.0332	5.02

Source: World Economic Forum, Global Gender Gap Report ,2006 & 2015

Global Status on Women Empowerment

To measure women empowerment in the present study we, however, have used the indicators like female literacy rate, female work participation rate, women's representation in politics and sex ratio. Not only we examined these indicators separately but also constructed women empowerment index. Various indicators used and indices constructed are presented in different tables for various countries across different regions, and on the basis of their levels of human development and income.

Data presented on women empowerment across different regions shown in Table 1.5 reveals that most of the regions had a good score of female literacy. It was the highest for the region Europe & Central Asia (98.60 per cent). The second position was occupied by East Asia & Pacific with female literacy score of 91.31 per cent which was marginally higher than Latin America & the Caribbean (91.05 per cent). Arab States and South Asia were placed in the 4th and 5th positions respectively. Female literacy rate was the lowest for the region Sub Saharan Africa (59.83 per cent) which was far below the female literacy rate for the country average as a whole (82.30%). In the post colonial period in Sub Saharan Africa, as a result of world economic recession, various interventions put in place which includes removal of subsidies to basic services including education, which had a negative impact on education generally but especially on the education of girls and children. At the end of twentieth century, debt profiles were high, poverty in the region had intensified and most countries of the region were in low income category. Hidden cost of education have correspondingly soared and there is widespread use of child labour, especially girls in the domestic and economic activities of parents. Where resources are scarce and choice has to be made, the obvious choices are the boys who are to be sent to school. [Dworzak,2000]. Similarly in South Asia, inspite of its high literary tradition and philosophies, contains a large percentage of illiterate people, the majority of them women. The choice of education heavily favoured boys, due to the traditional division of labour and gender. This is particularly evident in rural areas, where the bulk of domestic work falls on women.[Iyer,2000]

Again coming to context of female work participation rate, it is seen that the top performers in this case were Sub Saharan Africa (64.68 per cent) and East Asia & Pacific (57.58 per cent). Latin America & Caribbean occupied third position followed by Europe & Central Asia and South Asia. Arab states were the worst performer in this regard. Sub Saharan Africa characterized by poverty and low human development, has the highest proportion of women's work participation .Poverty compels the women to work more and therefore women are over presented in informal sector. In Sub Saharan Africa, 84 per cent women's non agricultural

employment is informal compared to 63 percent of men. Studies generally show that women are more likely to be engaged in work and also work for longer hours than men. For instance in 18 countries out of 25 in Sub Saharan Africa, greater than 50 per cent women were employed and even in six of these countries the percentage of employed women was greater than 75 per cent [Mukhuria et. al, 2005] . Against these, Arab states have only 24.7 per cent female work participation rate. Most of the countries of Arab states have discriminatory labour laws that limits the type and hours of work available for women. Most labour laws include restrictions for women in relation to jobs that are considered hazardous and morally damaging, yet they vary in their definition of hazardous employment and the prohibited working hours. Some of these social policies designed to protect female worker may have opposite effects by discouraging employers from hiring women. (eg. by entailing additional costs for employers) It may prevent women from competing with men for high level positions and concentrate them in low paying jobs. South Asia and Arab States had lower female work participation rates as compared to the world as a whole.

Again if we see the percentage of seats occupied by women in national parliament we find that the figure was quite low for the world as a whole and it was as low as 21.8 per cent only. In this respect the top scorer was Latin America & the Caribbean (23.83 per cent) followed by Europe & Central Asia, Sub Saharan Africa, East Asia & Pacific, and South Asia. The worst performer in this respect was Arab States having participation of women as low as 12.79 per cent. Large number of women's presence in the national legislature of LAC region can be manifested by the presence of gender quota in most of the countries of the region. For instance, by 2014, 16 of 20 Latin American countries and one country in the Caribbean region adopted gender quota. But apart from it many scholars [eg: Iverson and Rosenbluth 2008, Inglehart and Norris 2003] have identified the importance of overall patterns of economic, social and cultural development of women's opportunities to gain access to elected office. [Htun and Piscopo, 2014]. However poor presence of women in national governance in Arab States are the result of traditional values, restrictions and barriers faced by the women of the region.

In respect of sex ratio, it was the highest for Sub Saharan Africa (970), followed by Latin America & Caribbean, Arab States, South Asia, and Europe & Central Asia. The lowest sex ratio was witnessed for East Asia & Pacific (940) In regard to the highest sex ratio in Sub Saharan Africa, Sen (1990) observed that this region "ravaged as it is by extreme poverty, hunger and famine, has a substantial excess rather than deficit of women" and in this context, high female work participation rate plays a significant role in "linking women's gainful employment and survival prospect. [Anderson and Ray, 2009] . Again 12 th issue of the African Journal of Reproductive Health, 2008 came with a wonderful and interesting fact that females in Sub Saharan Africa gave birth more female than male although in the world as a whole more males are born at birth than females which can explain the highest sex ratio of the region among the world.

