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## **Women and Workforce: Understanding the Social and Cultural Context of Women's Employment**

**Manisha Madhava\***

*The decline in women's participation in the workforce is attributed to several social and economic factors like low level of education, wage differentials, quality of work, trade-offs between labour at home and workplace. A better understanding of decline can be arrived at if these factors are understood with reference to the social and cultural context that creates specific conditions of defeminisation. In India, gender stereotypes have been innovatively reinforced limiting women's participation in the public sphere. The process of socialisation has been moulded to suit the traditional societal norms, using language and allegories that force certain choices on young women in the employable age, limiting the possibilities of women's gainful participation in the workforce.*

### **Introduction**

Women's participation in labour is an important criterion for determining the social status of women. It is recognised as being crucial for raising living standards and economic well-being. It has a positive effect on the level of output of the economy and deters population growth (Collver & Langlois, 1962). It is indicative of the social status of the women, their autonomy in making life choices, and how they construct their identities within society.

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### **Women and Workforce: Understanding the Social and Cultural Context...**

India has one of the lowest female labour force participation (FLFP) rates - measured as the share of women who are employed, or seeking work as a share of the female population in the working-age group of 15 to 64 years. At 22.8 per cent in 2019-20, India's FLFP rate is well below the world average of around 50 per cent, and 30.5 per cent in Bangladesh, and 33.7 per cent in Sri Lanka which are in India's neighbourhood. This means that 79 per cent of Women in India above the age of 15 are not even seeking work. In urban areas, this rises to 90 per cent. Moreover, India's gender gap in participation (at 50 per cent) is one of the widest among G-20 economies. In India, FLFP has been on a decline, in contrast to most other regions, particularly since 2004. The decline of women's employment is a matter of concern for sociologists and policymakers alike.

Several studies (Verick, 2014; Gaddis and Klasen, 2014; 2009; Mammen and Paxon, 2000; Goldin, 1994) have looked into the nature of women's participation in the workforce as well as the causes of the low level of female employment in India. One set of supply-side explanations underlines the dominant position of the men in the workforce, which deprives women of opportunities of employment. The lower level of education of women, the low level of overall employment, and the adverse sex ratio of females in the population (Ghosh and Mukhopadhyay, 1984), and the effect of household income on participation are also important determining factors in women's participation in the workforce.

According to some studies, Indian women's employment at lower education levels is dictated by economic necessity. Women with a lower level of education and smaller household income are forced into the labour market due to economic necessity. However, for women with higher education (Klasen and Pieters, 2012) employment is contingent on drivers such as rising household incomes, husband's education, and the stigma against educated women seeking menial work. Therefore, not only is their level of education an important determining factor in their overall employment but, the level of education of the spouse also has a large but, negative effect on their participation (Bhalla and Kaur, 2013). Women whose spouses are educated and employed drop out of the labour forces, especially as marriage and family responsibilities demand a greater proportion of their time.

On the demand side explanations point out that the employment of educated women grew less in the last two decades, leading to many women withdrawing from the labour force (Klasen and Pieters, 2013). In the post-reform economy, informalisation of employment, that led to subcontracting and loose contracting (Unni and Rani, 2000) changed the nature of new jobs created in the



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economy and quality of employment (Chandrashekar and Ghosh, 2007, International Institute for Labour Studies, 2004). Most jobs that were available were poorly paid and contractual in nature, and were either manual or required skills that women did not possess which contributed to unemployment among women.

Studies indicate, most women in India are engaged in part-time work, informal sector, and in the form of non-unionised labour, which is of poor quality resulting in poor outcomes and less incentive to continue in the workforce. Women's preoccupation with the care economy including children and the elderly provides a backdrop to understanding their drop off from the labour market or reluctance to enter the market in the first place. Thus, women make their labour supply decisions not only considering leisure and labour trade-offs but prefer to opt for home-based production of goods and services (Becket, 1965). While wages are a key driver of female employment (Heckman and MaCurdy, 1980), working for a wage is chosen by women only if earnings at least make up for the lost home production (Jaumotte, 2003).

In the light of the above, the present paper argues that women's employment or unemployment is dictated largely by social factors that condition women into reproductive and productive functions. The paper argues that despite the possibilities of outsourcing some part of the care work and participating in gainful employment, women in general and urban women in particular, voluntarily opt-out of the labour market. Secondly, the paper brings out the problematic construction of the public sphere that reinforces gender stereotypes and alienates women from workforce participation. Such construction of public spheres pushes women out of the labour force and confine their existence within the family to the detriment of the economy and society.

#### **Trends in Female Labour Force Participation**

The female labour force participation rate (FLFPR) in the country has fallen from 30.27 per cent in 1990 to 20.8 per cent in 2019-20 as per data from the World Bank. The all-India level male Work Participation Rates (WPR) range between 50-55 per cent from 43rd round (1987-88) to 68th NSS round (2011-12). Corresponding rates for females are in the range of 22-29 per cent. Within this, labour force participation of women in rural areas is much higher than women in urban areas. During the 43rd round of NSS, only 15.2 per cent of females were employed in the urban areas which decreased to 14.7 per cent during the 68th round. Similarly, 32.3 per cent of females were participating in the rural activity which decreased to merely 24.8 per cent in

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the same period. Over the years, the gap between urban and rural areas has narrowed moderately, but most of the convergence has been driven by the fall in participation rates in rural areas. As a result, taken together, female labour force participation rates nationwide have fallen since the mid-2000s.

**Table 1**  
**Employment Status of Urban and Rural Females**  
**for the Period 1987-88 to 2011-12**

Round	Female Work Participation Rates (WPR)		Male Work Participation Rates (WPR)	
	Urban	Rural	Urban	Rural
43rd (1983)	15.2	32.3	50.6	53.9
50th (1993-1994)	15.5	32.8	52.1	55.3
55th (1999-2000)	13.9	29.9	51.8	53.1
61st (2004-2005)	16.6	32.7	54.9	54.6
66th(2009-2010)	13.8	26.1	54.3	54.7
68th (2011-2012)	14.7	24.8	54.6	54.3
PFLS (2017-18)	14.2	17.5	53.0	51.7

Source: NSSO, 68th Round, Report No. 554, Employment and Unemployment Situation in India, 2011-2012 and Periodic Labour Force Survey, 2017-2018, Ministry of Statistics and Programme Implementation, National Statistical Office, Government of India

**Table 2**  
**Type of Employment of Females Workers**

Round	Urban Females			Rural Females		
	R.E	S.E	C.E	R.E	S.E	C.E
43rd (1983)	27.5	47.1	25.4	3.7	60.8	35.5
50th (1993-1994)	28.4	45.8	25.8	2.7	58.6	38.7
55th (1999-2000)	33.3	45.3	21.4	3.1	57.3	39.6
61st (2004-2005)	35.6	47.7	16.7	3.7	63.7	32.6
66th(2009-2010)	39.3	41.1	19.6	4.4	55.7	39.9
68th (2011-2012)	42.8	42.8	14.3	5.6	59.3	35.1
PFLS (2017-18)	52.1	34.7	13.1	10.5	57.7	31.8

Source: NSSO, 68th Round, Report No. 554, Employment and Unemployment Situation in India, 2011-2012 and Periodic Labour Force Survey, 2017-2018, Ministry of Statistics and Programme Implementation, National Statistical Office, Government of India

Note: PS: Principal Status, SS: Subsidiary Status, RE: Regular Employment, SE: Self-Employment and CE: Casual Employment, S.E: Self Employment, C.E: Casual Employment

A study of the nature of employment reveals that casual employment of urban females has continuously declined from 25.7 per cent in the 43rd round to 14.3 per cent in the 68th round except for a marginal increase in the 61st round in comparison to the earlier round. However, there has been a continuous rise in regular employment since the 43rd round, from 27.5 per cent in the 43rd round to 42.8 per cent in the 68th

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round. Self-employment of urban females has also witnessed an increase during the 61st round, after remaining more or less constant.

**Table 3**  
**Share of Female Employment in Different Sectors**

Rounds	Urban Females			Rural Females		
	Agriculture	Manufacturing	Services	Agriculture	Manufacturing	Services
43rd	29.4	27	27.8	84.7	6.9	3.7
50th	24.7	24.1	35	86.2	7	4
55th	17.7	24	34.2	85.4	7.6	4.3
61st	18.1	28.2	35.9	83.3	8.4	4.6
66th	13.9	27.9	39.3	79.4	7.5	5.7
68th	10.9	44	55.1	74.9	16.7	8.3
PFLS	9.1	25.2	43.4	73.2	8.1	8.9

Source: NSSO, 68th Round, Report No. 554, Employment and Unemployment Situation in India, 2011-2012 and Periodic Labour Force Survey, 2017-2018, Ministry of Statistics and Programme Implementation, National Statistical Office, Government of India

Similarly, the proportion of urban women engaged in the manufacturing sector has remained stagnant. Given the export-oriented and liberalisation policies of the government, this stagnancy of urban female employment from the 43rd round to the 66th round is indeed surprising. The major gainer has been the other services. For urban women, employment in services increased from around 28 per cent in the 43rd round to around 55 per cent in the 68th round. It includes both well-paying skilled jobs as well as low-paying unskilled jobs in the private and public sphere. The service sector employment needs to be studied at a disaggregated level to examine the nature of service sector jobs being created for urban women.

**Table 4**  
**Educational Status of Working Females in India**

Rounds	Urban Females					Rural Females				
	43rd	50th	55th	61st	66th	43rd	50th	55th	61st	66th
Not Literate	29.2	30	27.1	30.4	23.1	52.6	54	51.3	55	43.2
Up to Primary	17.5	20.3	17.7	23.4	20.6	39.1	41.6	40.3	44.9	38.4
Middle	11.3	13.1	12.9	16.1	15.4	29	29	29	37.1	29.4
Secondary	15.1	13.4	12.4	12.3	9.7	26.1	25.8	25.7	30.5	22.2
Higher Secondary	NA	14.7	12.4	12.9	9.4	NA	23.4	20.6	25.2	18.3
Graduate & Above	31.5	30.1	27.3	29	25.9	35.1	36.6	31	34.5	29.7

Source: NSSO, 68th Round, Report No. 554, Employment and Unemployment Situation in India, 2011-2012 and Periodic Labour Force Survey, 2017-2018, Ministry of Statistics and Programme Implementation, National Statistical Office, Government of India

Table 4 shows the educational levels of working urban and rural women. In urban areas, WPR is higher for illiterate females than for females

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with higher levels of education except for graduates. For the 66th round, 23 per cent of illiterate urban women were employed, but this is only 15 per cent and 9 per cent for women who have middle and higher secondary education. In the case of urban females with graduate and above levels of education, the WPR declined from around 32 per cent in the 43rd round to 29 per cent in the 61st round and then to 27 per cent in the 66th round. Even for rural women, WPR is higher for illiterate females than for females with higher levels of education. In the 66th round, around 43 per cent of the illiterate rural women are employed, whereas this is only 18 per cent and 29 per cent respectively for women who have higher secondary and graduate levels of education.

Not only is there a huge gender gap in terms of employment in the labour force, but also in the kind of work women are engaged in. A large segment of India's working women (73 per cent of rural women in 2017-18) continue to be engaged in primary sector. While the country is still largely an agrarian economy, conventional wisdom says that with a growing economy, urbanisation, and industrial development, more women should be entering the workforce and into more productive sectors such as manufacturing and services. In India's manufacturing sector's urban women's employment has dropped from 27 per cent in 1983 to 25 per cent in 2017-2018, their employment in service has expanded from 27.3 per cent to 43.4 per cent. Working women have found employment in the service sector and not in the manufacturing sector.

Income too has a dampening effect on female labour force participation rates, with participation rates higher among low-income households due to largely economic necessity. With rising household incomes, participation rates for women start to drop off.

In sum, there has been greater labour force participation of women in rural areas who are illiterate and where household income demands women's contribution to household income. Urban, educated women with sustainable household incomes have dropped off the labour force. This means that the discussion on the falling trends of women's participation in the workforce needs to be contextualised with reference to social, cultural, and religious structures and how women construct their role in the public sphere.

### **Public Sphere and Women's Alienation**

The alienation of women from the public life, public spaces and public sphere is as old as the civilisation. According to Fedrick Engles (1902),

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the first division of labour was between men and women and the earliest exploitation was that of women by men in the setup of a private family.

The overthrow of the mother-right was the world historical defeat of the female sex. The man took command in the home also; the woman was degraded and reduced to servitude, she became the slave of his lust and a mere instrument for the production of his children.

Women were confined to a life of domesticity (Foreman, 1965) and relegated to a life of domestic labour in private sphere which is largely free from the influence of government and laws, separated from the economy and larger society responsible only to members of the household (Habermas, 1962). Capitalism added to the burden of women, making her a wage worker without reducing the burden of domestic labour (Kollantai, 1918). The division of labour and class structures was sought to be reproduced through the private family in a class society (Winslow, 1979). The family enforced authoritarian values, necessary to reproduce the existing values and class structure. Women's oppression was thus neither natural nor biological but arose out of the private family in a class society. The processes of class formation and emergence—the divisions of capital and labour which led to the development of the bourgeoisie and mass proletariat—were intimately bound up with parallel processes of gender.

Feminists contented that the oppression of women is enforced through a variety of family structures (nuclear, extended, single parent family, etc.) which was an instrument of privatised reproduction. However, women are not entrusted with the reproduction of society by the whole of society, but reproduction of family by one half of the family (Foreman, 1965). Apart from biological reproduction of successive generations, women were further entrusted with cultural reproduction of norms that would sustain the existing pattern of subordination. In the scheme of family relationships, women's relationship to biological reproduction rather than production was the basis of her subordination. The primary role of women has been that of a mother and her most important duties were to raise, socialise and educate children to be the future workers or rulers of that society and to ensure that the pattern of domination continued (Winslow, 1979). However, this is not the only role of women. Women have other responsibilities within the family - cooking, cleaning, shopping, repairing, nursing and care of elderly - all done by women, which were all unpaid and under recognised. And housework is firmly linked to the family and to the construction of women's identities in social life.

### **Women and Workforce: Understanding the Social and Cultural Context...**

Non-Marxist scholars while rejecting the claim that family is the agency of exploitation agree that notwithstanding the gains of capitalist developments, women who continue to be victims of severe exploitation were almost uniformly excluded from participating in the public sphere. Liberal, Marxist and radical feminists have all characterised women as doubly alienated in capitalism because of the public/private split that relegates their work as mothers and houseworkers to the home, and psychologically denies them full personhood, citizenship and human rights (Foreman 1974, Goldman 1969, Pateman 1988). This distinction between the public and private spheres and women's exclusion from it, explains why, historically, women had to fight for inclusion in public sphere.

In the Indian context, it is documented that women spend far more time than men. It is important to question if such gender stereotypes about women 'belonging in the home' dominate women's work choices and contribute to the construction of public spaces in such a way that it limits their access to it.

### **Exploring the Indian Context: Women Labour and Private Space of Family**

Post-independent India, adopted a modern western liberal democracy, with equal rights for men and women. This was a giant leap of faith which converted by a single stroke, nearly 49 per cent of India's women population into free and equal citizens of modern democratic society. It placed them on an equal legal pedestal with the prospect of relief from autonomous state machinery (Bardhan, 1989). Further, the Directive Principles placed on the state the responsibility of improving the condition of women. A series of policy initiatives in the 1950s and 60s, along with the changing economic scenario impacted the legal and social status of women. This was seen in terms of legal measures to ensure equal wages for women in state or state-aided employment opportunities, maternity benefits, security in workplaces and reservations or quotas, and the like. Welfare measures for improving the literacy rates, promoting the rights of the girl child, providing aid to mothers also were added to the repertoire of the welfare state. The measures continued to focus on the importance of women as 'equal partners' in production, sustaining a link in cultural norms and producers.

The legal system notwithstanding, women failed to construct an identity independent of the family. According to the Government of India Report (1974) - women in India have roles (of mother, wife, daughter, etc.) but no personality or identity of their own. In India's family system, roles are

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strictly assigned and while there was some inter-sectionality on account of modernising public spaces, the dominant pattern remains unchanged; controlling social functions are prescribed for the males, whereas supportive functions are prescribed for females. Thus, by birth, males are caretakers of resources. They are assigned the primary responsibility of earning, on the other hand, females are primarily family caretakers performing the functions of child nurturing, caring of the aged, and running the household. The social structure classifies the women's roles and her identity is wholly dependent on her relationships with others; an obedient daughter; a faithful wife; a nurturing mother; the all-powerful mother-in-law; the benevolent grand mother. Despite advances, the private space continued to be ruled by the family and caste while the liberal democratic state laid down the rule for the operation of public space.

The notion of fertility plays an important role in the conceptualisation of women's identity. Marriage is regarded as the ultimate goal of a girls' life; an attitude that is inculcated within an Indian family at the time of birth and reinforced throughout her youth. Elders bless young girls and women by wishing them a happy married life, *saubhagyavati bhava* where *bhagya* or good luck is integrally connected with a long life of her husband; or the Sanskrit *putrawati bhava* or the Hindi *doodho nahao poto phalo* which roughly means may you bear many sons. The regional versions of such blessings in different languages across India abound. The notion of the primary value of marriage is further strengthened by the performance of special worships, fasts, and ritualistic observances that are based on a woman's fertility. Thus, festivals like *Vatsavriti*, *Varalakshmi*, *Karwa Chauth*, or such festivals with different names are celebrated by married women across the country. The process of socialisation through rituals and ceremonies, and the use of language (proverbs, blessings, songs) is geared towards emphasising and dramatising the women's - functionality from the point of view of her traditional role and continuity of the existing patriarchal system (Ganesh, 1999). In the schema of things, marriage and childcare assume a position of prominence beyond what may be regarded as rational or reasonable. It is with this baggage that the young female population prepares for the larger life outside the family. While the adolescent boy begins to explore his potential realise himself, the adolescent girl becomes conscious of her temporary status within the family; her vulnerability prepares for the ultimate goals of her life (marriage). She tries to become a non-person (Kumar, 1986) that would help her in negotiating within the private space of the family outside her birth.

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There are also important notions of service or *sewa*, tolerance and self-restraint, adjustment, sacrifice, and docility as part of women's grooming up. Young girls are taught the virtues of submission to authority figures, especially men. They are discouraged from stepping out, except when it has to do with their cultural roles such as in marriages or to religious places, such as temple and when they step out for education or recreation they do so under supervision and explicit consent of the family. Pande (2018) found that 80 per cent of women in India need permission from their husband or other family members to visit a health centre. Both men and women reinforce these attributes using cultural idioms, role models, and norms. These attributes make it psychologically difficult and socially constraining for women to enter any space outside their family. It is only in case of abject necessity, such as economic needs or medical emergencies that women venture outside the safety. In many such cases, employment is also dictated by norms of social structure, for instance, to secure a girl's dowry, finance her marriage, pay off husband or brother loan, etc. Such necessity drives the 'free choices' of women relating to their employment. Unemployment of women is treated as a virtue as it becomes an enabler, which ensures better performance of her more familiar family roles. Hence, educated and employable girls are encouraged not to seek employment, just as girls who are employed are looked upon with suspicion. The aforesaid however it applies to women across age, geography, or economic status. Prioritising family over self and domestic unpaid labour over productive employment is normalised by both men and women and employment is encouraged only under duress. Thus, over 40 per cent of men felt that married women whose husbands earn a decent living should not work outside the home (Coffey, 2018).

An exploratory survey of young collegegoing women in the city of Mumbai found that more than 90 per cent college going women in the city of Mumbai in the age group of 18-21 wanted to work. Employment was, however, contingent on market. Those with lower skills and those with non-technical education felt that they may not be able to get the kind of employment that they wanted. On being asked what kind of jobs they wanted most girls defined it a permanent, decently paying jobs, closer to their place of residence. Among more educated girls, the preference was for government jobs vis-a-vis private sector jobs as it would be better paying, permanent, and also have 'many leaves'. As an interviewee explained, 'paid leaves are important'. They allow us to balance between work and home. The



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burden of balancing work and family weighed heavily even among young women who were yet to enter the field.

Nearly half of the girls surveyed also said that they would work only if their work allowed them to carry on their family roles 'responsibly' or if their perspective 'in-laws' gave them 'permission' to work. One girl said "our parents say, it depends on your in-laws. If they want you can work, but, if they do not, we will also not support you". This was more so among Muslim and Dalit girls than amongst upper caste girls. One young girl interviewed for the survey said "I will feel bad if I had to give up the job, but I will do so willingly for the family (Child)". Another woman said that no matter how helpful her husband would be, "it is only a woman who had to carry the burden of the household". Most of the girls said even if they were to work, they would ensure that they get married as per the family wishes. Love marriages, they told they will amount to "cheating" the family that has reposed faith in them.

The deeply entrenched ideas about gender roles and concerns around the social implications of women's economic empowerment create conditions where women, especially those who are married or have spouses who can support the family either prefer not to enter the workforce or work from home (self-employment). The priority that women give to gender-related care roles is an important contributor to the choice that women make while entering the labour market. A significant proportion of women engaged in household work reported their willingness to accept work if the work was part-time, made available at their household premises regularly. These findings are no different from other studies which showed that 34 per cent of rural women and about 28 per cent of urban women were willing to accept work. About 95 per cent in both rural and urban areas preferred to work regularly at their household. About 74 per cent in rural areas and about 70 per cent in urban areas preferred 'part-time' work regularly while 21 per cent in rural areas and 25 per cent in urban areas wanted regular 'full-time' work (Chaudhary and Verick). Employment among women is contingent on three factors: nature of employment, family needs, and the autonomy that the woman was able to exercise vis-a-vis the social condition that she received.

