Declining Child Sex Ratio of India: A State Wise Profiling

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ABSTRACT
Indian is witnessing an alarming fall in child sex ratio since 1961. Sex selective abortions and female infanticide due to cultural preferences for male child are considered as the causes of this menace. Government of India had enacted various laws such as Medical Termination of Pregnancy act 1971 and Pre-conception and Prenatal Diagnostic Technique (Regulation and Prevention of Misuse) act, 1994 to penalise such sex determination and selective abortion, but the ratio is still showing an alarming decline.

The study hypothesis that improvements in female literacy rate and labour participation rate helps to bring changes in the overall attitude of the society toward women and girl child and there by helps to reduce female infant mortality and sex selective abortions. The study analyses female literacy rate and labour participation rate of various states and the corresponding Child Sex ratio. The study found that improvements in the female literacy rate had not adequately reflected in the female labour participation rate. Even those states having a commendable improvement in both the parameters failed to reflect an adequate improvement in the CSR. The study concludes that mere improvements in female literacy rate and labour participation rate, wouldn’t improve the status of women unless it is supplemented by targeted social and economic empowerment. Analysing CSR from a multidimensional perspective, this paper argues how and why gender sensitisation and women empowerment should be brought into the policy circle to tackle this menace via transforming the life of the women and thus the society.

KEYWORDS: Child Sex Ratio, Female Infanticide, Female Literacy Rate, Labour Rate, Women Empowerment, Gender Divide.

INTRODUCTION
Female foeticide is the act of killing female foetus outside the legal channels of abortion. Such sex selective abortions affect the human sex ratio. Sex ratio is internationally defined as the number of males to female and is expressed in 100. According to the WHO, natural sex ratio at

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birth is assumed to be 103 to 107 (although it is subjected to debate) and any number above this is considered as a suggestive of female foeticide. There are many environmental factors responsible for this inherently biased sex ratio, or a ratio more in favour of male than female. But sex ratio at birth reduces as the age increases since adult male has an higher death rate as compared to adult female, since they are more exposed to threats as compared to females. Hence, sex ratio in the entire population is ideally 1:1.

But if we analyse the sex ratio around the globe we could see it widely varies in different age groups among different countries. For example, if we compare birth sex ratio of Europe (106) and US (105) with that of Asia we could see that the ratio is highly favourable to male for latter (107+ for 100 female). Amartya Sen, in his famous essay, “More than 100 million missing women” has rightly said, this high birth sex ratio over decades leads to 11% short of females in Asia’.

But if we examine the historical data on sex ratio in these Asian countries we could see the ratio is always skewed in favour of males as compared to other regions in the world. There could be two possibilities for this variation; one is due to natural reasons and the other is due to strong cultural preferences for male child and the related female foeticide or infanticide.

This debate has leads to two opposing schools of thoughts, which came up with equally valid and supporting evidences. One school of scholars argues that the natural sex ratio at birth is 102 to 107 males per females, however this ratio could vary due to a range of factors that are quite natural, such as; parental age, early marriage and fertility, teenage mothers, average maternal age at birth, age gap between father and mother, late births, ethnicity, social and economic stress, warfare and environmental and hormonal effects (Clutton-Brock & Lason, 1986).

The other school also brings in equally valid evidences from around the world to suggest that both sex ratios at birth and population sex ratio are remarkably constant and any deviation in this could only be explained by manipulation. The conventional assumption to support this argument is mammalian sperm have equal numbers of X and Y chromosomes and have equal chance of achieving conception and hence any variation in sex ratio is due to selective abortions between conception and birth (James W.H, 1987).

Supporters of this school says, ‘missing women’ estimated to about 100 million from North Africa, China, West Asia and South Asia from their combined population of 3 billion is due to the excessive female mortality prevailing in these region. From this background we could examine the case of India.