Table 1.5: Women Empowerment Indicators Across Regions, 2015

Region	Female Literacy Rate** (%)	Female Work Participation * Rate (%)	Seats occupied by Women in Parliament* (%)	Sex Ratio**
Arab States	84.21	30.08	12.79	953
East Asia & Pacific	91.31	57.58	16.22	940
Europe & Central Asia	98.60	50.89	22.47	941
Latin America & Caribbean	91.05	51.62	23.83	955
South Asia	61.43	45.34	16.13	948
Sub Saharan Africa	59.83	64.68	21.65	970
Country Average	82.30	52.06	20.18	953
World	82.7	50.3	21.8	971

Source: Human Development Report 2015*, CIA Fact book 2015**, UNESCO 2015***

In Table 1.6 we have presented economic, demographic, political and educational empowerment indicators of women for selected countries. Table reveals that FWPR was more than 60 per cent for the countries like, Ghana, China, and Norway. Iran, Saudi Arabia, Yemen and India had the low FWPR and lower than that of the world average. Similarly Ghana, Iran, Saudi Arabia, Norway and Yemen had relatively better sex ratio as against the worst in China and India among these countries. Sex ratio of India and China were below world average. If we look at the figures on political empowerment based on percentage of seats occupied by women in national parliament we observed that Norway and Germany performed better. More than 35 per cent of the total seats of national parliament were occupied by women in these countries. The participation rate was less than 26 per cent in some of the advanced countries like Singapore, Russia and China with no exception in Saudi Arabia. It was very less in countries like India, Ghana and Iran and the lowest in Yemen which was as low as less than one per cent. Over all, poor political participation of women in the world (21.8%) was witnessed. To have an idea on empowerment of women in the educational field we used the indicator like female literacy. It is seen from the table that Norway had been able to attain 100 per cent female literacy and three other countries like Russia, Germany and Australia were approaching to achieve the same. Countries like Ghana, India and Yemen were lagging behind.

Table: 1.6: Women Empowerment Indicators for Selected Countries, 2015

Country	Economic (FWPR)*	Demographic (SR)**	Political (SWIP)*	Educational (FLR)***
Norway	61.2	952	39.6	100
Australia	58.8	948	30.5	96
Germany	53.6	948	36.9	99
Singapore	58.8	926	25.3	95.1

Russia	57.1	943	14.5	99.7
Saudi Arabia	20.2	952	19.9	91.1
Iran	16.6	952	3.1	82.5
China	63.9	893	23.6	94.5
India	27	893	12.2	62.8
Ghana	67.3	971	10.9	71.4
Yemen	25.4	952	0.7	55
World	50.3	971	21.8	82.7
<i>Source:</i> Human Development Report 2015*, CIA world fact book**, UNESCO 2015***, <i>Note:</i> FWPR- Female work participation rate (%); SR- Sex ratio; PSWP- Seats occupied by women in parliament (%); FLR- Female literacy rate (%);				

Now let us have a look on how these indicators of women empowerment vary across countries having different levels of human development (Table 1.7). From the table it is seen that countries with very high human development had the highest female literacy rate (97.55%) and higher percentage of seats (22.14%) occupied by women in national parliament. Medium and low HDI countries had lower female literacy rate than the country average. Actually female literacy rate varied directly with human development index group. Female work participation rate and sex ratio varied negatively with level of human development with some minor deviation. However no such trend was seen in case of women's political participation. Female work participation rate was the highest for low human development countries (62.39%) followed by medium, and very high human development countries. The lowest female work participation rate (FWPR) was seen in high human development countries (45.98%). Low and medium human development countries had higher FWPR than the country average as a whole. Women's political participation was highest for very high human development group followed by medium and low human development countries. It was the lowest for high human development countries. Coming to the sex ratio, it was the highest for low human development countries (968) and the lowest for high human development countries (946). Low human development countries have higher sex ratio than country average.