#### **Negotiating in Public Sphere: Women's Choices**

The course of action women takes concerning their work depends on the adjustments and the negotiations she makes between the private space of the home and the public space of work. This determined her choice of

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entering the labour force as well as the nature of work she undertook. The boundaries between work and family are asymmetrically permeable for men and women. Because of the differences in role expectations and constraints, women tend to have greater spill over from the family domain into the work domain, while men more often have the work domain spill into the family domain

Childbirth and child-rearing emerge as primary reasons why working women chose to drop out of the workforce. A survey of 1,000 working women in New Delhi found that only 18.34 per cent of women continued to work after having a child. Women, therefore, pay what Baker calls child penalty. Motherhood demands complete devotion to child care activities and shapes the employment 'choices'. Even in the case of educated women with skills that would enable a significant output, the employment choices determined by her ability to make domestic arrangements, perceptions of support, and ideas about 'good mothering'.

This adversely affects women's productivity as employees. Even in India's large organised and formal sectors, it is not unusual for women to be denied opportunities because of their marital status. Young married women are viewed suspiciously by prospective employers for demanding more leave and negatively impact productivity because of their family responsibility. Nor is an abdication of family responsibility an alternative. The latter creates a perception of a woman who is unemotional and irresponsible.

### **Market in Private Sphere and Women Labour**

It was assumed that with the advent of global capital and increasing opportunities available to men and women, women would be free from chores of domestic production. Day-care centres, old-age homes, and kindergarten would free women to use their time and talents productively. The increase in literacy among women, better skills, and democratic policy measures, it was presumed that it would contribute to equal employment of women. This would benefit global capital and the welfare distributing state alike.

The economic reforms and the process of privatisation did improve the situation to some extent. The market stepped in to relieve women from responsibilities that are thought to be exclusively theirs. Childcare institutions sprang up in urban centres and towns. According to a study, nearly 30 per cent of the childcare institutions in India were established in the 1990s. In the period beginning 1952, 2.02 per cent (37 organisations) were

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established between 1952 to 1961, 4 per cent in 1962-72, 12 per cent in 1971-82 and the largest, 17.17 per cent were established during 1982-1991 (NIPC, 2012). Most of these childcare institutions were set up in urban areas and by voluntary organisations. However, behind the heartening statistics lies the fact that the market did not significantly ease the burden on women, and or to put it differently, women did not prefer the market economy to fill in the role that the social structure had created for them. They consented to undertake the double burden of work and home. Less than 2 per cent of all pre-school age children in India are cared for in childcare centres. All the rest are in the private family. The majority of children over age 5, when not in school, are cared for within the private family as well.

Interestingly, the social identification of 'family honour', with women further alienated women from entering the market space. Violation of women's bodies is associated with family honour. Growing concerns around the safety of women have become a talking point. High-profile incidents such as the 2014 gang rape of a young medical student in New Delhi, and reports of sexual assault and violence in urban areas, have fuelled the public perception that working women are at risk and the risk is for both the family, and the community.

In the aftermath of the Delhi gang rape, the media (social media and audio-visual communication) brought to the fore a plethora of images that showed a violation of women's bodies. These focussed on the issue of the 'safety of women' in public spaces. Inbuilt in the cause was the premise that the public spaces are "unsafe" and the need is to make it safer for women. Put differently, private spaces of home and family are safe, and venturing out to public space for professional or personal reasons was unsafe unless necessity so warranted. These perceptions of danger, constrain women's autonomy of movement and has direct implications on not just their economic participation but their entire psyche. Hence, women choose to work from home, if needed. And not work at all if economic needs did not demand it.

The state's response to the issue of safety for women has also been structural. Two noteworthy responses emerged. The first was of teaching self-defence for women, and the second was to ensure safety through the use of technological devices such as CCTV cameras in public spaces, provision of 'suraksha' (protection) buttons and emergency connectivity through Wi-Fi with the police, a safety app for smartphones 'himmat', launched by Union Home Minister Rajnath Singh in January 2015, which turns the phone into a panic button (The Indian Express, 2015). Such technology-based solutions

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undermine the fact that all women may not have access to smart phones. It also overlooks the fact that threat to women's security do not come only on the streets. But threats to women's safety, as numerous studies have already shown, can also be found inside the home. According to National Crime Records Bureau data, among rape offenders in 2014, 86 per cent were known to their victims. In Delhi, this number was 96 per cent (NCRB, 2014).

Further such technocratic solutions miss the crux of the problem. As Kavita Krishnana points out, it creates the basis of 'constant surveillance' of women in society. They are watched and their movements are monitored and controlled by their families, by lovers and husbands, or stalkers - and all this watching is often justified with the 'safety' argument. It adds to the existing argument that there has to be a socially acceptable rationale for women's entry into the public spaces - work, schooling, or anything related to their domestic duties like going to market. This public presence too is not without restrictions. It is hinged on time: there are only certain hours of the day where it is acceptable for women to be seen in public spaces; and certain times when it is a strict taboo (Soni, 2016). If at all women needed to venture out they need to be (a) equipped, spending additional time and resources to equip themselves, and (b) they needed to be safeguarded and protected by a benevolent individual and organisation. The former made venturing out more unattractive while the latter was burdensome and often ineffective. It also put the onus of safety on women, who is already heavily weighed down by moral turpitudes. She is expected to be always on a state of "hyper-alertness in a public place. Implicit here is the 'maleness' of the public sphere, where the woman never really fits in without her safety tools (Soni, 2016).

### **Conclusion**

It would not be an exaggeration to say that women are forced to work for the lowest wages, at the worst working conditions; they are the least unionised, they are the last hired and the first fired; women's unemployment is greater than men's and women face sexual harassment on the job. The religious and caste infrastructure cast women in iron mould and modern-day media does not question these moulds. These aspects of women's special oppression cannot be reformed away. They are built into the system - just as is her position in the family, in caste, in religion and in perceptions. Women's lack of participation is symptomatic of not just many barriers they face to enter labour market and to access decent work, but of the social structure that alienates women from their own self and makes them a cog in the process of social reproduction. The need is to address and

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create an identity for women, independent of structures within which they exist in the society, to dismantle systems that endlessly reproduce patriarchy, confront everyday sexism and shift focus towards reclaiming of space, while normalising women's presence.

### End Notes

1. Habermas (1962) Public sphere defined as an area "made up of private people gathered together as a public and articulating the needs of society with the state" as old as civilisation. Habermas idea of public sphere was de-spatialised, yet his model of bourgeoisie civil society is based on communication and exchanges that take place in urban café, saloons etc., where people communicated their ideas as equals. The public sphere spawned new forms of political actions and participatory government. Thus, public sphere is grounded in a physical space. Public space thus becomes a site political practice, social movements, etc.
2. Author Survey for a research project on Urban Women and Work Preferences. In this exploratory study, collegegoing women in the age group of 18-35, in the city of Mumbai were asked a range of questions that were related to their views on employment and their preference.

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## Modelling Mortality Caused by Novel Corona Virus and its Impact in Indian Context

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*Belonging to the family of Corona virus, COVID-19 is declared as a global pandemic causing numerous deaths worldwide. After its emergence in China, the initial cases of the virus in the Indian subcontinent were observed through individuals having travel history. The virus has created an emergency situation due to its ability of being contagious within communities. The Indian Government tackled this situation by imposing phases of lockdown where the mass gatherings were stalled. This paper proposes a mortality rate based mathematical model of diffusion to study the number of deaths caused by the virus, by considering the individuals having travel history abroad as imported carriers (IC) and those infected by these groups within the country as local carriers (LC). Moreover, a country specific parameter population control parameter (PCP) is introduced in this paper representing the combined effects of the measures that were introduced by the Indian Government to control the internal and external dissemination of infection such as screening at airports/ports and country lockdown; along with inbuilt immunity through BCG vaccines among citizens. The research findings are consistent with respect to the present scenario.*

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## **Modelling Mortality Caused by Novel Corona Virus and its Impact in Indian Context**

### **Introduction**

The presence of Corona virus or Covid-19 was first felt in Wuhan, China during December 2019 where few people showed symptoms of acute pneumonia (Singhal, 2020). Since then, it has left researchers and scientists guessing about the symptoms and possible remedies to withhold the effect of the virus within the infected body (Chen, Lu, & Chang, 2020). Covid-19 has resulted in tremendous amount of human life-loss all over the world due to which World Health Organisation (WHO) has declared it to be a pandemic (Bastos & Cajueiro, 2020). This member of the Corona family has created an environment of threat worldwide as it is difficult to identify Covid-19 symptoms which are very similar to common flu such as cough, cold, and breathing problem (Singhal, 2020). Also, in some cases, the symptoms are identified after 7-10 days as the incubation period of the virus is fourteen days (Zhao & Chen, 2020). Covid-19 knocked the gates of Indian subcontinent in the beginning of March 2020 and by May 2020 the toll of positive cases has reached a mark of 40 thousand (Statista, 2020). Some of the preventive measures that are suggested by doctors are frequent hand wash, avoid touching eyes/nose/face, and maintaining social distancing (1 metre or 3 feet) from others (Goyal, Chauhan, Chhikara, Gupta, & Singh, 2020). In order to slower the diffusion rate of Covid-19, the Indian Government initially implemented a lockdown where most of the schools, colleges, other workplaces, public transport, malls, cinema halls, and other areas which involve mass gathering were to stay closed in order to maintain social distancing (Arti & Bhatnagar, 2020).

When the conditions became worse, the government identified few hotspots (where more number of positive cases were observed) and later divided the districts into three zones namely red, orange, and green according to high, medium, and low infectious areas respectively. In light of these decisions by the Indian Government and even by other developed countries, it can be trusted that this virus is socially contagious and spread through community contact (Roques, Klein, Papaix, & Soubeyrand, 2020). Few researchers have started proposing epidemic based mathematical models estimating the number of deaths or number of infective cases, an overview of which is provided in table 1. Since, Covid-19 spreads through community transfer, it can be considered similar to a diffusion process studied under social sciences (Bass, 1969; Daim & Suntharasaj, 2009; Jiang & Jain, 2012). These models make use of hazard rate based internal-external influence and divide the social community into individuals who adopt through external influence and individuals who adopt through internal



influence. Under this study, we extend these concepts to determine the number of deaths caused by Covid-19 in India. Most of the initial cases in India were reported among those individuals who had a travel history to China, Italy, Iran, etc. (Singh & Adhikari, 2020). Such individuals can be termed as imported carriers (IC) who acted as seed of virus in Indian cities and social system. The individuals who contacted the virus after coming in contact with an infected person can be termed as local carriers (LC). These individuals had no travel history but came into contact of imported carriers (IC) or other LC. These include the family members, friends, neighbours, or colleagues of imported/local carriers. Because of the highly contiguous nature of Covid-19, the LC pose a bigger threat to the social system as compared to IC. Another parameter which determined the spread of virus through Indian social system was country specific. It includes Government policies put in place to control the situation as preventive measures and social awareness created by aggressive campaigns run by telecom companies, Government agencies, NGOs (non-government organisations), celebrity endorsements, etc. To counter the spread of infection at external level, the government initiated screening at airports/ports and to check the spread through local transmission (internal), country lockdown was announced to restrict the movement of individuals. This country specific parameter is also related to the immunity levels of Indian people, vaccination program etc. In this paper, this parameter is named as population control parameter (PCP).

A distinguishable fact of this model is the inclusion of PCP representing the effects of restraint put by immunity or lockdown and airport screening initiatives on the diffusion process of Corona virus. This can be justified by the fact that Indians have an inbuilt immunity due to BCG (Bacille Calmette Guerin) vaccine (Times, 2020) and also lockdown/airport screening resulted in less number of deaths.

**Table 1**  
**List of Covid-19 Studies**

Author (s)	Purpose	Analysis Tool
Peng, Yang, Zhang, Zhuge, and Hong (2020)	Estimation of key parameters and predictions of the inflection point and possible ending time for 5 regions in China.	Generalised SEIR (susceptible, exposed, infected, and resistant) model
Wu, Darcet, Wang, and Sornette (2020)	Estimate number of infected cases in China.	Generalised logistic growth model
Zhao and Chen (2020)	Characterisation of COVID-19 dynamics and explicit parameterisation of the intervention effects of control measures.	Susceptible, unquarantined, quarantined, confirmed (SUQC) model

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Author (s)	Purpose	Analysis Tool
Elmousalami and Hassanien (2020)	Comparison of day level forecasting models on COVID-19 affected cases in China.	Time series and mathematical modelling
Bastos and Cajueiro (2020)	Modelling and forecasting the early evolution of the Covid-19 pandemic in Brazil.	SIR (susceptible, infected, and recovered) models
Calafiore, Novara, and Possieri (2020)	Estimating contagion, recovery and death rates due to Covid-19 in Italy.	Modified SIR model
Simha, Prasad, and Narayana (2020)	Strategising the socio-political counter measures to mitigate COVID-19 in Europe and India.	Stochastic SIR model
Roques et al. (2020)	Estimation of the actual number of infected citizens in France during the observation window and to infer the infection fatality ratio.	Statistical inference based SIR model
Chen et al. (2020)	Estimate the ratio of the population that needs to be infected in order to achieve herd immunity.	Time-dependent SIR model
Singh and Adhikari (2020)	Age-structured impact of social distancing on the COVID-19 epidemic in India	Bayesian based SIR model
Arti and Bhatnagar (2020)	Modelling of new corona virus (Covid19) spread in constrained or practical scenario in India.	Mathematical modelling

The second part of the paper deals with the model on mortality caused by Corona virus.

#### Model

In this part, the concept of diffusion model to determine the number of deaths caused due to Covid-19 in India is explained. According to the model, apart from the imported carriers, people are infected by other members of the society who have already acquired the disease.

#### Model Assumptions

- It is assumed that the individuals who are susceptible of catching infection in the social system are fixed. Let it be given by  $X$ .
- The rate of change of the death is directly proportional to both the number of deaths among individuals with travel history from abroad (imported carriers) and the number of people who have been infected after coming in contact with such type of group within the country (local carriers).
- Imported carriers will be more influential in the starting and are expected to decrease monotonically with time.
- The coefficient of death among imported carriers is denoted by  $p$  whereas coefficient of death among local carriers is represented by  $q$ .

Let the impact of Government initiatives and social distancing measures along with population specific characteristics e.g., their immunity be represented by a time dependent function  $r(t)$ . This impact is assumed to be a function of time to take into account the change in Government policies e.g. lockdown restrictions/ relaxations, etc.

### Model Development

The rate of change of the death due to Covid-19 at time  $t$  is given by

$$\frac{dX(t)}{dt} = r(t) \left[ p(X - X(t)) + \frac{X}{X(t)} q(X - X(t)) \right] \quad (1)$$

The first term in equation (1) represents those individuals of social community that have been infected with the virus due to travel history. Whereas, the second term in equation (1) are those individuals who caught infection after coming in contact with an infected person (within India) and possess no travel history. Therefore, "imported carriers" are represented by the first term and "local carriers" are represented by the second term. The coefficients  $p$  and  $q$  correspond to external and internal source of infection, respectively. Moreover, the proportionality is a time dependent function  $r(t)$  which represents the combined impact of virus spread control measures such as country lockdown, travel restrictions, and population characteristics such as their immunity, demographic profile, etc.

Solution of the above equation with initial condition  $X(0)=0$  and assuming  $r(t)=r$  i.e., constant or time independent gives us:

$$X(t) = \frac{X[1 - e^{-(p+q)rt}]}{[1 + \frac{q}{p}e^{-(p+q)rt}]} \quad (2)$$

In next section, we describe parameter estimation for the proposed model on the Covid-19 data and its goodness of fit.

### Data Analysis

The data was accessed from an open source website managed by Indian Government (Statista, 2020). The data consists of the case history of the infective patients under the heads 'confirmed', 'recovered', and 'death' from 1st March 2020 till 31st January 2021. The death column was adopted for performing analysis for the proposed model.

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**Table 2**  
**Parameter Estimation Results**

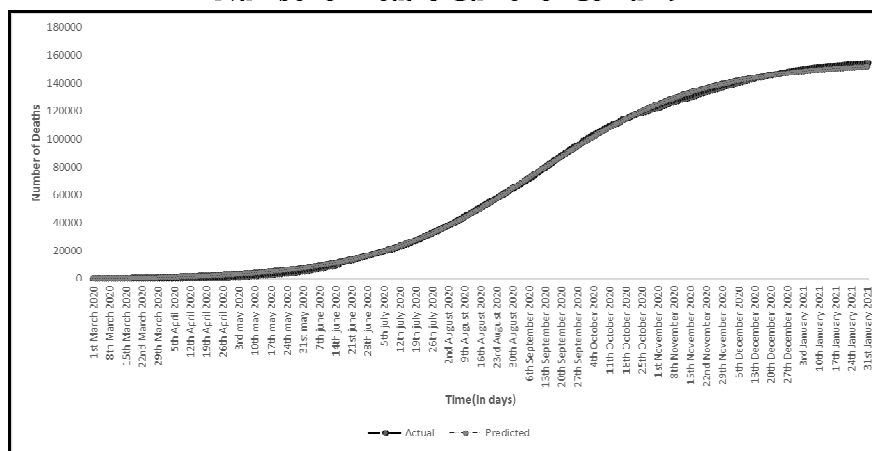
Parameter	Estimate	95 % Confidence Interval	
		Lower Limit	Upper Limit
X	154253.964	153730.531	154777.397
p	.001	-65.762	65.763
q	.133	-15485.501	15485.766
r	.211	-24633.639	24634.061

To estimate the parameters of the proposed model, non linear regression is undertaken. Regression results are presented in Table 2. In order to determine the fitness of the model, we make use of coefficient of determination ( $R^2$ ) and mean square error (MSE). The formula and the results are presented in Table 3. Results clearly depict that the proposed model fit the data well. Moreover, Figure 1 provides a graphical representation of the validation results of the model.

**Table 3**  
**Goodness of Fit Results**

Measure	Equation	Explanation	Result
Coefficient of Determination	$R^2 = \frac{\text{Sum of Squares of residuals}}{\text{Total sum of squares}}$	As the value increases, the more suitable the model is for data.	0.999
MSE (Mean Square Error)	$MSE = \frac{\sum(y_i - \hat{y}_i)^2}{(n-k)}$ ; n represents the number of observations made; k represents the number of parameters estimated	The lower the value, the more the model will match the data.	2032289.041

**Figure 1**  
**Number of Deaths Curve for Covid-19**



### Discussions and Conclusion

The findings from non-linear regression show that the mortality model proposed corresponds very well to the Covid-19 data regarding the Indian subcontinent, as the model explains 99.90 per cent variance in the data ( $R^2$ ). According to the proposed model,  $p$  is the proportion of infected people with a history of travel and  $q$  is the percentage of population who have been infected after coming in contact with a person infected due to travel history. Moreover, the value of  $r$  denotes the part of population that is saved from catching the infection as they have strong immunity via BCG vaccine or due to lockdown/airport screening type of measures imposed by the Government. The value of  $q$  (0.133) is greater than the value of  $p$  (0.001). This is consistent with previous studies that have performed modelling using various diffusion models stating that dissemination through internal influence is high as compared to external influence (Jiang and Jain, 2012). In view of the present scenario, the results are significant, as being declared a contagious pandemic the diffusion through social contact is very high i.e., local carriers are more risky. However, the calculated value of  $r$  (0.116) shows the importance of constraints imposed by Government to avoid mass gathering and control community transfer (Arti and Bhatnagar, 2020). Figure 1 represents the S-shaped cumulative number of death curve, similar to the ones provided in studies applying diffusion models.

The lockdown and immunity factor, which is missing from most of the previous studies, is important to judge Covid-19 spread. Though the country is improving its medical facilities but still avoiding mass gathering is the key to save its population from being infected apart from following the guidelines generated by scientists. For this purpose, the Government imposed a 21 days lockdown on 25th March 2020. With its implementation, it was observed that the death rate did not shoot up and the recovery rate increased. However, filling the loopholes observed in first lockdown, the Government continued the second phase of lockdown on 15th April 2020 for 19 days. This phase was strictly implemented. Same pattern can be observed after declaration of the third phase of lockdown starting from 4th May 2020. The recovery rate shows an increasing trend but still the death rate is under control. This shows the importance of lockdown in fighting with the virus.

The study uses Covid-19 statistics released by the Government to perform modelling of the number of deaths due to the coronavirus. As per the proposed model, the deaths depend on the number of people infected after coming from foreign countries i.e., having a travel history. Such members are called imported carriers. Possessing the capabilities of being

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spread through contact, the population members which are infected in such a way are termed as local carriers. Also, a distinguishing part of the proposed model is the introduction of infection control rate which has somewhat stabled the situation through lockdown implementations. However, since the virus has variable influence according to age of the patient, their medical history, and also the geographical location; these factors are premised to be constant in the model and can be included in future studies. Another limitation faced is that the findings are for Indian community and results may vary for developed economies. Further, the present model can be adopted by researchers to report the situation in their respective country and also suggest some recommendations.

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## **Institutionalising Health through NRHM: A Study of Village Health Committees in Uttar Pradesh**

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*National Rural Health Mission (NRHM), was launched in India in 2005 to provide effective health care facilities to the rural population. Later on, it was renamed as National Health Mission (NHM) after including urban poor. The prime motive behind launching this scheme was to bring about necessary architectural correction in the basic health care delivery system and to improve the quality of health care for those residing in villages, especially the poor, women and children. Under the scheme, Village, Health Sanitation and Nutrition Committees (VHSNCs) and the post of Accredited Social Health Activist (ASHA) for each village were constituted. The paper proposes to analyse the working and role of VHSNCs in one of the backward blocks of Unnao district in Uttar Pradesh (India) and tries to explore why these committees are unable to address the local health issues and bring about the desired change. The paper argues that despite promoting community participation and rural awareness as core objectives of NRHM, people in villages are still struggling to get better health care facilities.*

### **Introduction**

India, a land of villages, has more than 68 per cent rural population. But these villages lack basic amenities like basic education, healthcare

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services, employment opportunities, electricity, good roads and sufficient means of transportation, etc. This has happened despite having plethora of schemes for rural development implemented in rural areas. Health is one such areas which remained neglected. To provide effective health care for those residing in villages, especially the poor, women and children, National Rural Health Mission (NRHM) was launched which is a noble experiment in the direction of improving status of health in the country. The core aim of NRHM is community participation which is in sync with Alma Ata declaration (1978) that emphasised upon peoples' participation in framing policies, programmes which affect their health. NRHM through the involvement of Panchayati Raj has sought to place the management of health care in the hands of local communities. One of the key elements of the NRHM is Village, Health Sanitation and Nutrition Committees (VHSNCs) which are participatory community health forums and act as enablers of participatory action for community health. It has been constituted to take collective action on issues related to health and are meant to provide a platform for improving health awareness and access of community to health services, address specific local needs and serve as a mechanism for community based planning and monitoring. It seeks to improve access of rural people to equitable, affordable, accountable and effective primary health care.