In India, Central Statistical Organization express sex ratio as the number of females per thousand males and Child Sex Ratio (CSR) as the sex ratio in the age group of 0–6 years. There is a
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dramatic fall in child sex ratio of India since 1961 and this had made it difficult to believe that such dramatic fall in CSR is natural without any external interferences. Such explicit evidences on sex selective abortions had forced government to enact Medical Termination of Pregnancy act in 1971 and Pre-conception and Prenatal Diagnostic Technique (Regulation and Prevention of Misuse) (PC-PNDT) Act in 1994 with the sole objective to discourage sex selective abortions. The act was amended in 2003, to further strengthen the regulation of technology in sex selection and had made such selective abortions, a criminal offence.

Unrestrictive use of ultrasonic scan and easy availability of sex determination and selective abortion facilities worsened the situation in urban areas as compared to rural India. Though the law, abide health professionals from disclosing the sex of the foetus in the scan reports, the technology is widely misused in India. The government also works actively to curb this menace through strict enforcement of the PC-PNDT act and by conducting raids in private clinics and taking actions such as terminating licence, seizure and sealing of violators.

Census data shows that Infant mortality is higher in urban areas as compared to rural areas, this further strengthen the assumption that high infant mortality rate is not due to poor health care facilities but, due to the better accessibility to sex determination and selective abortion facilities in the urban areas. Despite, constant effort of the government of India through various legal measures at different levels the rate of fall in child sex ratio and sex selective abortion is still increasing except in few states.

This increasing female infanticide could be associated with the general preference for male child over female child especially in Northern states like Rajasthan, Punjab, Haryana, Gujarat, Jammu and Kashmir, Maharashtra and Uttar Pradesh. Both cultural and economic factors could be associated with this male preference, according to Hindu tradition, only a son could full fill the last rites of the parents and a son is expected to stay with the parents, economically support them at their old age. Similar preference for inheritance of property and family name is also prevalent among other religions too. Such cultural assumptions and practices defining women and men's roles often impeded women's development (Sen and Grown, 1988, Young, 1993). Such cultural disparity also reflects in income and economic development (Forsythe et al., 2000). The burden of enormous dowry associated with an Indian Brid is another factor that makes a male child more preferable to female for Indian parents.

Considering the fact that the gender disparities, rooted in cultural and social stigmas are hindering the progress of the society and economic development of the nation, the study hypothesize that improving literacy rate and work participation ratio of women will empower women to take better roles in the society and will improve the cultural prejudice and overall attitude of societies towards women. Thereby facilitating improvements in child sex ratio by reducing female infanticide and sex selective abortions.
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Objectives of the study
The study tries to identify a pattern for child sex ratio based on female literacy rate and female work participation among various states in India. The study hypothesis that, states having higher female literacy rate and better labour participation shows a higher child sex ratio as compared to states having low female literacy rate and poor work participation ratio.

METHODOLOGY
The study considers five decades’ data on Child Sex ratio (CSR) (from 1961 to 2011), female labour participation rate and female literacy rate of 36 Indian states and Union territories published by the Office of the Registrar General and Census Commissioner of India, Ministry of Home Affairs.

RESULTS AND DISCUSSION
India’s, past five decade’s census data collected by the NSSO, shows that there is a dramatic fall in CSR (in the age group 0-6, and has went from 104 males per 100 females in 1981 to 105.8 in 1991, to 107.8 in 2001 and 108.8 in 2011, Population census). It should be noted that this trend is despite of considerable improvements in the areas of health and education. The latest census figures (2011) shows the decline in CSR is alarmingly high in 21 states though most of these states had achieved a tremendous improvement in Female Literacy Rate.

The rate of fall in CSR is alarming in the states like Jammu and Kashmir, Daman and Diu, Lakshadweep, Andhra Pradesh, Dadar and Nagarhaveli, Nagaland, Rajasthan, Manipur, Maharashtra and Uttarkhand. CSR in some states like Punjab (789, the lowest among all states as per 2001 census), Haryana, Chandigarh and Himachal Pradesh which had shown a dramatic fall in 2001 census, had made considerable improvement in 2011 due to the collective efforts of Civil Societies and the Government. The progress made by Punjab in this line is remarkable and needs special attention (increase in child sex ratio: Punjab (+48), Chandigarh (+35) and Haryana (+15).