Table 1.7: Women Empowerment Indicators of Countries by Level of Human Development, 2015

Countries	Female Literacy Rate** (%)	Female Work Participation * Rate (%)	Seats occupied by Women in Parliament*	Sex Ratio**
Very High HDI Countries	97.55	49.90	22.14	947
High HDI Countries	94.39	45.98	17.86	946
Medium HDI Countries	81.04	52.19	21.17	953
Low HDI Countries	53.05	62.39	20.91	968
Country Average	82.30	52.06	20.18	953
World	82.7	50.3	21.8	971

Source: Human Development Report 2015*, CIA world Fact Book 2015**, UNESCO 2015**

Now we have the women empowerment indicators of countries classified on the basis of levels of their income presented in Table 1.8. From the table it is clear that female literacy rate (FLR) varied directly along with income. In other words high income countries had the highest FLR whereas low income countries had the lowest FLR. It ranged as high as 97.38 per cent in high income countries to as low as 49.95 per cent in low income countries. Low and medium income countries had lower FLR than that of the global average. However no such trend was seen in case of women's political participation. If we look at the data of FWPR we find that it was the highest for low income countries (70.34%), followed by high income countries (50%) and lower middle income countries (49.52%). For upper middle income countries, it was the lowest (46.23%). Global level as a whole had a higher FWPR than the lower middle, upper middle and high income countries. Again women's political participation measured by percentage of seats occupied by women in national parliament, was high for the low income countries followed by high and upper middle income countries. However for lower middle income countries, this score was 18.37 per cent which was the lowest. Except for low and high income countries all other income groups witnessed a lower political participation of women as compared to the global average. Sex ratio showed a reverse trend with income. It was the highest for low income countries and the lowest for high and upper middle income countries.

Countries	Female Literacy Rate** (%)	Female Work Participation * Rate (%)	Seats occupied by Women in Parliament* (%)	Sex Ratio **
High Income Countries	97.38	50	21.24	949
Upper Middle Income Countries	92.58	46.23	20.13	949
Lower Middle Income Countries	76.69	49.52	18.37	952
Low income countries	49.95	70.34	21.71	969
Global Average	82.30	52.06	20.18	953
World	82.7	50.3	21.8	971

Source: Human Development Report 2015*, CIA world fact book 2015**, UNESCO 2015***

Global Status on Human Development

To study the extent of human development around the world in similar lines we have carried out three types of analysis based on data presented according to the region to which they belong to, their level of human development, and income.

Table 1.9 shows region wise trend of HDI from 1980 onwards. In the table it is seen that HDI score for all the regions improved significantly over time. South Asia and East Asia & Pacific improved significantly in the said period. However the improvement was less in case of Latin America & Caribbean and Sub Saharan Africa. If we see the regional HDI score in 2014 we find that Latin America & Caribbean and Europe & Central Asia had the highest HDI score followed by East Asia & Pacific, Arab States and South Asia. The region with the lowest HDI score was Sub Saharan Africa. Except Latin America & Caribbean and Europe & Central Asia world had the higher HDI than other regional groups.

Region	HDI Score in					Change during 1980-2014	
	1980	1990	2000	2010	2014	Absolute Change	Percentage Change
Arab States	0.492	0.551	0.611	0.675	0.686	0.194	39.43
East Asia & Pacific	0.457	0.517	0.595	0.688	0.710	0.253	55.36
Europe & Central Asia	-	0.651	0.665	0.726	0.748	---	----
Latin America & Caribbean	0.579	0.627	0.683	0.734	0.748	0.169	29.19
South Asia	0.382	0.438	0.491	0.573	0.607	0.225	58.90
Sub Saharan Africa	0.382	0.399	0.421	0.468	0.518	0.136	35.60
World	0.559	0.597	0.639	0.693	0.711	0.152	27.19

Source: UNDP, Human Development Report 2014,2015

Now let us examine the performance of few selected economies of the world in respect of change of HDI from 1980 to 2014. From the Table 1.10 it is seen that all the selected economies in discussion showed improvements in terms of human development during the period. Both in the absolute and percentage terms, the best performance over the period was shown by China whereas the poor performer in this respect was Australia whose HDI ranking was one of the highest among the countries in question. Improvement was more than world average for the countries like China, India, Iran Saudi Arabia and Ghana.