This paper analyses how the VHSNCs connect with the community on various local health issues and take initiatives to enhance people's awareness about the importance of nutritional food items and sanitation. Whether these committees are able to formulate village health plans and arrange monthly meetings to find out the way to implement them will also be a point of analysis.

#### **The Government's Initiative**

Several committees before Independence and in the 1950s made a thrust to improve the level of nutrition, better water supply, sanitation, service infrastructure, training of workers, delivery of services in rural areas and recommended for more investment in the health sector. Health Committees of National Planning Committee set up by Congress in 1938, Bombay Action Plan, Gandhian Plan had highlighted the need of wide network of health services developed by the state. The Bhore Committee report (1946) suggested the formation of village health committees to enhance community 'cooperation' with health authorities and address local health issues. Similarly, the committee headed by S.S. Sokhey (1948)

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proposed to select young men and women from the villages to train them in the basics of community and personal care and hygiene, first aid, recognition of some of the common ailments and use of some simple remedies. After the completion of training, these health workers were supposed to return to their own villages and through illustrations and persuasion, were expected to spread the gospel of healthy communal living and thus take villages a step or two away from their age-long prejudices and superstition on the road to better living. The committee had given thrust to simultaneous training of village youth to engage them in basic rural health and also to set up more medical schools. Interestingly, the report suggested how to include the indigenous method of treatment and the local *Vaidyas* and *Hakims* who were very popular among the rural population. The committee had provided a detailed framework for a formidable health plan and infrastructure for the rural areas.

There are many studies which highlight the reasons for failure of our health planning. Health planning in India has always been according to foreign funding agencies rather than the local need. Health is a very serious issue and cannot be decided by donor agencies (Duggal, 2001). In post-Independence India, the rural health programmes were started in the form of Community Development Programme (1952) under First-Five Year Plan (1952-57) for all-around development of rural areas with provision of medical relief and preventive health services as one of its components. But essentially public healthcare was not in the priority list of this programme. To meet the challenges of child health and nutrition, Integrated Child Development Scheme (ICDS) was launched in 1975. Similarly, a rural health scheme and training of community health workers was launched in 1977. But it took 35 years for the Government to make a comprehensive policy for national health, though various committee reports like Mudaliar Committee (1959), Mukherjee Committee (1966), Kartar Singh Committee (1973), Shrivastva Committee (1975), Simon Committee (1960) which recommended for more trained health workers and better public awareness.

After the 1978 Alma Ata Declaration, India was one of the countries to create village-level health committees. Also, the first National Health Policy (NHP), 1983, had suggested executing many health functions with the help of people themselves. It had also recommended for trained multi-purpose workers of various grades of skill and competence from both the sexes. The policy affirmed that success of the decentralised primary health care system will largely depend on the building up of individual self-reliance and effective community participation. It had also insisted that

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through community involvement and voluntary services the issue of nutrition, water supply and sanitation, environmental protection, immunisation programmes, maternal and child health services and school health programme can be put on priority. In fact, it was implemented in India as a part of the revival of primary health care system in the 1980s, to supervise local health activities with the involvement of community health workers. Universal Immunisation Programme (1985) and Reproductive and Child Health Programme (1997) were launched to reduce infant, child and maternal mortality rates and to promote adolescent health. But this programme was also limited to mother and child welfare. The Government health policies in this period lacked integrated approach towards public health. Similarly, National Health Policy, 2002, remained apathetic towards the issue of rural health. It talked about a better cooperation between Centre and State Governments, training and deployment of medical practitioners, involvement of local self-government in health management, but was least concerned with the health problems faced by rural people and a comprehensive programme to tackle those problems (National Health Policy, 2002).

Local governance is an important aspect of reaching out to the people's need and that is why every policy of rural development in India has suggested for an effective inclusion of people. The NRHM programme, launched in 2005 has made village health committees as its primary unit at the village level. The provision to make village Sarpanch, the chairman of VHSNCs guarantees the crucial involvement of Gram Sabha in the important issues like health, nutrition and sanitation in the village. Gram Sabha, being a statutory body, can play an effective role in preparation of village and community plan because of their close proximity to the people (Second Administrative Reforms Committee Report, 2008). However, the report has been critical to make a separate committee for the people's health in the village under any centralised programme and suggests formulating a committee by Gram Sabha itself.

#### **NRHM and Village Health Sanitation and Nutrition Committees**

To address the long-standing health inequalities in rural society, the Indian Government launched NRHM in 2005. It made provision for equitable, affordable, accountable and effective primary health care facility throughout the country and for this purpose; the mission has made the provisions to constitute Village Health and Sanitation Committee (VHSC) in each village with the slogan 'people's health in their hand'. It has as its key

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component, provision of a female health activist in each village; a village health plan prepared through a local team headed by the health and sanitation committee of the panchayat (Mission Document NRHM). These village health committees are assigned to work as one of the sub-committees of the village panchayat for better health status of the community. The committee has been formed to take collective actions on issues related to health and its social determinants at the village level. They are particularly envisaged as being central to 'local-level community actions' under NRHM, which would develop to support the process of decentralised health planning.

#### **VHSNC: Organisation and Composition**

According to the guidelines of NRHM, proportionate representation from all the hamlets of gram sabha would be ensured in the committee. It should have minimum 15 members which should comprise one elected member of the panchayat especially the woman sarpanch. The woman sarpanch shall lead the committee and persons working for health and health-related services, community members/beneficiaries and representatives from all community, sub-groups, especially the vulnerable sections and hamlets/habitations. If there is no woman sarpanch from that village, then preference should be given to any panch from the SC/ST communities. Accredited Social Health Activist (ASHA), residing in the village shall be the member secretary and convener of the committee. ASHA is community health worker for whom provision was made by Ministry of Health and Family Welfare (MoHFW) as part of the NRHM. The Auxiliary Nurse Midwife (ANM) of the Health Department, the Anganwadi Worker (AWW), representatives of existing community-based organisations like Self-Help Groups, Forest Management Committees, Youth Committees, and school teacher should be included as regular members only if they are resident in that particular village. Other than these members, a more general category of special invitees could be included such as Medical Officer of the local Primary Health Centre (PHC), facilitator of the ASHA Programme, supervisors in Health and ICDS Departments, Panchayat Secretary and Block Development Officer, Zilla and Block Panchayat Member. The members of VHSNCs will be given training from time to time and are supposed to be conducted at the sub-block level. This would orient them on key objectives, functions, roles and responsibilities of VHSNC. Subsequently, they would receive a one-day review-cum-training session every quarter or at least once every six months (Guidelines for the Community Process, NRHM).

### **Functions and Responsibilities of VHSNCs**

According to the guidelines of NRHM, there are fixed responsibilities of the chairperson, ANM, AWW and ASHA. But in general the VHSNC are responsible for the following: (i) to organise meetings to plan for village health, maintenance and inspection of health records like village health register, joint bank account register, pass book and cash book, statement of expenditure, public services monitoring tools and registers, birth and death registers, it becomes a platform for dialogue and action; (ii) to create awareness about nutritional issues to the village community. It will also inform about the significance of nutrition as an important determinant of health and carry out a survey on nutritional status and nutritional deficiencies in the village, especially among women and children; (iii) to identify locally available food stuff of high nutritional value as well as disseminate and promote best practices (traditional wisdom) congruent with local culture, capabilities and physical environment; (iv) to do an in-depth analysis of causes of malnutrition at the community and household levels through ANM, AWW, ASHA and ICDS supervisors and will make people aware of nutritional food habits through Village Health Plan; (v) the committee will monitor and supervise Village Health and Nutrition Day (VHND) to ensure that it is organised every month in the village with the active participation of the whole village. VHSNC members should facilitate mobilisation of pregnant women and children, particularly from marginalised families, facilitate the organisation of and support the ANM, AWW and ASHA in conducting the VHND; (vi) a unique initiative to address the problem of undernourishment is that the committee, with the help of AWW and ASHA, will facilitate early detection of malnourished children in the community; tie up with the nearest Nutritional Rehabilitation Centre (NRC) as well as follow-up for sustained outcome; and (vii) it will also work as a grievance redressal forum on health and nutrition issues. To mark this additional responsibility, in 2011, VHSCs were renamed 'Village Health, Sanitation and Nutrition Committees' (VHSNCs), to expand their role to address nutrition.

The mission through these primary units aims to involve village people in making plan to address their everyday health problems and hygiene in their vicinity. An untied fund of Rs. 10,000 is given annually to the VHSNC. Once the VHSNC has been constituted, a joint account of ANM and Chairperson of the committee should be opened in the nearest bank. It is to this bank that the untied fund of the VHSNC shall be credited. The main purpose of the untied fund is to use it as a catalyst for health planning and

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for executing the plan. Nutrition, education, sanitation, environmental protection, public health measures are key areas where this fund could be utilised.

Several studies have shown that due to lack of awareness and proper training along with poor monitoring, lackluster attitude of officials, health workers as well as the committee members, these basic units have not served their assigned roles (Das et al. 2016; Kumara and Farooquee 2014, Mahanty et al. 2008, Malviya et al. 2013, Semwal et al., Singh and Bhaskar 2012). A comparative study done by public health resource network (2008) on the status of the village health and sanitation committees in Bihar, Chhattisgarh, Jharkhand and Orissa shows that formation of these committees in all these states have some common problems like lack of clarity of the need of such a committee and also the time and discussions among the accountable people, schedule of training, availability of funds, etc. Though the mission document has clearly defined the works and responsibility at every level, it lacks the spirit of making health a public movement, which was highlighted earlier by Sokhey Committee. It had suggested linking health and hygiene practices and awareness programmes with local celebrations and given them the outlook of a movement so that people can easily understand and adopt them without any prejudices.

#### **Objectives**

The paper intends to see the actual working of VHSNCs in the rural areas of Uttar Pradesh. The district of Unnao has been selected for this study since it has 83 per cent rural population and very good connectivity with the state capital Lucknow. Though it borders Lucknow, it has a poor public health infrastructure as there are only two government district hospitals and 16 Community Health Centres (CHCs) in the district for a population of 3,108,367. As per guidelines of NRHM, there should be one CHC per 1,20,000 populations, however each CHC in Unnao serves a population of 1, 94,272. Again, a single PHC in the district covers more than 75 thousand population against the NRHM norm that a PHC should be established for every 30 thousand population. Unnao has total 340 SHCs and each of them serve a total of 9,142 people. As far as Village Health Sanitation Committees are concerned, almost 90 per cent villages have constituted their committees. In this backdrop, this paper focuses upon the conditions and functioning of the committees in the rural areas Unnao district. It also analyses how the VHSNCs connects with the community on various local health issues and takes initiatives to enhance people's awareness about the importance of

nutritional food items and sanitation. Whether these committees are able to formulate village health plans and arrange monthly meetings to find out the way to implement them will also be a point of analysis. It also examines whether these committees maintain the health records of their area and are able to trace the undernourished population, especially women and children, and provide them facilities to overpower these criticalities.

### **Methodology**

The study was conducted during 2017 in 10 villages of Auras block, in Unnao, which comprises 91 villages all total. Since Auras is a backward block, only those 10 villages were selected through simple random samplings which were neighboring to the state capital, Lucknow. The reason for selecting these villages was to find out whether proximity with state capital reaped any benefit for those villages or not as it is easily accessible. The respondents of the study included the members of selected VHSCs along with common people residing in the studied villages. 36 members (43 per cent) out of a total 83 members of the selected committees were interviewed. The interviews were conducted mainly on VHNDs when most of the committee members like ASHA, ANM and AWW were present. Sometimes higher officials like Block level Medical Officers are also present to check the proper monitoring of the VHNDs. It is generally organised either in the primary school premises or at the place well known to the village people. Primary data of the study were collected through in-depth interviews with the committee members and also from women and men of the selected villages. The higher authorities at the block level were approached at PHC and also on two VHNDs in Bariee and Fatehpur Narsa but they have not been very cooperative. Another primary source of this study along with interviews is registers and records related to VHSNCs maintained by ANMs, AWWs, and ASHAs in the selected villages to know about the total number of committee members, conduct of monthly meetings and their detail description, the receiving of fund and their expenditure, the village health plan and suggestion given by higher authorities at their supervision.

### **Findings**

Table 1 provides the demographic profile of the selected villages namely, Bairee, Badadev, Bayarigaon, Fatehpur Narsa, Gerua, Gharghata, Hajipur Gosa, Shahpur Tonda, Shahdoi, and Jamalnagar in Auras block, which is situated almost 60 kilometers away from the district headquarters.

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Auras, with a population of 146043 has only one public health centre. People of 76 villages (84 per cent) still walk 5 kilometers to access any hospital facility. 66 villages (72 per cent) do not have sub-centres. Total literacy rate in the block is 47 per cent. The selected villages for the study are situated 9-12 kilometers away from the block headquarters where the primary health centre is situated and have an average connectivity. Every village has an Anganwadi Centre, (mostly in the school premises), ASHA and ANM, but none of them have health sub-centres in the village.

**Table 1**  
**Demographic Figures of the Selected Villages**

Village	No. of Household	Total population (%)			Literacy (%)		
		Total	Male	Female	Total	Male	Female
Bairee	156	1016	54.4	45.6	58.0	63.2	36.7
Badadev	436	2551	52.8	47.2	41.5	62.5	37.4
Bayarigaon	623	3448	52.5	47.5	46.6	63.4	36.5
Fatehpur Narsa	368	1988	53.2	46.8	43.0	64.4	35.5
Gerua	336	1411	55.0	45.0	50.0	66.1	33.8
Gharghata	245	753	52.8	47.2	54.4	62.1	37.8
Jamalnagar	814	4425	53.8	47.2	58.0	60.5	39.6
Hajipur Gosa	850	4935	54.2	45.8	56.0	56.0	44.0
Shahpur Tonda	604	3362	52.4	47.6	55.2	60.6	39.3
Shahdoi	61	343	51.6	48.4	46.06	59.4	40.5

Source: Data derived from Census data 2011, www.census2011.co.in

It is found in the study that in each village ASHA, ANM and AWW (Aanganwadi Worker) have marked a definite presence in village immunisation programmes, as per the schedule. Usually, every second Wednesday of the month is fixed for this purpose. They organise the programme, call pregnant women and children with the help of ASHA and provide required vaccination. In the supervision of ANM, these teams claim a very good co-ordination and achieve the fixed target of the month, though Uttar Pradesh in general, lags in child immunisation coverage in comparison with other states. But apart from pregnancy, delivery and child immunisation programme, this team does not look into any other health activity such as the distribution of medicine to prevent communicable diseases, measles, influenza, whooping cough, etc. and raising awareness about hygienic habits. ASHA, ANM, and AWW are also a part of VHSNC and are supposed to play a very significant role to make it functional and effective.

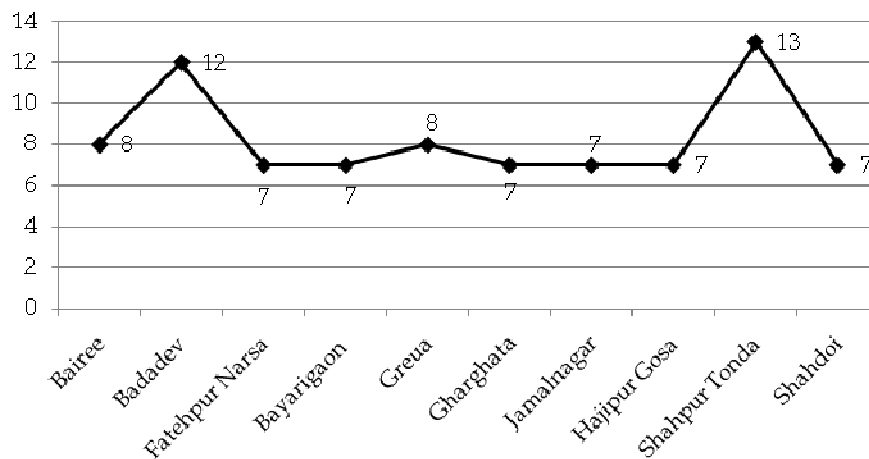
During the field study, it was observed that all these villages have constituted village health committees although the number of members



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varies and in no case exceeds 15, the stipulated number as given in Figure 1. In Bariee village, the ANM replied that the “numbers in the committee might be 8 to 10” when she was asked about total members of the committee. The ASHA of the village had the least information about the committee. Also, the representation of member/ex-employee, school teacher, MHW (Male Health Worker), members from non-governmental organisations in these committees were nil. Similarly, in Badadev village, total number of the members of the committee was 11 according to AWW worker.

**Figure 1**  
**Composition of VHSNCs in the Selected Villages**



Source: Data collected from field survey.

It is therefore found that none of the selected VHSNCs had an appropriate pattern of formation according to the NRHM guidelines. Not a single committee had a retired government personnel or school teacher as its member. Inclusion of these people may enrich the functioning of VHSNCs and their absence is one of the major drawbacks of these committees. No Village Committee has Male Health Worker (MHW) because 65 per cent seats of MHWs are vacant in the state and almost 70 per cent Sub- Centres are functioning without MHWs (Rural Health Statistics 2014-15) and almost all the committees are being run by ASHAs and ANMs.

These village health committees are the primary units to connect the local inhabitants to prepare village health plan along with undertaking routine hygienic activities in their surroundings. Under the NRHM, these committees are decentralised bodies and are supposed to make the primary

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health care facilities accessible to the common people. But only the formations of these units do not guarantee their implementation. In order to make them effective, regular meetings of VHSNCs along with awareness campaign in the villages are necessary.

According to NRHM guidelines, each VHSNC should have at least one meeting every month. ASHA fixes the schedule and venue for monthly meetings of the committee. She draws attention of the committee on specific constraints and achievements related to health status of the village community and enables appropriate planning. It is her responsibility to ensure that meetings are conducted regularly with participation of all members. Additionally, she is assigned a number of other duties like collection of information for village-level planning related to total population of the village, number of maternal and infant deaths, Janani Suraksha Yojana (JSY) beneficiaries, children immunised, malnourished children and those referred to Nutrition Rehabilitation Centre (NRC), number of households and details of families falling under marginalised groups such as those below poverty line, SC/ST category, women headed households, landless families working as daily wage labourers, families living in distant hamlets, migrant labourers and individuals with disability, etc.

The Handbook for members of the committee describes the guidelines for monthly meetings, the key point for discussions and decisions taken in the meetings, and the responsibilities to be assigned to every member. However, during the course of survey it was found that none of the selected VHSNCs had conducted regular meetings either due to lack of awareness or because of indifferent and callous attitude of the responsible officials. On being asked about the VHSNC meeting in their village, AWW of Badadev village said that the meeting was held once several months back when the Gram Pradhan, the chairman of the committee was present; but she could not provide the details of the discussions held in that meeting. Even the ground-level workers like ASHAs, ANMs and AWWs did not have proper knowledge about the formation and functions of the VHSNCs. It is also mentioned that block-level health officers will monitor the activities of the committees regularly but the lack of proper supervision by the higher authorities has made the situation worse. During the discussion, ANMs admitted that there have been hardly any meetings of the committees since its formation in their villages though records are maintained either by them or ASHAs on a quarterly basis which should be done every month. These committees are responsible for campaigning and initiating awareness

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programmes about health and sanitation in the village but they had not done anything. Similarly, the committees are assigned responsibility to prepare village health plan to tackle unhygienic practices, communicable diseases, malnourishment among women and children and open defecation, etc. However, it was found that not a single committee selected for the study had made village health plan and some of them were even unaware of this activity. On being asked about the Village Health Fund (VHF) and its expenditure, most of them could not answer. The monitoring and inspection part of the VHSNCs also seemed to be very weak and none of them did any monitoring and checked the records maintained by ANM, ASHA, and AWW in that area. Also, they do not maintain the record of activities performed by them. In addition to this, none of the VHSNC's chairpersons or any other PRI member attended a VHND (Village Health Nutrition Day), one of the most important activities of the VHSNCs. There is also no evaluation of their work with involvement of the community. The reasons behind such lackluster performance of these committees are ignorance, lack of training and irregular meetings of the committee members.

According to the guidelines of NRHM, there should be regular monitoring and supervision of the work done by VHSNCs by blocks and district level officers. It was found that block-level doctors and sometimes district officers supervised VHND to assess its functioning on the vaccination day organised in the village but not a single committee's meeting, health plans, community awareness programmes had been checked by any officer either of block or district level. This kind of apathy of senior officers reflects the lethargic and callous attitude of the persons responsible at ground level. There were no meeting registers and no feedbacks received from higher authorities. Though some people of the villages are made members of the committee but they neither know about the working of this committee nor about their membership therefore, interviewing them was of no use. It was also found that unawareness of the VHSNC members and chairpersons about their roles and responsibilities was also one of the big reasons behind the failures of VHSNCs.

#### **Awareness of Member about the Committee**

Some members of the committees, apart from ANM and ASHA, were from unskilled background. The VHSCs members were also found to be unfamiliar with their membership. Even ASHA, AWW and ANM were unaware about the specific functions performed by VHSCs. The awareness details about the committee among different stakeholders are given in Table 2.