While analysing the decadal data since 1961 on CSR, female literacy rate and labour participation rate of all the states and Union territories in India, it has been found that, there exist no absolute pattern for CSR among states on female literacy rate and labour participation rate. But, a closer and category wise analysis of states on these three parameters shows that some meaningful inference cold be derived from this based on the nature and character of the states.

CSR and Female Literacy rate
Ten states which had marked the highest female literacy rate (higher than the national average) were considered. Eight out of these ten states had shown high child sex ratio, which is higher than the national average (see Table 1), at the same time it has also been noticed that though this states has the highest sex ratio, the corresponding female labour participation rate of these states
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is very low, lower than the national average except for Nagaland. Kerala, which has the highest female literacy rate, 91.98%, has marked a very low female labour participation rate is, 18.2% and is lower than states like Rajasthan, Andhra Pradesh, Chhattisgarh, Himachal Pradesh, and Arunachal Pradesh which has much lower female literacy rate as compared to Kerala.

**States having the highest Female Literacy rate (above 75%)**

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<tr>
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<tr>
<td>1</td>
<td>A &amp; N Islands</td>
<td>957</td>
<td>968</td>
<td>16.6</td>
<td>17.8</td>
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<tr>
<td>2</td>
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<td>845</td>
<td>880</td>
<td>14.2</td>
<td>16</td>
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<td>868</td>
<td>871</td>
<td>9.4</td>
<td>10.6</td>
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<tr>
<td>4</td>
<td>Goa</td>
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<td>942</td>
<td>22.4</td>
<td>21.9</td>
</tr>
<tr>
<td>5</td>
<td>Kerala</td>
<td>960</td>
<td>964</td>
<td>15.4</td>
<td>18.2</td>
</tr>
<tr>
<td>6</td>
<td>Lakshadweep</td>
<td>959</td>
<td>911</td>
<td>7.3</td>
<td>11</td>
</tr>
<tr>
<td>7</td>
<td>Mizoram</td>
<td>964</td>
<td>970</td>
<td>47.5</td>
<td>36.2</td>
</tr>
<tr>
<td>8</td>
<td>Puducherry</td>
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<td>967</td>
<td>17.2</td>
<td>17.6</td>
</tr>
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<td>9</td>
<td>Nagaland</td>
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<td>943</td>
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<tr>
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<td>Tripura</td>
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<td>21.1</td>
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<tr>
<td></td>
<td>India</td>
<td>927</td>
<td>919</td>
<td>-</td>
<td>25.51</td>
</tr>
</tbody>
</table>

*Table 1: States having the highest female literacy rate and their corresponding Sex ratio and female labour participation rate for 2001 and 2011. Data as per census report Government of India.*

Delhi and Chandigarh are the only two northern states in this list, rest of the states are either southern states or North eastern states where the society is more matriarchal than their northern and western counterparts.

It should also be noted that, some of the strong patriarchal states like Punjab, Himachal Pradesh, Maharashtra and Uttarkhand show a high female literacy rate, higher than the national average but they have a lower CSR, and shows a declining trend, despite the fact that the states, Punjab and Maharashtra are economically well placed. Hence, a mere improvement in female literacy rate or overall economic status of the society, will neither improve the status of women in the society nor the societal attitude towards the women, unless it explicitly improves the status of women through gender sensitization and empowerment.

**CSR and Female Labour Participation Ratio**

If we consider the other parameter, that is the female labour participation rate and the performance of states on CSR and Female literacy rate for which having the highest labour participation rate, above 35%, (refer Table :2) we could see that except Rajasthan and Himachal
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Pradesh, the rest of the states have higher CSR than the national average. But at the same time, it should also be noted that in most of these states female literacy rate is lower than the national average.