Country	HDI Score in					Change during 1980-2014	
	1980	1990	2000	2010	2014	Absolute Change	Percentage Change
Norway	0.793	0.841	0.910	0.939	0.944	0.151	19.04
Australia	0.841	0.866	0.898	0.926	0.935	0.094	11.87
Germany	0.739	0.782	0.854	0.904	0.916	0.177	23.95
Singapore	--	0.744	0.800	0.894	0.912	--	---
Russia	---	0.729	0.717	0.773	0.798	---	---
Saudi Arabia	0.583	0.662	0.744	0.815	0.837	0.254	43.57
Iran	0.490	0.552	0.652	0.725	0.766	0.276	56.33
China	0.423	0.502	0.591	0.701	0.727	0.304	71.87
India	0.369	0.431	0.483	0.570	0.609	0.24	65.04

Ghana	0.423	0.502	0.487	0.556	0.579	0.156	36.88
Yemen	...	0.390	0.427	0.484	0.498	---	---
World	0.559	0.597	0.639	0.693	0.711	0.152	27.19
<i>Source:</i> UNDP, Human Development Report 2014,2015.							

Let us now study the trend of human development from 1980 to 2014 according to the groupings of countries based on level of Human development (Table 1.11). Table reveals that all the groups of countries showed an improvement during the period. Rapid improvement was observed in case of medium and low HDI group as compared to very high and high HDI group. Improvement was least in very high HDI group. Percentage change in the score from 1980 to 2014 for very high HDI group was only 18.36 per cent as compared to 39.33 per cent, 50 per cent and 46.38 per cent in high, medium and low HDI groups respectively. Improvement of HDI score was 27 per cent approximately for the world as a whole during the period. If we look at the HDI score in 2014 we find that HDI score of very high and high HDI countries were more than the world as a whole while it was less in medium and low HDI countries. It was as high as 0.896 for very high HDI countries and as low as 0.505 for low human development countries. It is obvious that HDI value was the highest for very high human development group and the lowest for the low human development group in both the periods. But the most significant point observed is that difference of HDI scores between top and bottom ranking countries were quite high both in 1980 and 2014. The gap reduced marginally, that is from 0.412 to 0.391 in the last thirty four years.

Countries	HDI Score in					Change during 1980-2014	
	1980	1990	2000	2010	2014	Absolute Change	Percentage Change
Very High HDI Countries	0.757	0.798	0.849	0.885	0.896	0.139	18.36
High HDI Countries	0.534	0.593	0.643	0.723	0.744	0.21	39.33
Medium HDI Countries	0.420	0.474	0.528	0.601	0.630	0.21	50
Low HDI Countries	0.345	0.367	0.403	0.479	0.505	0.16	46.38
World	0.559	0.597	0.639	0.693	0.711	0.152	27.19
<i>Source:</i> UNDP, Human Development Report 2014,2015.							

Now let us examine how HDI varied according to the World Bank classification of countries on the basis of level of income. Table 1.12 shows the trend of HDI scores from 1980 to 2014. Improvement in score varied directly with income groups in the entire period of analysis implying there was a positive association between income and human development. Low income countries had made significant improvement (48.51 per cent) followed by lower middle, upper middle and high income countries. It was the lowest for high income group (18.09 per cent). The differences in HDI between the top and the bottom economies were very high in 1980 and it persisted till 2014. The reduction in gap was insignificant, i.e., from 0.421 to 0.405. HDI scores of high and upper middle income countries were always more than that of the world average whereas these were always lower in middle and low income countries.

Countries	HDI Score in					Change during 1980-2013	
	1980	1990	2000	2010	2014	Absolute Change	Percentage Change
High Income Countries	0.724	0.761	0.809	0.846	0.855	0.131	18.09
Upper Middle Income Countries	0.576	0.626	0.667	0.726	0.732	0.156	27.08
Lower Middle Income Countries	0.445	0.499	0.528	0.590	0.600	0.155	34.83
Low income countries	0.303	0.344	0.371	0.436	0.450	0.147	48.51
World	0.559	0.597	0.639	0.693	0.711	0.152	27.19

Source: UNDP, Human Development Report 2014,2015.

Gender Gap, Women Empowerment and Human Development: A Nexus

The governments at different levels have undertaken numerous efforts to eliminate gender gap and empower women through various constitutional provisions, formulation of various plans and policies, training programmes, celebrating decades of women empowerment and many such programmes. In spite of all these initiatives over the years, there has not been remarkable improvement in the lives of women. The crime and violence against women have increased enormously throughout the world. The female political participation is quite low. They are the most vulnerable class in respect of wage employment. Poverty is more frequent among women. All these probably led to the concept of feminization of poverty. Human Development Report (UNDP, 2002) singled out the quota system as the key factor for enhancing women's political participation. It further mentioned that reservation of seats was not enough and thus there was a need for creating an enabling environment for women. Promoting gender equality is vital for meeting the MDGs and for creating prosperous, safe and peaceful world, where women have better access to health services, education, and to economic growth; their children are healthier and better educated. As a result economies flourish and societies are more peaceful. By contrast, where women or girls are treated as inferior to men and boys, a vicious circle of limited education, poor employment opportunities, ill health, and forced marriage and all too frequently violence exploitation can be established and perpetuated. Focusing more support on girls offers an opportunity to replace that vicious circle with a virtuous one that puts women at the heart of their families and their communities. As a result women are able to bring in money to their families, get involved with local enterprises and make sure their children are educated. These are vital agents for change (Mitchell, 2010). Again investing in women and girls has a multiplier effect on productivity, efficiency and sustained economic growth and that increasing women's economic empowerment is central to the achievement of MDGs and to the eradication of poverty, the greatest global challenge facing the world today, and an indispensable requirement for sustainable development (Khattab,2010).