**Table 2**  
**Knowledge about the Functions of VHSNCs**

	No. of Respondents	Knowledge of VHSCs	Regular Meetings	Village Health Plan	Village Health Fund	Awareness Program
Chairperson	6	2	0	0	0	0
ANM	10	10	2	0	10	0
ASHA	10	2	2	0	0	10
AWW	10	0	0	0	0	0

Source: Data collected from field survey

Chairpersons who are usually Gram Pradhans have hardly any knowledge about its functions and also about responsibilities as chairpersons of the committee. Only 2 out of 6 Pradhans interviewed responded that they were aware of such committees but they said that they did not attend its meetings ever. They were also unaware of village health plan and also of its fund. Again, during the discussions, ANMs who are members of the committee said that they knew about the formation of VHSNC but were unaware of the guidelines such as total number of members, regular meetings, village health plan, etc. In rural areas of Uttar Pradesh, ANMs, not ASHAs, are responsible for village health activities such as vaccination of women and children. Only two ASHAs said that they knew that there are rules to form such committees but only ANMs may have any detailed information about it. None of the AWWs, who work throughout the year and keep records of 0-6 years' children in the village, were aware of VHSNCs. It was also observed that common villagers are hardly aware of any such system working in their villages. They only know about ASHA and ANM didi who visit every month for the vaccination of pregnant women and children. They admit that sometime they go to ASHA to take medicine for fever. Problems like diarrhoea and measles are very common and they manage it on their own as hardly anyone visits them for the treatment.

#### **Major Reasons for Poor Performance of VHSNCs: Analysis**

It would not be an overstatement that the idea of VHSNCs is a noble attempt to address the common health problems at village level and for this purpose a complete layout of this idea was drawn by the policymakers under the NRHM programme. But it is disheartening to see that these primary institutions are failing to achieve the desired result. The very first and the foremost reason behind the underperformance of these committees is the lack of a strong will power. The policy makers have not paid attention towards the activities and performance of VHSNCs. Additionally, the system

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of accountability is not fixed at any level in this programme. Neither the district-level nor the block-level officers ever inquire about the functions of these committees. So, monitoring is nearly absent. Secondly, all VHSNC members need to attend the meetings along with the special invitees like the Block Medical Officer, Block or District Panchayat members, etc. Other members of the village community should also be encouraged though it is not compulsory for them to attend the meeting. Thirdly, there is lack of coordination between the district and block level officers. None of the village ANM or ASHA acknowledged the presence of any block level officer. It reflects that the higher authorities do not have any concern with village level issues and they hardly play any role in raising the health concerns of the common people.

Apart from that, the lack of training of committee members is a major lacuna in this entire programme. Regular trainings can bring about efficiency and also improve the working of its members. None of the selected VHSNCs had given any details about their training, except ASHAs who get one-month training at the time of their appointment while the Committee guidelines proposes regular trainings and capacity building programmes for its members. It shows the unwillingness and negligence of higher authorities. The chairpersons of the committees are usually the sarpanch of the concerned village panchayat. They may be competent enough to check the functioning of the committee, provided they are made of their responsibilities as well as of the committees. The other members also, except of ASHA, ANM and AWW, do not have any knowledge about the committee and its activities.

The responsible persons like ANM and ASHA do not show positive attitude towards the functioning of the committee and this kind of negligence has a negative impact on its performance. It is supposed that the committee should conduct the survey to maintain the records of total population of the village, number of households, BPL families (with information of their religion, caste, language), list of current beneficiaries of services related to health, water, sanitation and nutrition, to ensure access to all sections, particularly the marginalised groups including the disabled. It is also supposed to keep the record of deaths and their causes along with records of disability. Deaths of pregnant woman and children of less than one year of age should be reported and followed by an enquiry with family members. But it was found during the course of the study that the selected VHSNCs were very poor in maintenance of record. Though, some of them have done it but they are not competent enough to maintain it. In order to

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discharge such duties, ASHAs need to be very competent. It is important that the job assigned to ASHAs is not very easy as it requires enough maturity along with regular and rigorous training. As per their responsibilities, they should have good knowledge about primary health, communication skills, and leadership qualities. But under the NRHM guidelines, any woman who has passed 8th standard can be selected as ASHA. It can be said that even this guideline falls short of ensuring competence on the part of ASHAs.

ASHAs in the villages work in an atmosphere of an orthodox rural society and face multiple constraints. They face challenges of social hierarchies that prevent them from speaking on local issues. ASHAs in the villages are immobile and they have to work within their societal limitations. Though ASHAs and AWWs keep detailed information about pregnant women, 0-5 age group children in the village and track their full vaccination. It was found that people who are made members of the committees are called to sign the registers to fill the quorums of the meetings. When question was asked about record maintenance, ASHA, the member secretary, was unaware as to who will maintain such registers. The amount of village fund is also not sufficient to run the requisite works assigned to the committees. Due to ignorance and unwillingness, even the little amount of available village health fund gets unutilised.

It is noteworthy that ours is a country where almost 50 per cent rural population is still illiterate and unaware of government schemes. In fact, these village committees do exist in every village but only on papers. People are not made aware of such programmes so they are unable to find help. VHSNCs in the villages were planned to involve and familiarise the rural population about their own better health, nutrition and hygienic plans with the help of some trained health workers and under the supervision of responsible government officials. It was also felt that the role of NGOs (Non-Governmental Organisations) and civil society is also very relevant in this regard. However, it was observed that many such social organisations are 'urban-centric' and have 'urban-centric' approach. They work, especially for the urban localities. In rural areas of Unnao, the CSOs and NGOs mainly work in the areas of elementary education and legal aid. Members of non-governmental organisations are supposed to be the members of VHSCs so that they can represent the collective needs of the concerned community but their absence from the scene weakens the VHSNCs. Along with formal presence as members of the VHSNCs, persons working with NGOs can also

create and enhance people's awareness about the existence and working of such institutions.

### **Conclusion**

Health being a fundamental public good needs to be critically attended by policy makers. NRHM has been an important step in this direction. It is a programme that draws a wider institutional network and has set its strategies to address the challenges of rural health. Nevertheless, it has faced many constraints. People in the villages are still facing the threats of malaria; diarrhea, typhoid and communicable diseases like tuberculosis, measles, and chicken pox, etc. They are vulnerable to these diseases due to unhygienic and unsafe surroundings. The plan of the village committees to create better health awareness has indeed been a noble initiative but it is not effective due to poor implementation and callous attitude of the concerned authorities. This study shows that due to inactive/indifferent nature of higher authorities towards rural health, VHSNCs have failed to yield desired results.

These institutions were formed under the NRHM programme to address not only the problems of pregnant women and immunisation of children but to provide an accessible destination where any person, whether man or woman, can get instant relief from his/her common disease. They have also been constituted to make the village surroundings safer and hygienic by coordination with the people. A well-planned policy for health and hygienic environment can be put in place if authorities responsible for implementing it pay attention towards their duties. People in the villages do not know about the existence of committees set up under the plans. It is the need of the hour to organise village level camps or programmes to make people aware of this primary institution. It should also ensure that common people of the villages also attend the meetings. For this purpose, the role of civil society and NGOs seems desirable as they can raise the issues of common interest. Further, they should organise campaigns and rallies regularly for the public awareness in rural areas. It should also be made mandatory that at least a block-level officer remains present in such functions. They can ask for registers giving enrollment and grievance details and accordingly the village authorities may take up and resolve the identified issues. It will make ASHAs and ANMs vigilant and updated on the impending issues. Their regular presence can help update the functions of committees and can bring a desirable change.

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Regular meetings could be organised at least twice a month to discuss the health and sanitation issues confronting the village. The Government should also take necessary steps to empower the VHSNCs, by deploying more district, block and village-level officers to check the progress of these committees. This becomes necessary because VHSCs can bring in progressive change in rural areas by following its established norms of good governance. They need to be equipped with best practices that can contribute towards achieving good health and sanitation as desirable goals of human development in rural India.

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## Where are They?: Literacy Level of Scheduled Castes in Karnataka

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*Increased literacy level and educational attainment are vital indicators of progressive development of any society. Scheduled Castes (SC) are comparatively lagging behind in their educational status as well as socio-economic status in comparison to others. This could be attributed to the lack of functional literacy or educational attainment. This depends on inherent skills, competencies and knowledge along with many reasons such as early marriages, false beliefs, rigid caste system, low socio-economic status etc. Though the Karnataka state is striving towards achieving universal literacy at a faster rate, approximately 35 per cent of the SC population is illiterate. The present study analyses the degree of advancement in the literacy and education among SC population in the state of Karnataka.*

### Introduction

Socio-economic progress of a developing nation is measured by the level of literacy along with employment opportunities, health, nutrition and wellbeing among its citizens. Literacy rate is a significant indicator of nation's development besides life expectancy figures in World Bank's evaluation procedure. Literacy is a key skill and a key measure of a

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population's education. From a historical perspective, literacy levels for the world population have risen drastically in the last couple of centuries. While only 12 per cent of the people in the world could read and write in 1820, today the share has reversed (Max and Esteban, 2016). Literacy rate is the percentage of a population of a country who have the ability to read and write. Whereas education is defined as the systematic process of facilitating learning, receiving, acquiring knowledge and skills. India is a vast country comprising 29 States and seven Union Territories with diverse socio-cultural histories, spread over widely varying geographical conditions strive its best to improve the education level of its people through many programmes and schemes. The introduction of the Mid Day Meal Scheme (1995), the Sarva Shiksha Abhiyan (2001), as well as the enactment of RTE (Right to Education Act, 2009) have contributed significantly to improving literacy. However, the educational development in India is skewed with substantial inter-regional differences and prominent disparities between communities/sections of the society. Education assumes the role of creating a better tomorrow (The Hindu, 2012). The World Bank highlights that the gender gap is affected more by social and cultural factors and less by absolute poverty (World Bank, 1997). Considering the importance of education in nation building and economic development, along with Governments around the world, the Central and State Governments in India have been allocating a considerable share of their resources in the field of education. The educational gender gap, therefore, is not only a reflection of the low economic returns to female education but is also a symptom of the entrenched biases that discourage the aspirations of women and other marginalised communities (Lori, 2000).

Scheduled Caste population (16.2 per cent) constitutes a sizeable segment of the population in India (George, 2011). There has been notable improvement among the Scheduled Caste population over a period with regard to their literacy level, education and social status, but still they are far behind the mainstream population. This is of course a cause for concern as still 19.67 per cent points needs to be gained across Scheduled Caste in their literacy rate (The Hindu, 2012). The first impression from the Census of 2011 is that, Karnataka had achieved significant progress in literacy, especially among females. The data showed that the number of non-literates declined by 1.99 million between 2001 and 2011. Study on literacy and regional disparity question that 'neither in terms of absolute levels of literacy nor distributive justice, i.e., reduction in gender and caste disparities, does per capita income have any statistically significant positive bearing upon literacy status of states' (Raju, 1993). Further, almost 60 per cent of the decline in the

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number of non-literates in the state was on account of the decline in illiteracy among women. However, the gap between male and female literacy remained high. While the overall literacy rate in the state was 75.61 per cent, it was 82.84 per cent among males and 68.15 per cent among females especially in backward areas of the state.

The International Dalit Solidarity Network (IDSN) briefing paper on Dalits' access to education<sup>1</sup> says that the illiteracy rate for Dalit children is generally high compared to that of other children. Although the literacy rate has generally increased among Dalits over the last years, the literacy gap between them and other children is still persisting. Commitment to providing basic education for all is a goal enshrined in the Indian Constitution, which guarantees universal compulsory education as a fundamental right for every child in the age group 6-14. Successive development policies and plans have pursued this goal for the last seven decades. With a population of more than one billion it has been an uphill task to keep pace with the expanding demand for basic education.

Correspondingly, progress in education has been uneven, though the overall progress made has been quite impressive. From a mere 18 per cent literacy rate in 1951, the country progressed to around 65 per cent in literacy by 2001. While three out of four children in the age group 6-14 were un-enrolled 60 years ago, only 6-7 per cent of 210 million children remains un-enrolled today. This progress is the result of the implementation of a wide array of programmes across the country for total literacy, universal and quality elementary education for all.

As envisaged in the National Policy on Education-1986, development of education is pursued as a 'meaningful partnership between the Centre and the States'. While the Central Government prepares plans for national level action, the National Development Council, with the representation of Chief Ministers of all States, imparts a national character to the entire process of planning and programme formulation. Besides, State Governments also plan and implement programmes of education development in their respective areas. The Central Government bears the responsibility for maintaining a national integrative character of the education system and contributes to the improvement of quality and standards. National level action for implementation of Education for All (EFA) is currently being pursued through such flagship programmes as Sarva Shiksha Abhiyan, a nation-wide programme of universal elementary education, and Mid-Day Meal Scheme, the world's largest school feeding

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programme, along with programmes under the Integrated Child Development Scheme and the activities of the National Literacy Mission.

**Literacy in India**

According to Census operations literacy is defined as the ability to read and write with understanding in any language. The Census report (2001) reveal that at the beginning of new millennium total literacy rate in India stands at 65.38 per cent, with male literacy level at 75.85 per cent and female literacy level at 54.16 per cent. There has been only marginal increase in literacy level from the last census in 1991 (literacy level was 52.21 per cent). The pace of progress in literacy rates, as revealed by decennial censuses, is very slow in India. Between 1961 and 1991, a span of 30 years, literacy rate has gone up by a mere 23.9 percentage points, from 28.3 in 1961 to 52.21 in 1991. From 1991 to 2001 there is 13.36 per cent increase (Table 1). However, the literacy scenario in India is characterised by wide inequalities between the general population and SC population. The female literacy rate is still low in comparison to male population at all India level.

**Table 1**  
**Literacy Trends for Scheduled Castes in India (Percentage)**

Year	Total			Scheduled Castes			Differences		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1961	34.44	12.95	24.02	16.96	3.29	10.27	17.48	9.66	13.75
1971	39.45	18.72	29.46	22.36	6.44	14.67	17.09	12.28	14.79
1981	46.9	29.85	43.67	31.12	10.93	21.38	15.78	18.92	22.29
1991	64.13	39.29	52.21	49.91	23.76	37.41	14.22	15.53	14.8
2001	64.84	75.26	53.67	63.75	41.72	52.87	1.09	33.54	0.8
2011	82.14	65.46	74.04	66.64	41.9	54.69	15.5	23.56	19.35

Source: National Commission for SCs & STs

**A Cursory Look at the Educational Scenario in Karnataka**

An analysis made by Ahamed and Honakeri found that literacy rate is an important indicator which signifies the educational development of any state or community (Ahamed and Honakeri, 2014). The literacy rate among Scheduled Caste population in Karnataka during 2001 was 52.87 per cent. It has improved by 12.46 per cent points during the period 2001- 2011. In the year 2011, the literacy rate of Scheduled Caste enumerated at 65.33 per cent. Disparity Index is also calculated in order to know the disparity level of Dalits literacy rate to the state's literacy rate. The disparity level of Scheduled Caste in terms of literacy rate stood at 0.79, indicating that still 0.21 level of parity is still to be achieved. Gradually over the years, the disparity index

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has improved, reaching it closer to parity in the state. In 2011, the disparity index is calculated as 0.86 in the state. Therefore, over the period 2001-2011, there has been an improvement of around 0.07 per cent points in disparity index of Scheduled Caste's literacy rate. The Gender Disparity Index (GDI) has improved by 0.11 per cent points and the Regional Disparity Index (RDI) has seen an improvement by 0.10 per cent points in the state (Ahamed and Honakeri, 2014).

The Karnataka state is growing at a faster pace and its growth is largely dependent upon the knowledge base of the society which is the educational attainment and not merely literacy level. Special prominence should be given to education, which is already been an integral part of its economic planning. Right to education has been recognised as one of the Fundamental Human Rights and it can be ensured only through universalisation of primary education. In addition to this, it also encompasses the obligation to wipe out discrimination at all levels of the educational system and to set minimum standards and to improve quality of education. The progress of education development has to be viewed from the perspective of redressing the disparities and imbalances in the educational indicators as well as promoting skills and competencies for sustainable development. Further, the Eleventh Five-Year Plan encompasses the objective of achieving faster and inclusive growth. However, the disparities are widespread across the community, regions and states of the country. In this context, the paper analyses the state of Scheduled Caste population in Karnataka and related regional and gender disparities in the state.

#### **Literacy: Karnataka Scenario**

The data regarding the SCs literacy rate are not reported separately during the decadal Census report of 1951, 1961 and 1971. In 1981, the literacy rate of SCs has been consistently lower than that of the general population. It was 27.62 per cent in 1981; increased to 38.10 per cent in 1991 and further increased to 52.87 per cent in 2001. The literacy rate for the total population was 46.21 per cent (1981), 56.04 per cent (1991) and 66.64 per cent (2001). As per the 2011 census, Karnataka had literacy rate of 75.60 per cent, with 82.85 per cent of males and 68.13 per cent of females in the state being literate. As far as literacy rate of Scheduled Caste is concerned, according to the 2011 report, literacy rate of SC's remains in 65.33 per cent with 74.03 per cent of males and 56.58 per cent of females. The gap between the literacy rate of the

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general population and the SC literacy rate has been declining but not as rapidly as it is envisaged.

The gap in 1981 was 19.59 percentage points, which fell to 17.98 in 1991 and declined further to 13.83 in 2001. Scheduled Caste literacy rates have been increasing at a faster pace between 1981 and 1991. The rate increased by 10.48 percentage points and by 14.77 in 1991-2001 and 21.06 in 2001-2011.

**Table 2**  
**Overall literacy Rate of Karnataka 1951- 2011(Percentage)**

Year	Karnataka Overall				Scheduled Castes			
	Persons	Males	Females	Decadal Growth	Persons	Males	Females	Decadal Growth
1951	20.60	N.A	N.A	-	-	-	-	-
1961	25.40	36.20	14.20	4.80	-	-	-	-
1971	31.50	41.60	21.00	6.10	-	-	-	-
1981	38.50	41.60	21.00	7.00	27.62	39.38	15.48	-
1991	56.00	67.30	44.30	17.50	38.10	49.69	25.95	10.48
2001	66.64	76.10	56.87	10.64	52.87	63.75	41.72	14.77
2011	75.60	82.85	68.13	8.94	65.33	74.03	56.58	21.06

Note: Literacy rates for 1951, 1961 and 1971 related to the population aged five years and above. The rates for the years 1981 to 2011 related to the population aged seven years and above.

Source: Census of India 2011 - Provisional Population Totals

**Growth of Literacy Rate in Karnataka**

Table 3 shows literacy rate and gap in rural and urban SC's during the year of 1991, 2001 and 2011. In 1991, the literacy rate was 38.06 and it was increased with 14.81 per cent improvement in 2001 followed by 12.46 per cent in the year 2011. However, the table also depicts differential progress among male and female literacy rate. In 1991, the gender gap was 27.76 per cent; it is reduced to 5.74 per cent in the year 2001 and further to 5.03 per cent in the year 2011. The table also brings out some differential progress among rural and urban literacy rate. In 1991, the rural and urban gap was 1.57 per cent, reduced to -2.84 per cent in the year 2001 followed by reducing rate of -12.03 per cent in the year 2011. Over a period of two decades, there were 27.27 per cent improvements in the literacy rate among the SC's in the state which was higher than state literacy improvement rate of 19.60 per cent.

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**Table 3**  
**Growth of Scheduled Castes Literacy in Karnataka (Percentage)**

Census year	Literacy Rate (Per cent)			(Improvement Points)	
	1991	2001	2011	1991-2001	2001-2011
<b>Rural</b>					
Male	43.21	58.71	69.98	15.5	11.27
Female	19.23	35.86	50.82	16.63	14.96
Total	31.42	47.25	60.44	15.83	13.19
<b>Urban</b>					
Male	70.05	78.32	84.08	8.27	5.76
Female	47.64	59.88	81.36	12.24	21.48
Total	59.18	69.27	77.43	10.09	8.16
<b>Combined</b>					
Male	49.69	63.75	74.03	14.06	10.28
Female	25.95	41.72	56.58	15.77	14.86
Total	38.06	52.87	65.33	14.81	12.46
<b>Gender Gap</b>					
Male	26.84	19.61	14.10	7.23	5.51
Female	28.41	24.02	30.54	4.39	-6.52
Total	27.76	22.02	16.99	5.74	5.03
<b>Rural-Urban Gap</b>					
Rural	23.98	22.85	19.16	1.13	3.69
Urban	22.41	18.44	2.72	3.97	15.72
Total	1.57	4.41	16.44	-2.84	-12.03

Source: Provisional Population Totals, Census of India 2011, Paper 2, Volume 1 of 2011, Department of Secondary and Higher Education, Ministry of Human Resource Development, Govt. of India. Census of India 2001, Computed from Census of India 1991 and Union Primary Census Abstract Scheduled Castes, 1993.

Table 4 depicts the district wise progress achieved in the literacy rates in 2001 and 2011. Analysis of comparison across districts, the highest gain in the literacy rate is perceived in Kolar with an increase of 33.64 per cent in 2011. Koppal is lagging behind in the gain rate with the improvement of 12.25 per cent followed by Bijapur with 13.73 per cent increase, notably these two districts are part of Northern Karnataka which presumably indicates that literacy gain in northern Karnataka is comparatively less than the districts of south Karnataka. The state literacy rate in Karnataka is 75.60 higher than SC literacy to the point of 10.27 per cent. However, decadal growth is higher among the Scheduled Caste with the 12.46 per cent increase whereas overall state growth is only 8.96 per cent. The rate of 3.5 per cent improvement observed among the SC's literacy. The coefficients of variations (CV) over the years have reported a declining trend in the literacy rate of SCs in the state. Among all the districts of the state it has declined from 21.15 per cent in 2001 to 11.81 per cent in 2011. There are eight districts that show the improvement more than 30 per cent which indicates these districts pay more attention on education of Scheduled Castes. However,



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there are 10 districts close to this figure also showing improvement of more than 25 per cent.