**CSR and Female literacy rate of States having highest Female Labour Participation rate (above35%)**

<table>
<thead>
<tr>
<th>SL. No</th>
<th>State</th>
<th>CSR 2001</th>
<th>CSR 2011</th>
<th>Female Literacy rate 2001</th>
<th>Female Literacy rate 2011</th>
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<td>1</td>
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<td>975</td>
<td>969</td>
<td>51.85</td>
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<td>2</td>
<td>Himachal Pradesh</td>
<td>896</td>
<td>909</td>
<td>67.42</td>
<td>76.60</td>
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<td>3</td>
<td>Manipur</td>
<td>957</td>
<td>936</td>
<td>60.10</td>
<td>73.17</td>
</tr>
<tr>
<td>4</td>
<td>Andhra Pradesh</td>
<td>961</td>
<td>939</td>
<td>50.43</td>
<td>59.74</td>
</tr>
<tr>
<td>5</td>
<td>Arunachal Pradesh</td>
<td>964</td>
<td>972</td>
<td>43.53</td>
<td>59.57</td>
</tr>
<tr>
<td>6</td>
<td>Rajasthan</td>
<td>909</td>
<td>888</td>
<td>43.85</td>
<td>52.66</td>
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<tr>
<td>7</td>
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<td>963</td>
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<td>60.40</td>
<td>76.43</td>
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<td>970</td>
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<td>89.40</td>
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<tr>
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<td>964</td>
<td>943</td>
<td>61.46</td>
<td>79.69</td>
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<tr>
<td>10</td>
<td>INDIA</td>
<td>927</td>
<td>919</td>
<td>53.67</td>
<td>65.46</td>
</tr>
</tbody>
</table>

Table 2: Table shows the CSR and female literacy rate of states having the highest female labour participation rate.

From this we could infer that:

1) In India, increase in the female literacy rate is not adequately reflected in female labour participation rate.
2) An improvement in the female literacy rate is not adequately reflects in improvements in status of women and the societies attitude towards women.
3) Mere economic empowerment is not sufficient unless it is accompanied by political and social empowerment and the society at large is not sensitised for the cause of gender equality.

The above inferences suggest to focus more on women empowerment and what should it mean and how could this happen. World Bank defines empowerment as the expansion of freedom of choice and actions and increasing one's authority and control over the resources and decisions that affects one's life (2001). Similarly, Alsop and Heinson (2005) define empowerment as enhancing an individual's or group's capacity to make choices and transform those choices into desired actions and outcomes. Kabeer (1999) sees women's empowerment as the processes through which women gain the ability to take ownership and control of their lives. Hence the key objective of women empowerment should be to raise her to the level of greater independence and freedom of choices and decision pertaining to every sphere of her life, whether it is political, economic, social or cultural.
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To ensure this empowerment sustainable and transformative, change has to take place in the structures and legal frameworks (family laws, property rights, etc.) (Kabeer, 2001). Punjab, which had shown the highest improvement in the CSR during 2011 census, could be considered as a model state in this line. Efforts of Punjab government such as, series of gender sensitive policies, strict enforcement of PC -PNDT act 1994, intensive awareness generation activities through Medias aimed at bringing behaviour change, coordination with civil society and Judiciary were instrumental in inspiring people and changing their mindset and could be better replicated in other states. But a lot more needs to be done to bring the desired result in the society.

Hence, empowerment should goes beyond the short term goals of increasing women's access to income, by looking at longer benefits in terms of changes to laws and policies that constrain women's participation, and in terms of power relations at the household, community and market level (Carr, 2000). Given these different perspectives, this paper looks at child sex ratio from different angles and argues how and why gender sensitisation and women empowerment should be brought into the policy circle to tackle this menace via transforming the life of the women and thus the society.

CONCLUSION
Child Sex Ratio in India is declining at an alarming rate since 1961. Cultural preferences for male child and the related female infanticide are considered as the major reasons for this social menace. To counter this, government had come up with various policies such as Medical Termination of Pregnancy act in 1971, PC-PNDT act in 1994, but the ratio is still showing an alarming decline.

The study analysed the performance of various states on female literacy rate and female labour participation rate and concludes that neither an improvement in literacy rate nor in labour participation rate is sufficient to bring a change in CSR unless it is accompanied by an overall empowerment of women through gender sensitisation, that goes beyond the short term goals of increasing women's access to income, but looking at long term benefits of changes in laws and policies that constrain women's participation, and in terms of power relations at the household, community and market levels. This facilitate in bringing women to the mainstreams of economy and there by enhances the overall development of the economy and also brings positive changes in the society by altering the social stigmas and gender disparities.

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Conflict of Interests: None
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