But evidences show that a high level of human development in terms of HDI is not necessarily linked with highly empowered women. Many countries having high level of human development are also having low status on gender equality and women empowerment. In the following paragraphs we have attempted to put together data on these indicators like HDI, GDI and WEI to examine if there is any such nexus among them.

From the Table 1.1.3 wherein region wise data are presented for 132 countries, it is clear that HDI, WEI and GDI values were the highest for Europe & Central Asia. The second and third position in terms of HDI was occupied by Arab States and East Asia and Pacific. But the region Arab states had the lowest value of GDI and WEI. This means that in Arab States, the fruits of development were not equally distributed among the either sexes. Latin America & Caribbean occupied the fourth rank in terms of HDI and second rank in WEI and third rank in terms of GDI. The value of HDI was the lowest for Sub Saharan Africa (0.504) whereas the GDI value was relatively higher in the region. South Asia and Sub Saharan had lower HDI values compared to the corresponding global average figures. Again Arab States, South Asia and Sub Saharan Africa had lower WEI values compared to the country average and world as a whole. Gender Differential Index (GDI) was the highest for the region Europe & Central Asia (0.526) followed by Latin America & Caribbean, Sub Saharan Africa, East Asia & Pacific and South Asia. Arab States (0.369) witnessed the lowest GDI. Three regions, namely, Europe & Central Asia, Latin America & Caribbean and Sub Saharan Africa relatively performed better than that of the global average and world in terms of gender equality.

Table 1.13: Development Indices Across Regions in World

Region	HDI	WEI*	GDI*
Latin America & Caribbean	0.709	0.601	0.519
Europe & Central Asia	0.806	0.622	0.526
East Asia & Pacific	0.716	0.589	0.493
Arab States	0.757	0.418	0.369
South Asia	0.600	0.421	0.378
Sub Saharan Africa	0.504	0.535	0.514
Country average/global average	0.683	0.553	0.488
World	0.711	0.556	0.499

Source: *Researcher's calculation based on data from Human Development Report 2015, CIA Fact book 2015, UNESCO 2015, World Bank 2014.

Let us have a look on the performance of few selected countries on HDI, WEI and GDI (Table 1.14). Norway being the highest ranking country in terms of HDI, it had high GDI and WEI. Australia, Germany and Singapore also had the good scores in HDI, WEI and GDI. However, in Saudi Arabia and Iran, in spite of having high human development had low WEI and GDI value implying that in spite of improvement in human development front the countries were lagging behind in terms of the development of fair sexes. Both India and Ghana were moderately high human development countries. However the GDI and WEI of Ghana were more than that of India which clearly showed that gender disparity was stronger in India as compared to Ghana, though in human development front India was doing better than Ghana. Yemen was low ranking country in terms of WEI, GDI and HDI. This implied that along with its low status of human development its women were deprived in almost every facets of life. WEI was more than 0.6 for the countries like Norway,

Germany, Australia, Singapore, China, and Russia. Saudi Arabia, one of the members of very high human development countries had the both WEI and GDI value below 0.5. Norway, Australia and Germany had better HDI, WEI and GDI than world average.

Country	HDI	WEI*	GDI*
Norway	0.944	0.774	0.700
Australia	0.935	0.695	0.627
Germany	0.916	0.720	0.651
Singapore	0.912	0.662	0.526
Saudi Arabia	0.837	0.439	0.412
Russia	0.798	0.608	0.562
Iran	0.766	0.294	0.350
China	0.727	0.673	0.457
India	0.609	0.319	0.215
Ghana	0.579	0.528	0.616
Yemen	0.498	0.216	0.292
World	0.711	0.556	0.499

Source: *Researcher's calculation based on data from Human Development Report 2015, CIA Fact book 2015, UNESCO 2015, World Bank 2014.