**Table 4**  
**Progress of Scheduled Castes Literacy Rate (District wise)**

Districts	2001		2011		Improvement	
	Karnataka	SC's	Karnataka	SC's	Karnataka	SC's
Belgaum	64.21	41.40	73.48	67.79	9.27	26.39
Bagalkot	57.3	39.60	68.82	58.94	11.52	19.34
Bijapur	57.01	45.90	67.15	59.63	10.14	13.73
Bidar	60.94	34.10	70.51	63.40	9.57	29.30
Raichur	48.81	21.50	59.56	53.44	10.75	31.94
Koppal	54.1	47.50	68.09	59.75	13.99	12.25
Gadag	66.11	38.00	75.12	62.91	9.01	24.91
Dharwad	71.61	50.30	80	73.46	8.39	23.16
Uttara Kannada	76.6	50.20	84.06	77.08	7.46	26.88
Haveri	67.79	42.50	77.4	65.55	9.61	23.05
Bellary	57.4	30.10	67.43	58.60	10.03	28.50
Chitradurga	64.45	35.10	73.71	66.17	9.26	31.07
Davanagere	67.43	32.70	75.74	63.66	8.31	30.96
Shimoga	74.52	39.80	80.45	68.36	5.93	28.56
Udupi	81.25	46.20	86.24	78.56	4.99	32.36
Chikmagalur	72.2	35.20	79.25	67.62	7.05	32.42
Tumkur	67.01	37.00	75.14	66.23	8.13	29.23
Bangalore	82.96	57.30	87.67	78.56	4.71	21.26
Mandya	61.05	39.10	70.4	66.76	9.35	27.66
Hassan	68.63	35.00	76.07	66.51	7.44	31.51
Dakshina Kannada	83.35	54.90	88.57	75.90	5.22	21.00
Kodagu	77.99	45.70	82.61	72.70	4.62	27.00
Mysore	63.48	35.70	72.79	66.59	9.31	30.89
Chamarajanagar	50.87	33.80	61.43	61.64	10.56	27.84
Gulbarga	50.01	25.20	64.85	54.99	14.84	29.79
Yadgir* (Gulbarga)	0.00	39.90	51.83	43.30	51.83	-
Kolar	62.84	37.00	74.39	70.64	11.55	33.64
Chikkaballapura* (Kolar)	0.00	-	69.76	59.70	-	-
Bangalore Rural	64.7	35.60	77.93	68.64	13.23	33.04
Ramanagara* (Bangalore Rural)	0.00	-	69.22	64.38	-	-
C.V.(per cent)		21.15		11.81		

Note: \*Newly created districts during 2001-2011 carved out from old districts.

Source: Office of the Registrar General and Census Commissioner, India.

Provisional Population Totals, Census of India 2011, Paper 2, Volume 1 of 2011 and Census Report of 2001.

Education of women plays a very important role in the overall development of society. It not only helps in the development of half of the human resources, but also improves the quality of life at home and outside (Prabhakar, 2016). However, from the available data it can be inferred that

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gap between male and female literacy remained high in the state. The overall literacy rate in the state was 75.61 per cent, 82.84 per cent among males and 68.15 per cent among females in 2011. The overall gap had narrowed from 19.23 percentage points in 2001 to 14.73 percentage points in 2011, but the gap was more than 19 percentage points in Bagalkot, Bijapur, Raichur, Koppal, Yadgir, Gadag and Gulbarga districts of Northern part of Karnataka. These are contiguous districts in north Karnataka, which are backward districts of Karnataka. The extent of the gap clearly showed that Karnataka's problem of illiteracy was inherently related with gender. In Bijapur, for instance, where male literacy was 77.10, one percentage point above the state average male literacy, the female literacy was 12 percentage points below the state average literacy rate of 68.13 per cent. A couple of literature also bring out the state of gender disparity and the rural and urban gap in the literacy level of the Scheduled Caste population. Waris and Viraktamath (2013) in their paper explained that there was a wide gender disparity in the literacy rate in India. The effective literacy rates (age seven and above) in 2011 were 82.14 per cent for men and 65.46 per cent for women. The Census data provided a positive indication that growth in female literacy rates (11.8%) was substantially faster than in male literacy rates (6.9%) during the period 2001-2011, which means the gender gap is perceived to be narrowing down. Suresha and Mylarappa (2012) in their study bring out the fact that the literacy level of SCs in Karnataka was higher than the all-India SC literacy level with reference to both female and total literacy in 1991. In 2001, the SC literacy rate in Karnataka was lower than the all-India SC male, female and all, which was a matter of great concern.

A study by Ahmed and Honakeri (2014) revealed the fact that in Karnataka the rural literacy rate has always been lower than the urban literacy rate in all the Census periods.. Table 3 reveals the fact that rural areas have gained more in literacy rates than in urban areas over the period. Rural literacy has increased at the rate of 13.19 per cent, as compared to 8.15 per cent in urban areas during 2001 to 2011.

Azim Shaikath argued that the Hyderabad-Karnataka (HK) region is one of the most neglected areas in the development of education not only comparison in Karnataka but also in India. Though there are few historical reasons for the backwardness of the HK region, efforts in the development of literacy are not a part of history. There are 4,06,47,322 literates (75.33%) and 2,04,47,975 illiterates (24.67%) in Karnataka in 2001 out of the total population. Out of the total literates, 62.08 per cent are in south Karnataka and the rest in north Karnataka. Karnataka still has 1.32 crores illiterate

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people. Unless the state makes sincere efforts to eradicate illiteracy, these sections of the population will not be included in the socio-economic sphere of human activity (Azim, 2005). In another study Suresha and Mylarappa states that, as many as 15 districts (nine in the north and six in south Karnataka) have a literacy rate that is below the state average while five districts of the Hyderabad-Karnataka region are below the all-India literacy rate in respect of total, male and female literacy levels (Suresha and Mylarappa, 2012). North Karnataka, especially Hyderabad-Karnataka region performed poorly in several educational indicators. Dr. D.M. Nanjudappa High Power Committee Report (2002) stated that, wide variations in the literacy rates across the districts and talukas of Karnataka were noticed. There was a distinguishable progress in the literacy rates of the districts between 1991 and 2001 as per Census data. The literacy rate of Karnataka has shown an increasing trend from 56.04 per cent (1991) to 67.04 per cent (2001). North Karnataka regions have recorded low literacy rate and despite improvements still lag behind the state average literacy rate.

**Conclusion**

Considering the available data numbers on the literacy level of Scheduled Castes, it becomes important to understand how far they have improved within the stratification of caste system. Policies and provisions were initiated for SCs and notable progress has been seen (according to the data 1991-2001-2011) in the literacy rate among them but they are far behind the general population. Nevertheless, a small percentage of the SCs has shown an upward trend in the social mobility and are also been placed in high administrative positions. The data given by the Reports of Commissioner of SCs and STs and the National Commission of SCs and STs show that in 1993 the representation in group A posts (government, public sectors and banks) was found to be 7-10 per cent, 9-14 per cent in group B posts, 13-19 per cent in group C posts and 21-23 per cent in group D posts. The data depict that progress has been seen 1965 onwards, but it is not satisfactory in higher positions (group A and B), while group C positions have been taken up well and group D posts have exceeded the quota intake. The question now is, why the quota of positions in group A and B is not filled by the SCs? The only possible answer that can be given is, there are certain basic educational qualifications that are required to become eligible for a particular position under group A and B, and the eligible people are not available to fill in the posts among the Scheduled Caste people.

### **Where are They?: Literacy Level of Scheduled Castes in Karnataka**

It is well known fact that literacy plays a vital role in socio-economic progress of a nation along with employment opportunities, health, nutrition and wellbeing. World Bank evaluates the success of a developing country using literacy and life expectancy figures, so literacy rate of a country is very significant for nation's development. In fact, it is also understood that literacy rate is the percentage of people of a population of a country who have the ability to read and write. At this point, it is essential to understand that only the ability to read and write do not ensure an individual's development. Even though, literacy rate is considered as an indicator to measure nation's development, it is the functional literacy or the educational attainment that defines the actual development. The successful completion of a level of education refers to the achievement of the learning, acquired knowledge, skills and competencies. Educational attainment raises creativity, aptitude, productivity, promotes self-employment and entrepreneurship thereby ensuring economic security and social growth. Educational attainment intends to enhance the overall personality of an individual; it influences the thinking, attitude and the behaviour of an individual in all its manifestations. Welfare of a community needs healthy and literate people and that literacy should be functional which indicates that an individual is able to efficiently discharge his economic, social and civic duties, raise the standard of living and his quality of life.

Therefore, it may be concluded that though literacy rate of Schedule Caste population in Karnataka has shown a progress, yet it is not at par with general population of the state. It can be understood that literates are only able to read and write and literacy may not contribute to their overall development. Mere literacy is not going to lead to employment, economic security and social status of Schedule Caste people. Hence they lag behind in socio-economic and political sphere. Based on the literacy statistics, it cannot be concluded that a community or a population or nation is developing; on the other hand it is the functional capacity of the people which empower them to grow. Thus, it can be proposed that the government, stake holders, policy makers, thinkers, reformers seriously advocate and work towards bringing in functional literacy and educational attainment among the Scheduled Caste population for their holistic growth and development.

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## Assessing Elementary Education in Madhya Pradesh: A State Level Analysis

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*Elementary education in MP is characterised by high rates of non-enrolment, dropout and low level of educational achievements. Present study focuses its analysis on supply side aspects of elementary education of state using District Information System for Education 2013-14 data. The study reveals that enrolment in elementary school in MP is low as that of national average. The availability of various infrastructure is better than the national average. It also shows that there is higher number of single teacher schools and low percentage of female teachers. The Scheduled Caste concentrated districts are performing better in MP than the Scheduled Tribe concentrated districts. Therefore for the improvement of elementary education in the state, the number of teachers should be increased particularly female teachers. The infrastructures in schools of tribal dominated regions of MP need to be enhanced for strengthening the education system.*

### Introduction

The Indian Constitution recognises education as one of the essential and vital obligations of the state. Under the Directive Principles of State Policy (DPSP), Article 41 directs that 'state shall within the limits of its economic capacity and development make effective provisions for securing the rights to work, to education and to public assistance in case of

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unemployment, old age, sickness and disablement and in other cases of unreserved want' (Pandey, 2002). However, different socio-economic barriers like lack of adequate resources, disproportionate increase in population, denial of education to girls, culture of poverty and illiteracy, and Scheduled Caste (SC), Scheduled Tribe (ST) and Other Backward Classes (OBCs) category students' parents indifference towards education had not yielded satisfactory progress in elementary education. It is a matter of concern that even after more than 70 years since the inception of the Indian constitution, the constitutional directives envisaged in Article 41 remains unfulfilled. The Noble Laureate Prof. Amartya Sen had rightly observed that primary education continued to remain as a gray land despite the substantial progress made by higher education in India (Chauhan, 1997).

India has taken long strides in the spread and development of educational facilities especially during the plan period for the last 50 years. As a result, during 1961 only 13 per cent of people could read and write with understanding. From 1991-2011, the percentage rose from 52 per cent to 74 per cent. But still hundreds of millions of Indians continue to be deprived of the opportunity to learn. International comparisons give another useful view of this bleak picture. In vast as well as heterogeneous country like India, the progress is insignificant when one compares with China, Indonesia, Sri Lanka, Brazil and Mexico.

The objective of this study is to analyse the conditions of elementary schools in the state of Madhya Pradesh (MP) with the help of the data available from District Information System on Education (DISE), 2013-14, NUEPA, New Delhi. The data of Census of India 2001 and 2011 have also been used for comparing the level of achievements in this study. School Infrastructure Index has also been computed for districts of MP to study the inter-district availability of infrastructure in elementary schools. The condition of MP state has also been compared with other Empowered Action Group (EAG) states (Uttar Pradesh, Bihar, Odisha, Chhattisgarh, Rajasthan, Uttarakhand, and Jharkhand) to assess the performance of MP among the north Indian states in providing elementary education.

### **Enrolment, Physical Infrastructures and Teachers in Schools of Madhya Pradesh and EAG States**

The poor performances in attaining higher literacy rates could be viewed from the supply as well as demand side. The supply side aspects include availability of schools in the vicinity, facilities in the school, teacher quality, quality of education, etc. On the demand side the problems are high

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opportunity cost, high cost of education, low returns of education, etc. Since primary education is now a fundamental right in India, the stress is often on the supply side factors though demand factors also play an important role. Moreover, the demand side factors are directly linked with economic development provided a threshold level of development has been achieved with reasonable equity across regions and socio-economic groups. The present paper focuses on the analysis of supply side factors, considering its importance in developing countries like India.

The enrolment of children in the schools to assess their participation in the formal education is the pivotal factor. Girl's enrolment in elementary education in MP is same as that of national average i.e., 48.3 per cent. But in Rajasthan and Uttarakhand, it is lower than the national average. The transition rate (from primary to upper-primary) of MP is about 87.4 per cent which is lower than the national average of 89.9 per cent. The 'transition rate' signify that out of 100 students passed out from primary school, how many of them get enroll in upper primary schools. Other EAG states like Bihar, Jharkhand, Uttar Pradesh also have lower transition rate than the national average. The net enrolment rate for primary and upper primary school for MP in 2013-14 is 94 and 76 which is higher than that of national figure of India. The net enrolment ratio for primary and upper-primary schools in Rajasthan and Uttar Pradesh are lower than that of India. Overall the condition of MP in terms of enrolment in other EAG states is slightly better.

**Table 1**  
**Enrolment and Transition Rate in Elementary Schools among EAG States (2013-14)**

Enrolment	India	Bihar	Chhattisgarh	Jharkhand	Madhya Pradesh	Odisha	Rajasthan	Uttar Pradesh	Uttarakhand
Girls' Enrolment	48.4	49.8	49.1	49.3	48.3	48.5	46	49	47.6
Transition Rate	89.9	86.2	93.1	80.2	87.4	88.8	88.7	76.9	95.9
Net Enrolment Ratio (Primary)	88	91.6	93.8	96.5	93.66	89	79.5	87	83.5
Net Enrolment Ratio (Upper Primary)	70.2	79	76.8	79.7	76.14	63.8	62	57.2	63.4

Source: District Information System on Education, 2013-14.

To ensure proper teaching and learning environment schools always require certain basic amenities or facilities that are directly correlated with the enrolment and retention of children in the schools. These basic amenities are



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road connectivity, playground, boundary wall, girl's toilet, boy's toilet, drinking water, midday meal, electricity etc. The road connectivity of elementary schools in MP is quite impressive. About 90.6 per cent elementary schools are connected with all weather schools, which is slightly higher than the national average of 89.1 per cent. But Jharkhand and Rajasthan are lagging far behind in this parameter. In Jharkhand, only 51 per cent of elementary schools are connected with all weather roads. Playground is also essential for elementary schools. In 2013-14, only 58 per cent of elementary schools in India have playground facilities. The condition in Jharkhand and Bihar is poorer than national average. In MP, more than 60 per cent elementary schools have playground facilities. Even in India, elementary schools do not used to have boundary wall. In 2013-14, only 62 per cent of elementary schools in India have boundary wall and in case of MP, it is 44 per cent only. About 85 per cent of elementary schools in India have girl's toilet. Among the EAG states, the condition is better than national average except Bihar, Chhattisgarh and Odisha. In case of boy's toilet also, the condition in MP is better than the national average. Only figures of Bihar and Jharkhand are lower than that of national average. In all EAG states, the facility of drinking water is better than the national average except Bihar and Jharkhand. The condition of midday meal in EAG states is quite good. About 89 per cent of elementary schools in India are providing midday meal to their children. All states in EAG are performing well than all-India average except Uttar Pradesh, where only 83 per cent elementary schools are providing midday meals to their students. The percentage of elementary schools in India having electricity is low. It is only 52 per cent in 2013-14 at all India level. Among the EAG states, only Uttarakhand has a figure above national average.

**Table 2**  
**Basic Amenities in Elementary Schools (%) among EAG States, 2013-14**

Basic Amenities/ Facilities	India	Bihar	Chhattisgarh	Jharkhand	Madhya Pradesh	Odisha	Rajasthan	Uttar Pradesh	Uttarakhand
Schools with All Weather Road	89.1	84.6	93.3	51.2	90.6	87.2	76.5	96.7	78.5
Schools with Playground	58.1	34.2	49.5	32	60.4	29.7	48.9	71.5	57.3
Schools with Boundary wall	61.9	52.9	57.2	26.9	44.2	65.8	82.5	68	80.5
Girls' Toilet	84.6	70.2	80.1	84.8	88.7	68.9	96.1	97.1	92.3
Boys' Toilet	94.4	80.1	97.3	89.6	97.3	95.3	98.1	99	99.3
Drinking water	95.3	92.3	95.6	91.2	96.1	96.8	96.3	98.2	95.8
Midday meal(MDM)	88.6	95.5	98.6	97.5	97.1	97.5	97.7	83.1	97.9
School with electricity	51.7	8.1	51.5	12	24.3	26	50	39.2	65.3

Source: District Information System on Education, 2013-14.

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In India, 5 per cent of elementary schools are single classroom schools. All EAG states are in better position than national average including Madhya Pradesh. There are about 28 students per classroom in India in 2013-14. In Madhya Pradesh, the situation is better; it is only 25 students per classroom in MP. But the condition in Bihar is much worse. It has 58 students per classroom, so the classrooms of elementary schools in Bihar are very much crowded as compared to MP.

**Table 3**  
**Classrooms in Elementary Schools among EAG states, 2013-14**

Classroom	India	Bihar	Chhattisgarh	Jharkhand	Madhya Pradesh	Odisha	Rajasthan	Uttar Pradesh	Uttarakhand
Single Classroom Schools	4.9	2.5	2.6	1	3.1	9	3.5	0.8	1.6
Student-Classroom Ratio (SCR)	28	58	24	29	25	27	21	32	19

Source: District Information System on Education, 2013-14.

In India, about 8.3 per cent of elementary schools have single teacher reported in 2013-14. But conditions of Jharkhand, Madhya Pradesh, and Rajasthan are much worse. These states have more than 10 per cent of their elementary schools being run by single teacher. The performance of Jharkhand is worst, where 14.9 per cent elementary schools are being run by single teacher. The Pupil-Teacher Ratio (PTR) is high in Bihar, Jharkhand and Uttar Pradesh. Bihar has PTR of 51. Madhya Pradesh is in better position having PTR of 29 students per one teacher. Among EAG states, only in Bihar average teacher per school is higher than national average of 5.3. In India during 2013-14, about 47.2 per cent of elementary school teachers were female. All EAG states have less number of female teachers than national average of 47.2 per cent including MP.

**Table 4**  
**Teachers in Elementary Schools among EAG states, 2013-14**

Teacher	India	Bihar	Chhattisgarh	Jharkhand	Madhya Pradesh	Odisha	Rajasthan	Uttar Pradesh	Uttarakhand
Single Teacher Schools	8.3	7.1	7.8	14.9	13.5	5.8	11.8	9.3	8.3
Pupil-Teacher Ratio(PTR)	26	51	22	39	29	22	20	38	17
Avg Teacher per School	5.3	5.5	4	3.7	3.5	4.2	5.1	4.1	4.2
Female Teachers	47.2	39.9	40.7	32.4	41.9	41	32.6	38	45.9

Source: District Information System on Education, 2013-14.

**Enrolment and Transition Rate in Districts of Madhya Pradesh**

Majority of the districts in MP have lower net enrolment ratio than state average both in primary and upper primary schools. Bhind, Bhopal, Chhatarpur, Datia, Gwalior, Indore, Morena, Rewa, Satna, Shivpuri, Singrauli, Tikamgarh, Umaria etc., have higher net enrolment ratio in both primary and upper primary schools.

**Table 5**  
**Net Enrolment Ratio in Primary Schools in Madhya Pradesh (2013-14)**

Particulars	Districts
Above State Average (94)	Ashoknagar, Bhind, Bhopal, Chhatarpur, Damoh, Datia, Dindori, Guna, Gwalior, Harda, Indore, Jhabua, Morena, Panna, Rewa, Satna, Sheopur, Shivpuri, Sidhi, Singrauli, Tikamgarh, Umaria (22 districts)
Equal and below State Average (94)	Alirajpur, Anuppur, Balaghat, Barwani, Betul, Burhanpur, Chhindwara, Dewas, Dhar, Hoshangabad, Jabalpur, Katni, Khandwa, Khargone, Mandla Mandsaur, Narsinghpur, Neemuch, Raisen, Rajgarh, Ratlam, Sagar, Sehore, Seoni, Shahdol, Shajapur, Ujjain, Vidisha (28 districts)

Source: District Information System on Education, 2013-14.

**Table 6**  
**Net Enrolment Ratio in Upper Primary Schools in Madhya Pradesh (2013-14)**

Particulars	Districts
Above State Average (76)	Balaghat, Bhind, Bhopal, Chhindwara, Chhatarpur, Datia, Gwalior, Hoshangabad, Indore, Mandla, Morena, Narsinghpur, Rewa, Sagar, Sehore, Seoni, Satna, Shivpuri, Shahdol, Singrauli, Tikamgarh, Umaria (22 districts)
Equal to and below State Average (76)	Alirajpur, Anuppur, Ashoknagar, Barwani, Betul, Burhanpur, Damoh, Dewas, Dhar, Dindori, Guna, Harda, Jhabua, Jabalpur, Katni, Khandwa, Khargone, Mandsaur, Panna, Neemuch, Raisen, Rajgarh, Ratlam, Sheopur, Shajapur, Sidhi, Ujjain, Vidisha (28 districts)

Source: District Information System on Education, 2013-14.

In Madhya Pradesh, some districts are poor performer in both primary and upper primary. They are Alirajpur, Anuppur, Barwani, Betul, Burhanpur, Dewas, Dhar, Jabalpur, Katni, Khandwa, Khargone, Mandsaur, Neemuch, Raisen, Rajgarh, Ratlam, Shajapur, Ujjain, Vidisha etc. Here it is important to note that Net Enrolment Ratio is significantly lower in tribal concentrated districts, but SC concentrated districts, it is positively correlated.

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**Table 7  
Girl's Enrolment in Elementary Schools in Madhya Pradesh (2013-14)**

Particulars	Districts
Above State Average (48)	Anuppur, Ashoknagar, Barwani, Betul, Balaghat, Bhopal, Chhindwara, Damoh, Dewas, Dhar, Dindori, Guna, Harda, Hoshangabad, Indore, Jabalpur, Katni, Khandwa, Khargone, Mandsaur, Mandla, Panna, Raisen, Rajgarh, Rewa, Sagar, Seoni, Satna, Shahdol, Shajapur, Sheopur, Sidhi, Singrauli, Umaria, Vidisha (35 districts)
Equal to and below State Average (48)	Alirajpur, Bhind, Burhanpur, Chhatarpur, Datia, Gwalior, Jhabua, Morena, Narsingpur, Neemuch, Ratlam, Sehore, Shivpuri, Tikamgarh, Ujjain (15 districts)

Source: District Information System on Education, 2013-14.

Girl's enrolment in majority of the districts in MP is higher than that of state average. About 35 districts out of 50 districts in MP have higher girl's enrolment in elementary district than state average of 48 per cent. Some of the districts in north, north-west, south and south-west MP have lower girl's enrolment. The girl's enrolment is also negatively correlated with SC population in MP with less than 5 per cent level of significance. So, in those districts in MP where SC population is high, there are chances of low girl's enrolment in elementary schools.

**Table 8  
Transition Rate from Primary to Upper Primary School  
in Madhya Pradesh (2013-14)**

Particulars	Districts
Above State Average (87)	Ashoknagar, Bhind, Bhopal, Chhatarpur, Damoh, Datia, Dindori, Guna, Gwalior, Harda, Indore, Jhabua, Morena, Panna, Rewa, Satna, Sheopur, Shivpuri, Sidhi, Singrauli, Tikamgarh, Umaria (22 districts)
Equal and below State Average (87)	Alirajpur, Anuppur, Balaghat, Barwani, Betul, Burhanpur, Chhindwara, Dewas, Dhar, Hoshangabad, Jabalpur, Katni, Khandwa, Khargone, Mandla, Mandsaur, Narsingpur, Neemuch, Raisen, Rajgarh, Ratlam, Sagar, Sehore, Seoni, Shahdol, Shajapur, Ujjain, Vidisha (28 districts)

Source: District Information System on Education, 2013-14.

The transition rate of MP from primary to upper primary school is 87 per cent. It means that out of 100 students passed out of primary schools only 87 get enrolled in upper primary school. Majority of the districts in MP have lower transition rate than the state average of 87 per cent. It is

positively correlated with SC population. But it is negatively correlated with ST population with 1 per cent level of significance. So, dropout during elementary schooling is more prevalent in ST category students.

### **Facilities in Elementary Schools**

Physical proximity of schools near pupil's house is one of the determining features which decides drop-out rate in rural India. If access to school is tough because of bad road students tend to avoid going to schools. Madhya Pradesh is better in this context; about 91 per cent of elementary schools are connected with all weather roads. There are some districts where more than 95 per cent of elementary schools are connected with all weather roads. These districts are Bhopal, Chhidwara, Indore, Raisen, Rewa, Shahdol and Sidhi. In some districts, less than 80 per cent of schools are connected with all weather roads e.g., Ashoknagar, Hoshangabad, Narsingpur, Panna, Sehore, Shivpuri.

Globally, water-borne diseases kill more children than AIDS, malaria and measles combined all together. Water borne diseases are caused due to lack of safe drinking water and sanitation facilities. Girl's toilet is very important utility in elementary schools. Since girl students are more prone towards urinary tract infections (UTI), separate girl's toilet reduces their chances of getting infected and helps them to attend the classes without any medical leave. In MP about 89 per cent of elementary schools have girl's toilet. In some districts, more than 99 per cent of elementary schools have girl's toilet. These districts are Bhopal, Dewas, Gwalior, Indore, Jabalpur, Katni, Mandsaur, Morena, Neemuch, Raisen, Rewa, Seoni, Sagar, Shajapur, Sidhi, Tikamgarh and Umariya. There are some districts whose performance are poor, where less than 80 per cent of elementary schools have girl's toilet. These districts are Vidisha, Rajgarh, Jhabua, Barwani, Ashoknagar and Alirajpur.

The DISE data 2013-14 depict that 97 per cent of elementary schools in MP had boy's toilet. This figure is comparatively very high. Even in some districts of MP, all the elementary schools have boy's toilet. These districts are Bhopal, Dewas, Gwalior, Harda, Jabalpur and Morena. There are also some districts that are performing poorly, where this percentage is below 80. They are Vidisha, Rajgarh, Mandla, Jhabua, Anuppur. Both girl's toilet and boy's toilet are negatively correlated with ST population with less than 10 per cent level of significance. Nevertheless, the coefficient of correlation is not very high.

### **Assessing Elementary Education in Madhya Pradesh: A State Level Analysis**

The facility of drinking water is one of the important utilities in elementary schools that define the overall infrastructure in a school. In MP, about 96 per cent of elementary schools have drinking water facilities in 2013-14. It is higher than the national average during the reference period according to DISE data. Some of the districts are performing very well in MP. These districts have drinking water facilities in more than 99 per cent of their elementary schools. These better performing districts of MP are Ashoknagar, Barwani, Gwalior, Harda, Hoshangabad, Jabalpur, Narsingpur, Satna and Tikamgarh. There are also districts in MP, who are performing very poorly. The districts where less than 90 per cent of schools have drinking water facilities are Dhar, Khandwa and Seoni. The facility of drinking water in school is positively correlated with SC and ST population in the district.

The midday meal facilities are being provided in 97 per cent of elementary schools in MP in 2013-14. It is 8 per cent more than national average of 89 per cent. But still 3 per cent schools are not providing midday meal to their children. It is a matter of great concern in the state. Some of the districts are performing so good that more than 99 per cent of its elementary schools are providing midday meals to their children. These districts are Betul, Damoh, Harda, Narsingpur, Neemuch, and Ratlam. On the contrary some districts are performing poorly. Few districts are having less than 95 per cent elementary schools that are providing midday meals. They are Alirajpur, Sheopur and Ujjain. The provision of midday meal facilities in elementary schools is negatively correlated with SC population in those particular districts. This means higher the percentage of SC population in district, lower the percentage of elementary schools providing midday meal to their students. The coefficient of correlation is -0.25 and level of significance is 8 percent. But correlation with ST population is not significant.

### **Availability of Classrooms in Elementary Schools**

The norms and standards for elementary school under 'Right to Education Act 2010' calls for all-weather school building for children. This all-weather school building should consist of at least one classroom for every teacher and an office-cum-store-cum-head teacher's room. The school should have barrier-free access under the Act. Normally, it is expected that there should be at least two teachers in primary school and three in upper primary. From this we can infer that there should be at least two classrooms in primary school and three classrooms in upper primary school. In terms of

availability of classrooms in elementary schools, MP's performance is not encouraging. About 3.1 per cent of elementary schools in MP are having single classroom. But it is lower than the national average of 5 per cent. There are some districts in MP like Alirajpur, Ashoknagar, Barwani, Bhind, Dhar and Panna where more than 5 per cent of elementary schools have single-classroom. In Dhar district, about 14 per cent of elementary schools have single classroom. Damoh, Datia, Guna, Gwalior, Indore, Morena and Shahdol districts are performing fair, where less than 1 per cent elementary schools have single classroom. The percentage of single classroom in MP is positively correlated with ST population. This means that higher the percentage of ST population in a district, higher the percentage of single classroom in elementary schools. It clearly shows that tribal dominated regions are lagging behind in terms of classroom infrastructure in elementary schools.

Due to low population density, classrooms are less crowded in MP compare to national average. Here, the student-classroom ratio (SCR) is 25. Even in some districts like Anuppur, Chhindwara, Dewas, Mandla, Neemuch, Seoni and Shahdol, it is lower than 20. The SCR is positively correlated with SC population in MP signifies that higher the population of SC in the district, higher the chances of high SCR in Madhya Pradesh.

#### **Availability of Teachers in Elementary Schools**

The number of single teacher schools is very high in MP. About 13.5 per cent of elementary schools have single teacher in 2013-14. It is higher than the national average of 8.3 per cent. In some districts, more than 20 per cent of elementary schools have single teacher. Such districts are Alirajpur, Barwani, Dhar, Dindori, Jhabua, Mandla, Morena, Rewa, Shahdol, Singrauli, and Umaria. In Rewa, about 32 per cent of elementary schools have single teacher. There are also some districts where this percentage is lower than 5 per cent. They are Bhopal, Gwalior, Indore and Neemuch. The percentage of single teachers is positively correlated with ST population but it is negatively correlated with SC population.

Pupil-teacher ratio (PTR) in MP is 29:1. Since, number of enrolled pupils in MP is low, so less number of teachers also resulted into low PTR. In some districts, PTR is higher than 40:1. These districts are Morena, Sheopur, Singrauli and Tikamgarh.

The percentage of female teachers is about 42, which is lower than the national average of 47 per cent. In some districts, it is more than 50 per cent. These districts are Bhopal, Burhanpur, Jabalpur, Khandwa and Ujjain.

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In some districts, the percentage of female teachers are lower than 25 like Bhind, Morena and Singrauli.

#### **School Infrastructure Index**

School Infrastructure Index (SII) is calculated to judge the overall condition of infrastructure of elementary schools (Kothari, 2014). Both physical facilities and teacher related variables are taken in this index. SII is calculated at district level. Through this index, we can also compare the districts with each other in the state. Thirteen variables have been considered to calculate this index. The 13 variables are percentage of elementary schools in the districts - (i) with all weather roads; (ii) with playground facilities; (iii) with boundary wall; (iv) with girl's toilet; (v) with boy's toilet; (vi) serving midday meal to its students; (vii) with electricity; (viii) having single-classroom; (ix) having single teacher; (x) with drinking water facility; (xi) percentage of female teacher; (xii) Pupil-teacher Ratio (PTR); and (xiii) School Classroom Ratio (SCR). Those districts that are performing well are ranked high. This means that higher the performance of the variables in a particular district, higher will be its rank. For example, Rewa district is the best performer in variable 'elementary schools connected with all weather roads'. About 100 per cent of its schools are connected with all weather roads, so it is ranked 1 (one). In the same way, Ashoknagar is poorest performer with regard to accessibility to all weather roads having the lowest percentage of 77.9 per cent in MP. So, Ashoknagar is ranked 50. All the districts under the 13 variables are ranked for their performances. Then all the 13 ranks of all districts are added and divided by 13. After dividing by 13, we get School Infrastructure Index (SII). Lower the value of index, higher will be its rank and higher will be its performance.

The top 10 performing districts are Neemuch, Bhopal, Gwalior, Dewas, Jabalpur, Indore, Raisen, Balaghat, Shajapur and Hoshangabad. Neemuch ranked first, but its rank under drinking water facility is 28. It is performing well in terms of availability of classrooms and teachers in the schools. Second rank is captured by Bhopal, the capital city of MP. It is a highly urbanised district of the state. The availability of facilities in urban areas is used to be more than rural areas. The third rank is captured by Gwalior, another urbanised district of MP. Singrauli, Jhabua, Alirajpur, Ashoknagar, Barwani, Dindori, Mandla, Shivpuri, Vidisha, Panna and Sheopur are the bottom 10 districts in the school infrastructure index (SII). Majority of these poor performing districts are tribal dominated districts of MP.



### Conclusion

The enrolment in upper primary schools in MP is low but overall the enrolment in elementary schools is higher than national average according to the DISE data 2013-014. Even girl's enrolment in elementary schools in MP is equals to national average. But transition rate (Primary to Upper primary) is lower than the national average in Madhya Pradesh. The schools in MP are facing shortage of facilities particularly unavailability of boundary wall around schools, unavailability of electricity, unavailability of playground, absence of boy's and girl's toilet, acute shortage of teacher especially female teachers. Even all schools are not providing midday meal to their children. There are regional variations across districts of MP regarding enrolment, availability of various types of amenities, availability of teachers, classrooms etc., in elementary schools. Some of the districts such as Neemuch, Bhopal, Gwalior, Dewas, Indore, etc. are performing well. On the other hand, districts like Singrauli, Jhabua, Alirajpur, Ashoknagar, Barwani, etc. are the poor performing districts in MP. The scheduled castes dominated districts are performing better in MP than the tribal dominated districts.

Therefore, the study recommended that for the improvement of elementary education in the state, the quantity of various facilities in schools should be improved. We should give more attention towards availability of playground, electricity and boundary wall in the schools. The number of teachers should be increased particularly female teachers for the betterment of the girl student. The availability of teachers, girl's toilet and electricity needed to be improved in the tribal district of Madhya Pradesh to attract student's interest in the school.

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## Assessing Elementary Education in Madhya Pradesh: A State Level Analysis

### APPENDIX 1

#### School Infrastructure Index of Madhya Pradesh (2013-14)

Index	Districts	Rank	Index	Districts	Rank	Index	Districts	Rank
8.62	Neemuch	1	20.62	Betul	18	30.38	Sidhi	35
10.69	Bhopal	2	21.23	Burhanpur	19	30.38	Umaria	35
12.15	Gwalior	3	22.15	Seoni	20	30.54	Bhind	37
12.46	Dewas	4	22.31	Guna	21	30.69	Dhar	38
12.92	Jabalpur	5	22.69	Morena	22	31.77	Khandwa	39
13.38	Indore	6	22.69	Ratlam	22	32.00	Sheopur	40
14.54	Raisen	7	23.85	Sagar	24	32.69	Panna	41
18.15	Balaghat	8	24.31	Rajgarh	25	33.08	Vidisha	42
18.54	Shajapur	9	25.31	Katni	25	33.62	Shivpuri	43
18.77	Hoshangabad	10	25.54	Khargone	27	34.15	Mandla	44
19.00	Harda	11	27.23	Tikamgarh	28	34.23	Dindori	45
19.38	Datia	12	27.31	Sehore	29	34.38	Barwani	46
19.38	Ujjain	12	28.15	Anuppur	30	37.69	Ashoknagar	47
20.15	Narsingpur	14	28.62	Rewa	31	38.15	Alirajpur	48
20.15	Shahdol	14	28.85	Chhatarpur	32	39.38	Jhabua	49
20.31	Mandsaur	16	29.00	Satna	33	41.85	Singrauli	50
20.38	Chhindwara	17	29.62	Damoh	34			

Source: Calculated from District Information System on Education, 2013-14.

### APPENDIX 2

#### Correlation of SC and ST Population with Various Variables in MP (2013-14)

Parameter	Scheduled Caste		Scheduled Tribe	
	Correlation Coefficient	Level of Significance (%)	Correlation Coefficient	Level of Significance (%)
Total Literacy (%)	0.446	0.1	-0.693	0
Female Literacy (%)	0.323	2.2	-0.58	0
Road (%)	0.11	44.7	0.014	92.4
Playground (%)	0.446	0.1	-0.588	0
Boundarywall (%)	0.136	34.5	-0.288	4.2
Girl's Toilet (%)	0.167	24.6	-0.311	2.8
Boy's Toilet (%)	0.199	16.6	-0.263	6.5
Drinking water (%)	0.24	9.3	0.221	12.3
Midday meal (%)	-0.25	7.9	0.097	50
Electricity (%)	0.349	1.3	-0.526	0
Single classroom school (%)	-0.147	30.7	0.275	5.3
SCR	0.271	5.7	-0.125	38.8
Single teacher school (%)	-0.439	0.1	0.592	0
PTR	-0.021	88.4	0.134	35.4
Female teacher (%)	-0.144	31.9	0.059	68.3
Girl's Enrolment	-0.299	3.5	0.163	25.8
Transition rate	0.251	7.9	-0.442	0.1
NER (Pri)	0.335	1.8	-0.279	5
NER (UPri)	0.496	0	-0.615	0
Infrastructure Index	-0.263	6.5	0.488	0

Source: Calculated from District Information System on Education, 2013-14.

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## **Challenges and Options before Agriculture in Mewat Region of Haryana**

**Jai Kishan Bhardwaj\***

*Agriculture is the main occupation in Mewat region of Haryana. It is in poor state since geographical conditions in Mewat including topography and climate are against the growth of agriculture which leads to underdevelopment of other sectors of life. The socio-economic condition of the region has further led to decline of agriculture in the region. Moreover, the limited capacity of leaders about the upliftment of the society has made the situation more critical. The paper analyses challenges and options before agriculture in Mewat region of Haryana state.*

### **Introduction**

As per 2018 NITI Aayog Report, Nuh (erstwhile Mewat district) has been declared as the most backward district of India. Based upon data of five sectors, a total of 49 indicators of developments including education, health and nutrition, the commission has recognised 115 districts as aspirational districts of India. For the effective implementation of state and central scheme, Government has appointed officers of additional secretary and joint secretary level. To see the progress of the development in these districts, Niti Aayog has set up a base line which is available online from April 2018. Among those backward districts, Nuh was adjudged as the most backward districts of entire India with a total score of only 26 per cent which means district is in a very

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bad state of development in social sectors like education, health, agriculture and basic infrastructure. As per the Niti Aayog Report, only 27 per cent children received vaccination, 63 per cent women are anaemic, 10 per cent girls were married at a very young age, 37 per cent girls were married before they attaining 21 years of age, only 49 per cent girls are educated and only 23 per cent households have facility of potable water (Sharma, 2018).

The region of Mewat in Haryana is facing highest level of poverty despite being part of Haryana which is one of the developed states of India. Haryana has the fifth highest per capita income among Indian states and UTs. It's per capita income was Rs. 1,00,006 for the year 2011-12. Work participation in the Mewat region is 26.6 percent in comparison to 35.3 per cent at the state level since no major industry is established here. Mewat among all the districts of Haryana has the lowest per capita income which is Rs. 45,934/- in the year 2011-12. Basic amenities, including proper meal and potable water are not available to the people of Mewat. In this area, land has become barren because of salty ground water. Water table is also going down rapidly. In the countryside of the region, women and children remain busy in management of water throughout the day. It is very pertinent to mention here that water is essential for life. Moreover, the primary sector activities like agriculture and livestock are completely dependent on water. Analysing the literature on the socio-economic conditions of Meos, the paper takes up discussion about the factors that can be held responsible for the backwardness of Mewat region in agriculture.

Mewat region is not a backward region lacking in access to good quality of drinking water. Ground water is salty and scheme of managements of Yamuna water to the region is not completed after two decades of its announcement.

**Table 1**  
**Asset Ownership Pattern (%)**

	Radio/ Transistor	T.V.	Computer/ Laptop	Bicycle	Scooter/ Bike	Car/ Jeep/Van	Telephone/ Mobile	N.A.*
Mewat	9.0	17.4	6.7	24.0	21.5	4.0	71.3	20.7
Rest of Haryana	17.7	70.7	13.9	45.8	34.1	11.0	79.6	8.7

Source: Director of Census Operation, Haryana

It is very pertinent to mention here that availability of mobile phone in households of Mewat is less compare to other regions of Haryana. This trend indicates the pervasive nature of mobile phones in the households of the Mewat while basic amenities for a healthy living such as toilet remain scarce.

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### Agriculture and Livestock

It needs to be mentioned that agriculture is the backbone of Indian economy and Haryana is predominantly an agrarian state. Haryana's 70 per cent of population is engaged in agriculture and is the second largest contributor to India's central pool of food grains. Most of the crops grown in Haryana are Kharif crops which are largely rain fed.

Economically, most of the people of the region are dependent on two activity for earning their livelihood viz., agriculture and labour. Agriculture is the mainstay of the people which is dependent on rainfall since irrigation facilities are meagre. Use of certified quality seeds is not prominent in the area. Use of fertiliser is very low because of poor socio-economic conditions of farmers. Agriculture is the mainstay of life in Mewat is also highlighted by Meo (1999) poet:

*“Kheti me Ras bahut hai, Upje Bhari Nyar,  
Sat Toor Sulakhna Bhens Bandhayo Char,  
Bhens Bandhayo Char, Ke Khawe Chhachh Malida,  
Nirbhe Pelo Dand Bandhe Dehi pe Gudo,  
Ho Tan So Hushiyar Kam sab Karo Ageti,  
Chhorsoch Saspanj Ranj- Gam Kar Levo Kheti.”*

(Agriculture farming is much beneficial; it produced a lot of fodder; purchase four buffalos, to get enough milk. By these four buffalos one eats curd and milk-bread mix food and do much exercise without fear to make the muscular body. Make yourself physically fit and do your every work before or in time, leave all other thinking, confusion and tension and do agriculture farming.)

**Table 2**  
**Land Holding Pattern in Mewat**

Size Group (in Hectares)	Mewat		Rest of Haryana	
	Number of Farmers	Area	Number of Farmers	Area
Below 0.5	34959	10407	392193	112188
0.5-1.0	14616	11338	242277	185312
1.0-2.0	9552	13605	260371	385273
2.0-3.0	7450	18642	141025	353749
3.0-4.0	3616	12548	87068	303572
4.0-5.0	2056	9090	57455	260102
5.0-7.5	2097	12553	68205	421722
7.5-10.0	877	7342	33791	292126
10.0-20.0	723	9802	30650	422363
20.0 and above	221	7535	7140	259987
Total	76167	112862	1320177	2996394
Average size of Holdings	1.5	2.3		

Source: Director of Land Records (2011), Haryana

## Challenges and Options before Agriculture in Mewat Region of Haryana

### Water

The Mewat area receives scanty rainfall. Agriculture is dependent on other irrigation means. Mewat does not have sufficient means of irrigation as evident from the fact that Mewat villages have lowest number of diesel and electric sets as compared to other districts of Haryana. One of the farmers narrated 'we yield only one crop generally which is dependent on rain most of the time, we burn up to 27 litres of oil. Electricity does not support our agriculture, how can we be benefitted from farming' (Deen Mohammad, Malai village, 12/11/2018).

**Table 3**  
**Ownership of Irrigation Sets**

	Average Number per village		Number of Persons Depend on One Set	
	Diesel Set	Electric Set	Diesel Set	Electric Set
Mewat	18	18	139	137
Rest of Haryana	35	77	112	50

Sources: Statistical Abstract 2011, Haryana

The usage of government canals as source of irrigation in Mewat is negligent. The dependence of 88 per cent of farmers is on tube-well, which puts extra burden on the groundwater. Only 41.9 per cent of area in Mewat is irrigated while remaining 58.1 per cent is rain fed. Despite being a drought prone area, very small pockets in the district have access to canal irrigation (Dainik Jagran, 2018).