Table 1.15 presents the data on various development indicators when the countries were grouped on the basis of level of human development. HDI and WEI varied directly with the level of human development. GDI value was the highest for very high human development grouped followed by medium and low human development group. It was the lowest for high human development group. Very high and high human development countries had higher values of HDI as compared to the corresponding global figure. Except low HDI countries all other groups had higher WEI value compared to the global average. Similarly high and low human development groups had lower value of GDI compared to corresponding figures at global level.

Countries	HDI	WEI*	GDI*
Very High HDI Countries	0.861	0.612	0.519
High HDI Countries	0.750	0.557	0.474
Medium HDI Countries	0.639	0.555	0.490
Low HDI Countries	0.468	0.495	0.479
Country/global average	0.683	0.553	0.488

World	0.711	0.556	0.499
Source: *Researcher's calculation based on data from Human Development Report 2015, CIA Fact book 2015, UNESCO 2015, World Bank 2014.			

Now let us have a look on the movement of HDI, WEI and GDI which vary when countries are classified on the basis of levels of income. From the Table 1.16, it is seen that HDI varied directly with income. High income countries had the highest value of HDI and low income countries had the lowest value of HDI. WEI was the highest for high income countries (0.606) followed by upper middle income and low income countries. It was the lowest for lower middle income countries (0.510). Low and lower middle income groups had lower values of HDI and WEI as compared to the countries as a whole. On the other hand, GDI value was the highest for high income countries immediately followed by low income countries. It was the lowest for lower middle income countries.

Table 1.16: Development Indices of Countries by Level of Income			
Countries	HDI	WEI*	GDI*
High Income Countries	0.851	0.606	0.514
Upper Middle Income Countries	0.737	0.565	0.487
Lower Middle Income Countries	0.609	0.510	0.459
Low Income Countries	0.454	0.524	0.498
Country / Global Average	0.683	0.553	0.488
World	0.711	0.556	0.499
Source: *Researcher's calculation based on data from Human Development Report 2015, CIA Fact book 2015, UNESCO 2015, World Bank 2014.			

To know the strength of the relationship between HDI, GII and WEI a correlation analysis was carried out. Because of lack of comparable data, our analysis was restricted to 132 countries. The correlation summary is presented in the Table 1.17. HDI was positively and significantly related with WEI indicating that high human development always accompanied with high empowerment of women. Relationship between WEI and GDI was found to be very strong and positive which implied that countries with high women empowerment resulted more gender equality. However the relationship between HDI and GDI was though positive but very feeble and statistically insignificant. All these correlation coefficients established the fact that human development, gender inequality and women empowerment were inter related.

Table 1.17: Correlation Matrix of Development Indices in the World			
Indices	HDI	GDI	WEI
HDI	+1.000		
GDI	+0.144	+1.000	
WEI	+0.341**	+0.901**	+1.000

** Correlation coefficients significant at 0.01 level
 No of Observation – 132

In order to examine whether these significant relationships among HDI, GII and WEI remained valid for countries irrespective of their levels of (human) development we segregated 132 countries into four categories and estimated correlation coefficients separately for each of these categories (Table 1.18). The correlation results of HDI, GII and WEI of 28 nos. of very high human development countries revealed that all the relationships were strong, positive and significant. However the correlation analysis for the 45 high, 27 medium and 32 low human development countries depicted a different picture. For these three groups, the relationships of HDI with GDI and WEI were weak and not statistically significant though the relationship between GDI and WEI was strong and statistically significant. To summarize it can be said that the all the relationships were positive. The relationships between WEI and GDI were found to be strong and statistically significant in all the groups. But the relationships of HDI with WEI and GDI were strong and significant only for very high human development group.

Table 1.18: Correlation Matrix of Indices of Countries at Different Levels of HDI				
Types of Countries	Indices	HDI	GDI	WEI
Very High HDI Countries [♣]	HDI	+1.000		
	GDI	+0.649**	+1.000	
	WEI	+0.741**	+0.959**	+1.000
High HDI Countries [♣]	HDI	+1.000		
	GDI	+0.180	+1.000	
	WEI	+0.124	+0.879**	+1.000
Medium HDI Countries [♣]	HDI	+1.000		
	GDI	+0.082	+1.000	
	WEI	+0.153	+0.884**	+1.000
Low HDI Countries [♣]	HDI	+1.000		
	GDI	+0.188	+1.000	
	WEI	+0.243	+0.945**	+1.000
** Correlation coefficients significant at 0.01 level. ♣No. of countries/observations (N) was 28, 45, 27 and 32 for very high HDI, high HDI, Medium HDI and low HDI countries respectively.				

To analyze the cause and effect relationship of HDI, WEI and GDI we construct three simple linear regression equations as follows

(a) $(HDI)_i = b_0 + b_1(FLRI)_i + b_2 (ISRI)_i + b_3(PCCD)_i + U_i \dots\dots\dots(i)$

The variables such as HDI, FLRI, ISRI, PCCI and U respectively in the above equation refer to human development index, female literacy rate index, infant survivability rate index, sex ratio index and disturbance term. From the raw data the following estimates are made.

	b ₀	b ₁	b ₂	b ₃
Coefficient	-1.33589	0.080006*	1.823167*	.352348*
Standard error	0.270284	0.025388	0.297156	0.019868
t-value	-4.94253	3.151313	6.13539	17.73427

*Significant at 5% level of significance, R²= 0.945968, AdjR²=0.944701, F= 746.983,
No of observation:132

From table 1.19 it is seen that each point on the estimated regression line gives an estimate of the expected or mean value of HDI corresponding to the chosen value of FLR, ISR, and PCI. The beta value (b₁) which is 0.08 indicates that with 1 percent increase in female literacy rate, the HDI value increases by 0.08 percent which, though statistically significant is negligible. Similarly from the value of b₂ and b₃ we can say that with 1 percent increase in ISR and PCI the value of HDI increases by 0.182 and 0.35 respectively. The R² value indicates that 94% of the variation of HDI value can be explained by FL, ISR and per capita income. Thus all the three variables are statistically significant and have positive contribution to HDI.

Now let us present the second linear regression equation as follows.

$$(WEI)_i = b_0 + b_1(FLR/MLRI)_i + b_2 (FWPR/MWPRI)_i + b_3(FSSP/MSSPI)_i + U_i \dots\dots\dots(ii)$$

The variables such as WEI, FLR/MLRI, FWPR/MWPRI, FSSP/MSSPI and U respectively in the above equation refer to women empowerment index, ratio of female to male literacy rate index, ratio of female to male work participation rate index, ratio of female to male share in politics index and disturbance term. From the raw data the following estimates are made which are shown in the table 1.20.

	b ₀	b ₁	b ₂	b ₃
Coefficient	0.066578	0.414837*	0.258108*	0.416761*
Standard error	0.014184	0.020148	0.013572	0.020802
t-value	4.693807	20.58923	19.01769	20.03438

*Significant at 5% level of significance, R²= 0.925275, AdjR²=0.923524, F= 528.3178,
No of observation:132

The beta value (b_1) which is 0.414 indicates that with 1 percent increase in the ratio of female to male literacy, the WEI value increases by 0.41. Similarly from the value of b_2 and b_3 we can say that with 1 percent increase in the ratio of female to male work participation rate and female to male share in state politics, the value of WEI increases by 0.26 and 0.42 respectively. The R^2 value indicates that 93% of the variation of WEI value can be explained by the independent variables in consideration. All the variables were proved to be significant statistically. Thus women empowerment increases with reduction of gender gap between men and women.

The third regression equation with GDI as dependent variable was presented below.

$$\textcircled{c} (GDI)_i = b_0 + b_1(FLRI)_i + b_2(FWPRI)_i + b_3(SRI)_i + U_i \dots\dots\dots(iii)$$

The variables such as GDI, FLRI, FWPRI, SRI and U respectively in the above equation refer to gender differential index, female literacy rate index, female work participation rate index, sex ratio index and disturbance term. Table 1.21 shows the regression summary based on the equation (iii)

	b_0	b_1	b_2	b_3
Coefficient	0.014776	0.252128*	0.321587*	0.25122*
Standard error	0.027949	0.018503	0.019249	0.042416
t-value	0.528666	13.62638	16.70681	5.922716
*Significant at 5% level of significance, $R^2 = 0.785432$, $^{Adj}R^2 = 0.780403$, $F = 156.1826$, No of observation:132				

From the table it is seen that the beta value (b_1) is 0.252 which indicates that with 1 percent increase in the female literacy, the GDI value increases by 0.25. Similarly from the value of b_2 and b_3 we can say that with 1 percent increase in the female work participation rate and sex ratio, the value of GDI increases by 0.32 and 0.25. The R^2 value indicates that 79% of the variation of GDI value can be explained by FLRI, FWPRI, and SRI all these variables are proved to be significant statistically. Thus gender equality increases with increase in women empowerment indicators like female literacy rate and female work participation rate and demographic indicator sex ratio at international level.