The grim irrigation situation in Mewat can be attributed to high ground water salinity found in several villages of the region. The dominance of marginal farmers in Mewat suggests the subsistence nature of agriculture in the region. Agriculture production is also low in Mewat. The value of the agriculture product depends upon the status of public services and infrastructure in the region.

**Table 4**  
**Sources of Irrigation**

	Government Canals	Tube wells
Mewat	12.2	35.4
Rest of Haryana	87.8	64.6

Source: Director of Land Records, Haryana

The people of Mewat have been waiting for the last 40 years for the construction of the proposed Mewat canal. The canal will be of 78 kms. of length which will begin from Sahalwas village in district of Jhajjar and pass

### Bhardwaj

through Tauru and Sohna hill and would reach the Nuh distributaries. This distribution will help in filling the Kotla lake and also help in irrigation of thousands of acres of land in the nearby villages. It is noteworthy that Gross Area Irrigated to Gross Area Sown in Mewat is 53.2 per cent in comparison to 88.3 per cent to that of rest of Haryana state. Fragmented land holdings, traditional way of farming, the absence of canals in the most part of the district and the dependence on rain imply that agriculture does not tend to be very remunerative. Moreover, between the periods of 2005-06 and 2008-09, gross value of agricultural output per hectare on current price was as low as Rs. 57,685/- in comparison to Rs. 82,794/- for rest of Haryana. In addition, there are less numbers of markets for selling of agriculture produce and lesser coverage of metalled roads available in the district than the state level (51 per cent as against 64 per cent in rest of Haryana) makes the situation worse (Gayatri, 2018).

**Table 5**  
**Land Use Statistics**

	Net Area Sown (000 Hectare)	Percentage area sown to total cultivable area (%)	Net area Irrigated (000 Hectare)	Percentage area sown to total cultivable area (%)
Mewat	117	100	49	41.9
Rest of Haryana	2852	94.3	2542	89.1

Source: Directorate of Economics and Statistics (2011), Haryana

Various efforts have been made to resolve agriculture problems through soil and watershed conservation, supply of better quality inputs and improved harvest management practices in the area by government and non-governmental agencies. This ambitious watershed development programme was undertaken by the Mewat Area Development Programme (MADP) and was funded by International Fund for Agricultural Development (IFAD) but the success of such programmes are limited by the absence of a broader strategy i.e., a master watershed development plan. Heavy run-off of water, less impact on cropping practices and increasing yields, the lack of community engagement in conceptualisation and implementation and the limited involvement of local Panchayats make the things more complicated (Mathur and Gaiha, 2003).

The sources of water, both for irrigation and drinking purposes are limited in the Mewat region. Moreover, the water situation has worsened because of salinity of ground water due to which water cannot be used for drinking. For drinking, 20 per cent water supply is made through public water supply and bore well system while 17 per cent water supply is made

### Challenges and Options before Agriculture in Mewat Region of Haryana

through purchased water from tanker. Rest of the population is dependent on open wells, private hand pumps, rain water, ponds, public hand pumps, and canals in Mewat. The villagers use pond water for both, irrigation and drinking purposes which affects their health adversely. Water conservation activities are largely absent (Niti Aayog, 2015). One of the residents narrated 'we are treated like step-children. We do not receive drinking water even sometimes continuously for five days. Electric supply is hardly for an hour in a day. What to do and not to do? There is difficulty of supply of canal water. If one does bore for tube well water, there is saline water which is neither fit for dinking nor for agriculture' (Haji Khusi khan, Malai Village, 12/11/2018).

There are very few sources of water and people are either do not have access or the source of water is contaminated in the Mewat region. The government officials do not come forward to the rescue of people even after complaints are registered. Apathy of the local and state administration regarding development/irrigation projects in Mewat is evident from the fact that the Central Water Commission has cleared the provision of 741 cusecs of water from the Yamuna to the Haryana's Mewat region but the project is still not completed. As per the present Indian National Lok Dal (INLD) legislator and grandson of great Meo leader Yashin Khan said in Legislative Assembly that Hathin tehsil of Palwal district, entire Nuh district and 24 villages of Sohna Tehsil of Gurugram district had been facing acute shortage of water and supply of contaminated water due to lackadaisical attitude of Bhartiya Janata Party (BJP) Government in Haryana. He stated that "We were continuously getting our share till 2004-05, when Government diverted water to Rohtak, Sonipat and Jhajjar" (Manav, 2018).

**Table 6**  
**Agriculture and Livestock Development across Blocks in Mewat (%)**

Block	Household Purchasing water	Gross Irrigated area	Small and marginal farmers	Land under commercial crops	Tractors	Drip Irrigation	Livestock	Wheat yield (Qtls/acre)	Mustard yield (Qtls/acre)
Jhirkha	25.2	67.6	88.1	33.6	9.4	0.0	65.4	15.20	7.2
Hathin	17.2	70.7	91.6	7.7	16.9	0.0	76.5	17.04	8.39
Nuh	22.8	79.6	86.4	32.0	16.4	1.4	67.4	16.50	6.46
Tauru	0.0	97.3	94.7	21.3	14.5	15.8	59.2	17.48	6.98
Punhana	13.3	78.8	94.2	12.2	9.5	0.0	67.8	17.34	7.06

Sources: Director of Census Operation, Haryana



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Small landholding, low productivity, minimal irrigation facilities, drought at regular intervals, drives the poor and innocent Meo into high debts in the hands of Jain and Hindu bania moneylenders. Situation of Meo farmers has not changed much in the last century. As the annual administrative report of the government of the Punjab (1916) noted, "The condition of the Meos is rapidly becoming hopeless. They live literally from hand to mouth, carelessly contracting debt. For marriages, funerals and petty luxuries even in average years that when a year of drought comes they are thrown on the moneylender who can make with them whatever terms" (Mayaram, 1997).

It is argued that the Gurugram canal is making farmland infertile and forcing farmers to turn to pisciculture. People of the region have raised voice on this serious problem of pollution of fields. This untreated water from Delhi and Wazirabad flows in Mewat's fields and runs up to Rajasthan, after crossing the region. The Government does not seem to be serious to solve this matter to ameliorate the problem. A committee headed by Agriculture Minister O.P. Dhankhar has been formed but no meeting has taken place as of now. According to the farmers of Bibipur and Bhopawali village, even pisciculture is successful till the time ponds are full of rain water. At present fish are dying in canal water (Gayatri, 2015). At another time in Haryana Vidhan Sabha, INLD leader from Nuh, Jakir Hussain said that Agra canal from which the Mewat region get water in the Gurugram feeder, supplied water mixed with industrial pollutants and sewage, resulting in spread of diseases among the people and desertification in the region. It is worth mentioning here that Mewat canal is proposed from Salhawas village of Jhajar district and it will reach Nuh through Helimandi, Blaspur chowk and Tawru after crossing through a tunnel near Sohna. Proposed project of 78 K.M. long will include seven pumps with a cost of 326 crores which is not approved by Central Water Commission till date (Gayatri, 2015). For the last four decades, people have been waiting for Mewat canal. Every time they are told that the project file is pending before Central Water Commission. It naturally infers that no Government is serious about it. Not only local leaders but different Chief Ministers have also promised of its construction only at the time of elections.

Member of Legislative Assembly (MLA) from Nuh and head of All India Meo Panchayat, Jakir Hussain pointed out that for so many years the meeting of Mewat Development Board (MDB) has not been convened despite the fact that due to its relevance Governor of Haryana has been made its ex-officio President. Fund for MDB is not utilised properly and all its

### Challenges and Options before Agriculture in Mewat Region of Haryana

posts and positions are distributed by Government officials to their near and dears. There is an urgent need for providing reservation to the youths of Mewat region in Government jobs to make them free from the clutches of backwardness. The issue of development is taken a back seat in Mewat region of Haryana. One of the officials posted in the area narrated that 'the image of the Mewat region is bad. It is usually believed that this is a Muslim area, full of crimes but this is not the reality. People here are poor but innocent and obedient; therefore once who is posted here does not want to go back from this region' (Aditya Gaur, Doctor, Health Centre, Firozpur Zhikha, 13/11/2018).

#### Livestock

Livestock is an important asset for the rural population in Mewat, since it has significant impact in terms of income and employment of people in the area. Average livestock per household in Mewat is higher than rest of Haryana but the average poultry owned per household in Mewat is lower than the average poultry in Haryana. Mewat area has low accessability in terms of presence of veterinary hospitals and dispensaries which has direct negative impact on the health and productivity of livestock.

**Table 7**  
**Livestock and Poultry Ownership Pattern**

Particular	Mewat	Rest of Haryana
Average livestock per household	2.9	2.0
Average Poultry per household	0.8	6.8

Sources: Director General, Animal husbandry and Dairying (2011), Haryana

The health and productivity of livestock is influenced by the lack of capital as well as the availability of veterinary services and this adds to the burden of the rearing household (Ishtiaque and Hurera, 2014).

Meo people generally insist that the cow should be associated with economics rather than religion. One of the Muslim residents narrated that 'even we rear cow and earn good money from its milk and butter' (Abdul Mazid, Malai Village, 12/11/2018). Animal husbandry is the secondary source of income for Meos in the Mewat. Apart from meeting the local demand for milk and meat, the average of three livestock animals per household indicates a dependence on livestock for their livelihood. One of the Muslim residents opined that 'we used to rear milch animals along with farming. We are afraid after the cases of Pahlukhan, Raghbar Khan and of Akhlakh. We are Yaduvanshi, therefore we are cow-rearer traditionally. Cow

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used to give good yield, but now no one will find a cow in the whole village. Only few people rearing few buffaloes. Earlier one could hardly find any buffalo but now you will hardly find any cow (Deen Mohammad, Malai village, 12/11/2018). The health and productivity of livestock is influenced by the lack of capital as well as the availability of veterinary services and this adds to the burden of the rearing household (Ishtiaque and Hurera, 2014; Mehta et al, 2015).

**Table 8**  
**Average Number of Functional Veterinary Institutions**

Particular	Average Number of Functional Institutions		Number of Functional Institutions per 100 sq. Km.	
	Govt. veterinary hospital	Govt. veterinary dispensary	Govt. veterinary hospital	Govt. veterinary dispensary
Mewat	21	65	1.4	4.4
Rest of Haryana	45	84	2.2	4.2

Sources: Director General, Animal Husbandry and dairying (2011), Haryana

It is evident from the table that average livestock per household in Mewat is higher than rest of Haryana. However, the average poultry owned per household in Mewat is lower than the average poultry in Haryana. Mewat performs poorly in terms of availability of veterinary hospitals and dispensaries which has direct negative impact on the health and productivity of livestock.

#### **Developmental Efforts in Mewat**

Mewat Development Agency (MDA) was constituted in 1980 to accelerate pace of development of Mewat region. MDA provide funds for implementation of development scheme specifically designed for the benefit of Mewat area. In order to ensure adequate development of this region, infrastructure has been created and basic amenities provided to the masses in the field of agriculture, animal husbandry, fisheries, health, water supply, establishment of industrial training and industrial estate, housing and education.

Mewat Development Board (MDB) was set up for the development of the Mewat region in 1980 by Haryana Government. The MDB has been ineffective to meet out its ends as the budget for various sectors is very low. Non-Meos in the region when interviewed argued that MDB works for Meo people only and not for the entire region. One of the residents narrated that 'fund is not utilised properly by MDB. There is lot of corruption in the Board,

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much can be done if officer have a positive will to undertake development' (Dr. Mohammad Ashfaq Ali, Mewat Karwan, Rangala village, 13/11/2018).

### Reasons for Poor State of Agriculture

Public services and infrastructure are necessary to ensure socio-economic development of a region. These include access to roads, banks, presence of factories and availability of Government funds for development. Exploring the availability of banks and their usage in the Mewat region, indicate that only 41 per cent of the total households in Mewat avail bank services which is lowest in Haryana. One of the residents of the area opined that 'due to unavailability of banks in the village, the elderly people do not get the benefit of old age pension which is credited in their account through DBT scheme (Rafiq, School Teacher, Rupraka village, 12/11/2018). Similarly the average per capita money deposits are among the lowest in Mewat, as compared to other regions. Cooperative societies co-exist with the banks and complement their services. The cooperative societies have also not flourished in Mewat as compared to other regions of Haryana. The reasons are irregular income patterns and almost absence of women in the functioning of cooperative societies. Inclusion of women in entrepreneurial activity in Mewat can increase the functioning and presence of cooperative societies. This would result in larger socio-economic benefits for the region.

**Table 9**  
**Cooperative Societies and Membership Pattern**

Particular	Average number of cooperative societies/district(2012-13)	Percentage of Members to Total Population (2012-13)
Mewat	340	10.5
Rest of Haryana	1768	22.3

Source: Registrar, Cooperative Societies, Haryana

Road connectivity in the Mewat region is very low despite the fact that most of the villages in the Haryana are connected with roads. Mewat records the coverage of metalled roads as 51 per 100 sq kms of area against 64 per 100 sq kms for rest of Haryana. Mewat has the least number of markets in the state and the number of villages served by every market is the highest at 110. This leads to low value of agriculture products for the farmers of Mewat region. Even Government agencies are reluctant to buy the agriculture produce of the farmers of Mewat as witnessed in the case of denial of HAFED and other Government marketing agencies to buy the mustard produce by the farmers of Mewat (Sharma, 2018). Although, Mewat

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is in the vicinity of Gurugram, the region has not been used for setting up of any factories. As a result, the percentage of working population in Mewat is very low. In the beginning, MDA built good colonies in urban areas but these colonies are in a dilapidated condition. Mewat has not been able to take advantage of its strategic location (proximity to the national capital) and lags far behind in development.

It is said in the Mewat region that money to Meo means what his wife wears and not what he has in the bank. Only a few people have an account in banks in Alwar, Bharatpur or Gurugram. Mewat has moved into the fringes of money economy. People in the Mewat are just beginning to understand the importance of money. Due to the preaching of Tablighi Jamaat, give and take of money as loan is prohibited. Meos, therefore, cannot take *taccavi* and loan from community development blocks because they will have to pay interest on such account which is a great sin for them. In a modern society like today it is simply inconceivable to make a distance away from the bank, insurance corporations, and other institutions of the credit (Ali, 1970).

The Tablighi Jamaat prohibits Meo people from participation in Melas (fairs) which are very popular in Mewat held at places associated with Sheikh Musa, Shah Chokha, Bharti Hari and Lal Das. Even near Nuh a large mela assembles on the occasion of Teej festival. Meos of Mewat regions are restricted from using such occasions for the purpose of rural development (Ahmad, 2016).

Meo culture is patriarchal and Meo people derive a sense of worth from being a man with a pride. A low standard of living and high level of pride are the chief characteristics of the Meos. These two have combined to their exploitation by moneylenders. For the maintenance of status they usually mortgage their land to the local moneylender known as Bohras. This reduces them to the necessity of working as landless labourers without the chance or hope of ever recovering their land as they get trapped in the indebtedness (Mayaram, 2004). Culturally pride acts as a deterrent to social development. The pride inherent in the social mind of the Meos is a hindrance to their progress. The illiterate Meo youths and even adults are influenced by heroic legends of the past, leading to the perception that Delhi and its land is their own rightful due. It was thus the combination of three factors poverty, pride and proximity that had contributed to the notoriety of Meos as cattle thieves, and as robbers and bandits. For them, NH248A could just as easily be Telegraph Road. To paraphrase Mark Knopfler, they have got a right to work but there is no work to be found (Mayaram, 1997). Earlier

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they were employed in stone quarries that have long been shut down. Shops and factories have terminated their services. One of the Police officials opined that lack of employment opportunities in the area is creating criminals in the area (GoH, 2018). Drinking is the next weakness associated with Meo community. However, preaching of Tablighi Jamaat has reduced this evil. But even then the region is not free from alcoholism. Villages in the hills also in Alwar and Baharatpur are noted for home brewing and drinking, especially on festive occasions.

Politically, Mewat region spread into three northern states namely Haryana, Rajasthan and Uttar Pradesh. The northern half of Mewat is connected administratively with Chandigarh, the capital of Haryana, more than two hundred miles away to north. The southern half is attached to Jaipur, the capital of Rajasthan further south than Mewat itself. This diversity of administration hampers the task of development. Moreover, politics of Mewat is dominated by some family including the family of Yashin Meo Khan. One of the Meos opined that 'Mewat voters go for the candidates and not for the party. Another person opined that 'For the last two to four years, it has become possible to get Government job after passing the test, earlier, there was nothing. Only two families used to rule. They were of Chaudhari Tayyab Hussain and Chaudhari Khurshid. Even after attaining the post of Home Minister, they worked for their families not at all for any other' (Azad Pardhan, Rupraka village, 12/11/2018). It is observed that "people voted for Zakir Hussain when he was with the Congress, they voted for him when he was with the BSP (Bahujan Samaj Party) and they voted for him when he shifted to the INLD (Indian National Lok Dal)". Hussain is incumbent legislator from Nuh, one of the three assembly constituencies in Mewat. On the other hand, Firozpur Jhirkha is with INLD while Punhana voted an independent to the Legislative Assembly of Haryana in the last assembly elections held in 2009 (Manav,2018 ). One of the residents opined that 'backwardness is the result of Government inactions. Neither our leaders listen to us nor do they anything for us (Rafiq Ahmad, Advocate, Rupraka village, 12/11/2018). The newly elected MP (Member of Parliament) from Gurugram parliamentary constituency, Rao Inderjeet Singh, in a recent interview has stated that in the coming five years Mewat is his top priority. He plans to get the Mewat canal constructed. Rail connectivity to Mewat and beatification and revival of Kotla Lake are other projects on his priority list (Singh, 2019).

### **Conclusion**

From the preceding discussion, it can be concluded that agriculture sector in the Mewat region is still in its infancy stage. After 70 years of independence or even after the creation of separate state of Haryana has not brought any big change in the lives of the people of Mewat. The development of any region mainly relies on its economic activities. The pathetic condition of agriculture sector in Mewat region has slowed down the pace of overall development of the region. A boost to the agriculture sector in the form of good irrigation facilities, infrastructural development, provision of high quality seeds, fertilisers and agriculture equipment, availability of credit facility and proper training of farmers can play a significant role in bringing back Mewat region on the track of development.

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## **Association of Caste, Class and Women Education with Health and Healthcare in India: Evidence from Nationwide Survey**

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*The study examined association of women education on stunting and use of family planning services using latest available NFHS-4: 2015-16 data. Descriptive methods and, binary logit regression is used to model association for the study. The study finds that increase in women education reduces stunting and less use of family planning services. Results from logit regression revealed that caste and class alters effect of women education on health outcomes and health care services utilisation. The study further reiterated that improving women education should be taken into consideration for shaping health and healthcare behaviour of Indian population.*

### **Introduction**

India's development has found reflection of state intervention and noticeable progress in social and economic scale. Education is the most important factor which plays a great role in the development of an individual as well as of a country. Education has an immense effect on people living in the underdeveloped or less developed areas from human capital formation perspective. However, there is disparity in promoting the girls children in many of the countries and India is one among them. Since

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the 'UN Declaration of the Decade of Women' in 1975, attention and action on women's concerns have steadily increased. Since then focus on education has increased, whether it is the form of consciousness-raising or skills acquisition by women's organisations, government agencies and international donor agencies (UNESCO, 1995). Even after much centre of attention to improve women education in the country, still there is a wide disparity in female education. According to latest Census, only 65 per cent women were literate, whereas 82 per cent male are literate. The complexity of less preference for female education may have intrinsic dimension of caste and class within the phenomenon. As all the caste in India is not equally developed, there is much heterogeneity across castes in terms of economic status in the country. The poor economic status may compel the family to withdraw their children out of school irrespective of gender. However, that complex inter-sectionality is needed to be examined within the caste and class framework in the context of women's education. As there are evidence that poor socio-economic status leads to poor educational outcomes on one hand and the women education contributes on better outcomes including health. The study intended to explore the underneath issues through theoretical and empirical exploration for understanding demographic and health outcomes with a gender perspectives.

### **Caste and Class in Indian Perspective**

Caste in India has a long chequered history. A theoretical formulation recognises caste as a system of social and economic organisation is governed by certain customary rules and norms, which are unique and distinct. The organisational scheme of the caste system is based on the division of people in social groups (or castes) in which the civil, cultural, and economic rights of each individual caste are pre-determined or ascribed by birth and made hereditary (Thorat and Newman, 2010). At present, caste system is developed as complex social hierarchy and the complexity may be easily observed with their variation with various caste specific social groups. Notably, individuals belonged to the specific caste group having unequal access of services and opportunities. Those differential access and unequal position led to disparity and inequality on the development indicators. At present, all castes have been categorised into four broad social groups namely Scheduled Caste (SC), Scheduled Tribe (ST), Other Backward Classes (OBC) and Others.

Class refers to a differentiation of status of people on economic scale in a society. Historically, class is not an Indian concept but borrowed from European country to depict economic status of an individual. Historically,

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the word class had emerged with social class which over the period got separate distinction, on social scale and other on economic scale. The term 'class' is etymologically derived from the Latin word *classis*, where it was used to categorise citizens by the wealth in order to determine military service obligations (Brown, 2009). In Marxian concept 'class' was one's relationship to the means of production. Economic prosperity defines a person's class affiliation. Hence, not only economic resources in societies vary according to the level of development and structural features of society, but also different groups tend to have differential access to these resources. Power enjoyed by the groups also differ and creates related social disadvantage and deprivation. These absolute as well as relative disadvantages and deprivations make people poor on development and well being on economic scale.