Summary of Findings:

The major findings of the chapter are summarized as follows:

Gender gap exists in almost all the countries of the world. No country has been able to eliminate gender gap completely. However performance of Nordic countries are good in terms of reduction of gender gap. The lowest performers in this respect are Middle East and North Africa. Global gender gap scores improved significantly irrespective of region, country, levels of income and human development. The highest improvement was seen for the countries having low income and low level of human development. Women empowerment indicators like female literacy rate is good for the developed region like Europe and Central Asia, East Asia and Pacific and Latin America and Caribbean. However female work participation rate and sex ratio is high for the less developed region of Sub Saharan Africa. Female literacy rate varied directly with the level of human development and level of income whereas female political participation rate did not show such variation. Female work participation rate varied inversely along with the level of human development

with minor exception but it did not show any such variation with income level. Sex ratio varied inversely with human development and level of income with minor variation. Human development improved significantly across the regions and irrespective of income level over the last three decades. Low income countries and the countries with low level of human development had shown significant improvement in terms of human development. However the lowest improvement was observed in the countries having high income and very high level of human development. At the global level, overall a positive correlation existed between HDI and WEI and GDI. The relationship between GDI and HDI was very weak. However the results showed a minor variation across countries with different levels of human development. From the regression analysis we found that indicators like female literacy rate, per capita income and infant survivability rate could improve the level of human development whereas reduction of gender gap in the area like literacy, work participation and decision making at both community and household level could improve women empowerment. Gender inequality might be reduced through improvement in education, employment and demographic indicator like sex ratio in favor of female .

References

- Anderson and Ray (2009). Missing Women: Age and Diseases. *Review of Economic Studies*, Vol 77, 1262-1300
- CIA(2015). World Fact Book: SexRatio. Retrieved from www.cia.gov/library/publications/the-world-factbook/fields/2018.html
- CIA(2015). World Fact Book: Infant Mortality Rate. Retrieved from www.cia.gov/library/publications/the-world-factbook/rankorder/2091rank.html
- Dworzak(2000). Education in Sub Saharan Africa. In Cheris Kramarae and Dale Spender(ed.) *Global Women's Issues and Knowledge- Routledge International Encyclopedia of Women*, Routledge, New York
- Htun and Piscopo (2014). Women in Politics and Policy in Latin America & Caribbean. *Working Paper*, Social SR Council
- Inglehart, R. and P. Norris(2003). *Rising Tide: Gender Equality and Cultural Change around the World*, Cambridge University Press, Cambridge.
- Iversen, T. and F. Rosenbath (2008). Work and Power: The Connection between Female labour force Participation and Female Political Representation. *Annual Review of Political Science*, Vol. 11, 479-495.
- Iyer, R. (2000). Education: South Asia. In Cheris Kramarae and Dale Spender(ed.) *Global Women's Issues and Knowledge- Routledge International Encyclopedia of Women*, Routledge, New York.
- Kaba, A.J.(2008). Sex Ratio at Birth and Racial Differences –Why do Black Women Give Birth to More Females than non Black Women? *African Journal of Reproductive Health*, Vol. 12, No. 3.
- Khatab, M. (2010). Reviewing Ongoing Progress in Women Empowerment and Gender Equality. *Dialogues at the Economic and Social Council*, ECOSOC, UN, 2010
- Mitchell, A. (2010): "Women Empowerment: Lynchpin of Development Goals" *Dialogues at the Economic and Social Council*, ECOSOC, UN, 2010.
- Mukhuria, A., C. Abouafia and A. Themme. (2005). The Context of Women's Health: Results from The Demographic and Health Surveys, 1994-2001. Comparative Reports No. 11. Retrieved from <https://dhsprogram.com/pubs/pdf/CR11/CR11.pdf>. Visited on 20 June 2014 at 11 am.
- OECD(2014). Women in Public Life: Gender, law and Policy in the Middle East and North Africa. Retrieved from www.oecd.org/mena/governance/women_in_public_life_mena_bochure.pdf. Visited on 10th April 2015 at 3 pm.

UNDP (1990-2015). *Human Development Report*, Oxford University Press, Oxford.

UNESCO(2015). Adult Literacy Rate, population 15+ years(both sexes, female, male. *UIS Data Centre*. Retrieved from <http://data.uis.unesco.org/>. Visited on 17 th March 2016 at 4.30 pm.

World Economic Forum (2005—2014). *Global Gender Gap Report*, Geneva, Switzerland.

World Bank (2014). http://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD?order=wbapi_data_value_last&sort=desc. Visited on 11th March 2016 at 2 pm.