### **Caste, Class and Women in India**

Throughout the world, majority of women constitute poor, under-employed and socially and economically disadvantaged. In Indian scenario, this ecological framework can be understood that it has a patriarchal society having rigid patriarchal rules and ethical values. In Indian society, women are getting less priority which resulted in their poor development at individual as well as in the social and economic sphere. There are many individual, household as well as community level factors which have direct linkages with women's status which responses into progress and development of women in the country like India.

In India, both caste and class as social and economic construct is much influential in dynamics of development and are used widely to understand deprivation, development and wellbeing of an individual. When it comes to women, the relationship becomes much more complex. As socio-economic status is positively linked with deprivation and vulnerability, it affects women much more than it does to the men. Moreover, when these two constructs of caste and class interact with gender, it may have different treatment. Studies have been strengthening that social and economic context may respond also in shaping the development, autonomy and empowerment of women in any society (Deshpande, 2002; Mason, 1987).

### **Pathways through which Women Education affect Outcomes**

Education is a parameter which affects development outcomes in positive manner and interestingly when it comes to women education, it shows more impact than any other factors. Education of females contributes

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more significantly towards enhancement of human capital, productivity, and economic growth not only in their own generation but also in the next generation. In demographic and health literature, education of women improves demographic and health outcomes because of educated mother's better knowledge of the importance of the said issues. Economists provided evidences that female education lowers the fertility rate by reducing desired family size. Education raises the value of women's economic activities by raising the labour market rewards from going out of the home for work. Further, education may also change women's preferences about the quantity versus the quality of children. Further, it appears that female education increases the age at marriage and subsequently lowers the total fertility rate in the later stage.

Among the various socio-economic factors like caste, class and other; mother's education is found one of the most important factors in determining child health across the country. A negative relationship between the level of education of mothers and infant mortality has been observed in many developing countries including India (Gobindaswamy et al., 1997). The revolution in women lives has implication for infant survivorship because of the effect of women's social and economic status on these determinants of infant well-being (Mason, 1987). Factors such as the education of women and the opportunity costs of child bearing promote contraceptive use, which elongate birth interval. It has also treated as a proxy indicator for socio-economic status of the family to study the infant and child health in many countries (Cleland, 1990; Desai and Alva, 1998). Based on the review of the literature by Caldwell and Caldwell (1993), it is suggested that education improves child health solely by enhancing the use of modern health services. Education results in wide range of favourable behaviour connected with child care and automatically play a role in improving child health.

In a nutshell, the caste, class and women education have a very important role in the contemporary context to understand the variability in the women's demographic and health outcomes.

### **Data and Methodology**

National Family and Health Survey data is widely used to understand the linkages of caste, class and women education. In this regards, latest available data is NFHS-4, which was collected in 2015-16. In this study, at the outset descriptive statistics has been analysed on the level of women education using caste and class as a catalyst. Here, it is important to mention

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that class is proxy of economic status in India and most of the demographic and health studies rely on wealth index as a proxy measure of economic status of the households.

The linkages of women education, caste and class have been examined through child nutrition, using stunting among children of under five years of age. Service utilisation especially uses of family planning is also another parameter of health care development. The association has been modelled using binary logit regression and is explained through odds ratio. Stunting among children is modelled using children of under five years born in last five years preceding the survey to selected women of 15-49 years under the study. Use of family planning services is modelled on currently married women of 15-49 years using any methods during the survey in 2015-16.

Logit regression is widely used to find the relationship between binary dependent variable (P) and more than one independent and explanatory variable (X). It can be written as follows:

Logit (P) =  $\text{Log} \{P / (1-P)\} = \alpha + \beta X$ ; where, x is independent/explanatory variable of P.

Or,  $\text{Logit}(P) = b_0 + b_1X_1 + b_2X_2 + \dots + b_kX_k$

Or,  $\text{Log}(P/1-P) = b_0 + b_1X_1 + b_2X_2 + \dots + b_kX_k$

Where,  $X_1, X_2, \dots, X_k$  are independent/explanatory variables and  $(P/1-P)$  is the Odds. For this study  $X_1, X_2, \dots, X_k$  are associated risk factors for stunting and use of family planning methods.

The odds ratio is calculated using following formulae-

$$\text{Odd Ratio} = \frac{(p/(1-p))}{(q/(1-q))}$$

Where, p and (1-p) is the probability of stunting for health outcomes and use of method for healthcare, and not stunted and use of method for the study group, and q, and (1-q) is the probability of stunting for health outcomes and use of method for healthcare, and not stunted and use of method for the reference group.

### Results of the Study

#### *Socio-Economic Status and Women Education in India*

Analysing the effect of caste and class on women education in India, Table 1 tries to provide glimpse of the level of women education and its association with caste and economic status. In this study, the education status has been provided for the women of reproductive age group 15-49 years. These are the women who contribute mainly on demographic and child health outcomes in India. Overall, 27 per cent women have been found

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not having any kind of educational attainment. Across the caste, the percentage of women having no education varies from around a high of 42 per cent among Scheduled Tribe (ST) women to around 16 per cent among women from the better off caste. Majority of the women have been found concentrated in secondary level (47 per cent) of education. The difference across the caste found for around 13 per cent which can be elaborated as 39 per cent secondary educated women among ST to 53 per cent among better off caste. However, only 13 per cent women of 15-49 years having education beyond 12 years and those women ranges from only 5 per cent among ST to 21 per cent among better off caste.

Women's educational status having no education at all is highest of 57 per cent among poorest strata to only 6 per cent among richest strata. Primary education status revealed that there is no much difference between poorest, poor or middle class women and they were concentrated around 14 to 16 per cent whereas among rich or richest class, the primary educated women were only 6 per cent. Status of education up to secondary or above depict that proportion among poorest or poor decreases whereas those proportion increases among richer or richest class women. The secondary educated women found a high of 53 per cent among the richest strata of the country. Further, the women having higher education level, it was only 1 and 3 per cent among poorest and poor women whereas a high of around 36 per cent women were having higher level of education.

**Table 1**  
**Level of Women Education by Caste and Class in India: 2015-16 (%)**

	No Education	Primary	Secondary	Higher	Total
<b>Caste</b>					
Scheduled Caste	32.9	13.9	44.5	8.8	100
Scheduled Tribe	41.9	13.7	39.0	5.4	100
Other Backward Classes	28.4	12.2	47.1	12.3	100
Others	15.6	10.9	52.9	20.6	100
<b>Economic Status</b>					
Poorest	56.6	15.0	27.2	1.1	100
Poorer	37.7	16.7	42.3	3.3	100
Middle	26.3	14.7	52.2	6.8	100
Richer	15.8	11.0	59.1	14.1	100
Richest	6.2	5.7	52.3	35.8	100
Total	27.5	12.5	47.3	12.8	100

Source: Author's calculation based on NFHS-4: 2015-16

### *Women Education and Nutritional Outcomes*

In this section, it is tried to understand linkage of women education across caste, class and children nutrition in the country. For the purpose of

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Analysing nutritional outcomes it has been tried to understand at two level of education. First on the women having no education and secondly women having higher level of education (Table 2). Considering the education across the caste and class on nutritional outcomes, the emerging pictures are very contrast. On stunting, the children of the SC (Scheduled Caste) women who are not having education among them, 53 per cent children were stunted as against of only 24 per cent children of SC women having higher education. Among OBC women those percentage were found 51 per cent and 21 per cent respectively. In case of women from better off caste, the stunted children were 47 per cent among mothers having no education compared to 18 per cent among higher educated women. In the case of underweight children, the picture seems almost same as of the stunting among children. Among ST women, 51 per cent children were underweight whose mother was not educated as compared to 22 per cent whose mother has got higher education.

**Table 2**  
**Mother's Education, Caste, Class and Nutritional Outcome among Children of under Five Years in India: 2015-16 (%)**

	Stunting		Wasting		Underweight	
	No Education	Higher Education	No Education	Higher Education	No Education	Higher Education
<b>Caste</b>						
Scheduled Caste	53.1	24.0	22.5	18.4	48.3	21.8
Scheduled Tribe	50.0	25.3	29.2	22.8	51.6	26.2
Other Backward Classes	50.9	21.6	21.4	18.3	46.0	19.2
Others	47.4	17.9	20.7	16.9	42.5	16.7
<b>Economic Status</b>						
Poorest	55.0	39.5	24.3	22.4	51.3	39.8
Poorer	49.3	30.9	21.5	21.6	45.3	30.1
Middle	44.0	24.8	20.9	21.4	40.0	25.4
Richer	39.6	22.1	19.2	16.9	35.0	19.7
Richest	38.0	18.0	19.6	17.2	30.8	15.6
Total	50.8	20.8	22.7	17.9	46.8	18.9

Source: Author's calculation based on NFHS-4: 2015-16

Analysis of association of economic status of women with stunting, wasting and underweight among children revealed a contrast picture. Uneducated poorest mother having 55 per cent stunted children as against of 39 per cent among higher educated poorest mothers. Among the richest women, among the mother having no education 38 per cent children were found stunted and 18 per cent children are found stunted belonging to higher educated richest mother. For the underweight children, analysis of

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poorer and richer mothers, it is found that the difference has been found less compared to the poorest or richest mothers. Among the poorer mothers, 45 per cent children were underweight among uneducated women compared to 30 per cent among higher educated mothers.

### *Women Education and Use of Family Planning Methods*

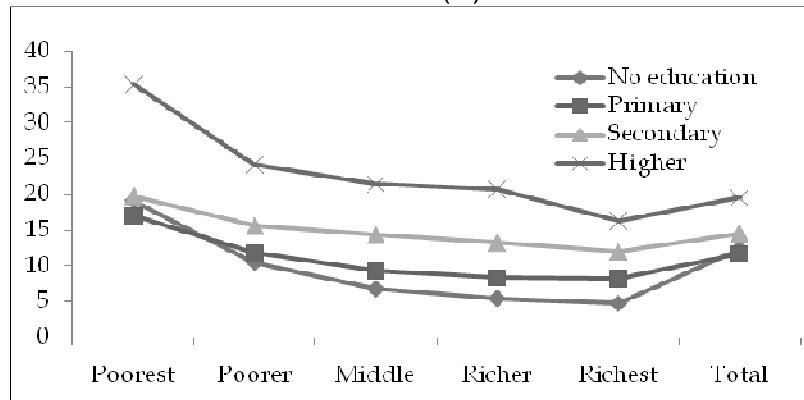
Preventive care is one of the important components for better health outcomes and as well as reflection of advanced healthcare utilisation within the society. To understand those issues, use of family planning (FP) services among 15-49 years of women across the caste and class has been analysed. Table 3 depicts the use of family planning methods among women having different level of education in the country as the time of survey in 2015-16. It is found that utilisation family planning is low among low caste women as against women of better off caste. It was found that only 30 per cent among SC women are using FP method as compared to 46 per cent women belonging to better off caste. Analysis of economic status with FP use by level of women education in table 3 depicts that only 18 per cent women within poorest strata were using FP methods as against of 46 per cent among women from the richest strata. Further, figure 1 provides glimpse of unmet need among sexually active SC women of 15-49 years of age in the country. Interestingly, the unmet need is highest among the poorest women having high level of education. As those women are having higher education level but their poor economic status compels them not to afford the family planning services on the one hand and the poor accessibility of FP services on the other hand.

**Table 3**  
**Women having Education 12 years and above and**  
**Family Planning Use in India: 2015-16 (%)**

Use of Family Planning	Yes	No	Total
<b>Caste</b>			
Scheduled Caste	70.4	29.6	100
Scheduled Tribe	71.0	29.0	100
Other Backward Classes	65.5	34.5	100
Others	54.0	46.0	100
<b>Economic Status</b>			
Poorest	82.2	17.8	100
Poorer	79.4	20.6	100
Middle	76.8	23.2	100
Richer	69.9	30.1	100
Richest	54.4	45.6	100
Total	62.2	37.8	100

Source: Author's calculation based on NFHS-4: 2015-16

**Figure 1**  
**Unmet Need among 15-49 years currently Married SC Women in India:**  
**2015-16 (%)**



Source: Author's calculation based on NFHS-4: 2015-16

**Results from Multivariate Analysis on Child Stunting**

In this section, results from multivariate analysis is undertaken to understand the differential treatment of various factors on health outcomes and services utilisation in India. It has been modelled for stunting as a health outcomes and use of contraception for healthcare behaviour regulated by women education, caste and class along with set of different demographic and other variables. For stunting, it has been regressed first for unadjusted and full model adjusted for women demographic and health characteristics and behaviour including place of residence. The result is provided in the form of odds ratio with 5 per cent significance level. First model is unadjusted odds ratio regressed on women education, second model is regressed on women caste group, third model in on women economic status, fourth model is regressed on all the three factors- women education, caste and class. Finally the result of full model is provided into model fifth after adjusted for other above mentioned variables.

The risk of stunting among children decreases as the level of education among mother increases as among the children of primary educated mothers, 23 per cent less children (OR=0.773, p<0.001) were stunted compared to children of non-educated mothers. In case of secondary and higher educated mother, the risk of stunted children found 49 per cent and 69 per cent less (p<0.001). Along the caste line (Model 2), the risk of stunting is highest among Scheduled Caste children and it was 12 per cent, 15 per cent and 41 per cent less among Scheduled Tribe, OBC and Others caste group children (OR= 0.887, OR=0.855, OR=0.591, p<0.001). Even along



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the economic status (Model 3), it is found inversely related to the stunting among children. As odds ratio of stunted children from richer family was 0.413 ( $p < 0.001$ ) and among richest children odds ratio was only 0.308 compared to the poorest children. Model fourth has regressed on mother education, caste and economic status; revealed that although pattern is found consistent for all the three factors but the risk of being stunted is found increased compared to when it has modelled independently. Like in model first the odds ratio of stunted children for primary educated mother was found 0.773 which increased to 0.851 in model fourth. In model second, odds ratio of stunted children among Others was 0.591 which is increased to 0.781 in model fourth. The same can be found for economic status in Table 4.

**Table 4**  
**Odds Ratio of Stunting Modelled on Women Education, Caste and Class as Covariates Controlled Women Demographic and Health Factors in India**

Stunting	Odds Ratio (OR) of being stunted				
	Model 1	Model 2	Model 3	Model 4	Model 5
<b>Women Education (r=No education)</b>					
Primary	0.773a			0.851a	0.863a
Secondary	0.513a			0.671a	0.694a
Higher	0.307a			0.510a	0.540a
<b>Caste Group (r=Scheduled caste)</b>					
Schedule tribe		0.887a		0.827a	0.837a
OBC		0.855a		0.933a	0.936a
Others		0.591a		0.781a	0.792a
<b>Economic Class (R=Poorest)</b>					
Poorer			0.724a	0.811a	0.826a
Middle			0.550a	0.668a	0.693a
Richer			0.413a	0.539a	0.565a
Richest			0.308a	0.454a	0.484a
<b>Women Age in years (r=15-19 years)</b>					
20-24					1.136a
25-29					1.150a
30-34					1.153a
35-39					1.185a
40-44					1.300a
45-49					1.183b
<b>Number of children born in 5 years (r=One)</b>					
Two					1.113a
Three					1.111a
Four & More					1.236b
<b>Wanted Birth (r=Wanted then)</b>					
Wanted later					0.977
Wanted no more					1.129a
<b>Women BMI (r=Thin)</b>					
Normal					0.829a
Overweight					0.647a
<b>Place of residence (r=Urban)</b>					
Rural					0.929a
Constant	1.091a	0.854a	1.148a	1.436a	1.404a

a=significant at 0.001 level, b= significant at 0.01 level, c= significant at 0.05 level

Source: Author's calculation based on NFHS-4: 2015-16

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Model fifth in the table 4 provides adjusted odds ratio for stunting among children. The women age, children born in last five years, wantedness of last birth, women body mass index (BMI) and place of residence does not alter the odds ratio much compared to the model fourth. Therefore, risk of stunting on those factors which are not in model fourth has elaborated here. With the increasing age of mother, odds ratio of stunted children found increasing as 15 per cent more (OR=1.153, p<0.001) among children belonging to 25-29 years old mothers to 30 per cent more (OR=1.300, p<0.001) among 40-44 years old mothers compared to 15-19 years old mothers. More children born to a women in last five years increased the risk of stunting as 23 per cent more stunted children (OR=1.236, p<0.01) was found among women who had delivered four or more children in last 5 years compared to the women who had delivered one child in last five years. Stunting is also found high among unwanted children compared to the wanted one. Women whose BMI is low, high percentage stunted children are found among them. Women whose BMI is normal, stunting among children was found 18 per cent less and 36 per cent less among mothers with high BMI compared to the low BMI. Significantly, stunting was found low in rural areas compared to the urban areas during 2015-16 (p<.0.001).

**Table 5**  
**Odds Ratio of Family Planning Use among Currently Married Women Modelled On Women Education, Caste and Class as Covariates Controlled on Women Demographic Factors**

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
<b>Women Education (r=No education)</b>							
Primary	1.093a			0.953a	1.213a	1.021a	1.000
Secondary	0.905a			0.654a	1.146a	1.190a	1.136a
Higher	0.777a			0.426a	0.887a	1.190a	1.116b
<b>Caste Group (r=Scheduled caste)</b>							
Schedule tribe		0.618a		0.667a	0.659a	0.731a	0.720a
OBC		0.925a		0.889a	0.844a	0.884a	0.879a
Others		1.102a		1.029a	0.979	0.946c	0.936b
<b>Economic Class (R=Poorest)</b>							
Poorer			1.344a	1.425a	1.317a	1.029	1.020
Middle			1.553a	1.750a	1.498a	1.126a	1.110a
Richer			1.659a	2.018a	1.600a	1.146a	1.122a
Richest			1.952a	2.720a	2.034a	1.361a	1.320a
<b>Women Age in years (r=15-19 years)</b>							
20-24					1.807a	0.776a	0.859b
25-29					3.006a	0.760a	0.828b
30-34					3.561a	0.776a	0.801a
35-39					3.328a	0.716a	0.709a
40-44					2.643a	0.597a	0.565a
45-49					1.959a	0.517a	0.472a

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	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Number of children born in 5 years (r=One)							
Two					0.904a		0.646a
Three					0.609a		0.420a
Four & More					0.365a		0.302a
Number of Children at first use (r=No children)							
One						1.811a	1.792a
Two						5.151a	5.624a
Three						7.785a	8.683a
Four & More						9.295a	10.386a
Wanted Birth (r=Wanted then)							
Wanted later					1.113a	0.799a	0.904b
Wanted no more					1.296a	0.821a	0.857a
Place of residence (r=Urban)							
Rural					0.961a	0.945a	0.949b
Constant	1.077a	1.131a	0.701a	0.895a	0.214a	1.470a	1.616a

Source: Author's calculation based on NFHS-4: 2015-16

**Results from Multivariate Analysis on Use of Family Planning (FP) Method**

In this section, results from multivariate analysis are given to understand the differential treatment of various factors on services utilisation in India. It has been modelled on use of family planning methods for healthcare behaviour regulated by women education, caste and class along with set of different demographic and other variables. For stunting, it has been regressed first for unadjusted and full model adjusted for women demographic and health characteristics and behaviour including place of residence. The result is provided in the form of odds ratio with 5 per cent significance level. Based on seven models results are provided in Table 5. First model is unadjusted odds ratio regressed on women education, second model is regressed on women's caste, third model in on women economic status, fourth model is regressed on all the three factors- women education, caste and class. Fifth model is controlled on women age, children born in last five years, wanted birth and place of residence other than indicators of model four. Model sixth controlled on all indicators, other than number of children born in last five years as replaced by children at first use. The result of full model is provided into model seventh after adjusted for all the variables of model five and model sixth.

The use of family planning methods decreases as the level of education among currently married women increases, it is found among the secondary educated women. Ten per cent less children (OR=0.905, p<0.001) were stunted compared to children of non-educated mothers. In case of higher educated mother, use of FP methods decreased by 23 per cent (p<0.001). Along the caste line (Model 2), the use of family planning methods is highest among better off caste groups as it was 10 per cent more among

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others compared to Scheduled Caste currently married women. Significantly lowest use of FP methods is found among Scheduled Tribe women in the country (OR= 0.618,  $p<0.001$ ). With respect to the economic status (Model 3), use of FP methods increases with increasing economic well being. Among richest quintile the OR (Odd Ratio) is found close to two times high compared to the women from poorest quintile (OR=2.720,  $p<0.001$ ). In the model fourth, when we regressed on all three variables, effect of women education and caste reduced whereas increased for economic status compared to all three previous models.

The contraceptive use among currently married women increases with increasing age. It is recorded highest within peak fertility age and recorded decrease among women of 35 years and above age significant. It was recorded more than three times higher (OR= 3.561) among 30-34 years women and close to two times higher (OR=1.959) among 45-49 years women compared to 15-19 years women. With the increasing number of children born in last five years who used FP services has found reduced drastically as the women who delivered more than four children. The FP use was recorded 64 per cent less compared to the women who have delivered only one child during the period ( $p<0.001$ ). Significantly, use of FP methods is found 29 per cent high among women whose last born child is unwanted compared to the women whose last born child was a wanted one. Place of residence does not make much difference on the use of FP methods. The final model seventh revealed increases in use of FP methods with increasing women education whereas for the caste and economic status comparatively extracted on lower odds ratio compared to model second and model third. The women age also reduced with lower odds ratio compared to model fifth and also reduced on number of children born in last five years. However odds ratio is slightly increased for number of children at first use compared to model sixth. However, on the context of the place of residence, there is almost no difference compared to the previous model. Hence, it can be added here that although an independent variable may be extracted on different odds ratio, it will be changed when we control for more covariates within the model.

### **Discussion and Conclusion**

The study tried to understand the complex relationship of individual embedded with caste regulated by class along with economic status flowed by progress on educational level of the women of reproductive age. The study found that the women from disadvantages caste like Scheduled Caste and Scheduled Tribe are having less education compared to the better off caste women. Majority of the SC, ST women have been found concentrated

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around secondary level of education (47%). It is evident that education benefits nation and their people, and it is one of the most effective developmental instruments (USAID, 2008). Education catalyses economic growth to social development by the way of building the human capital (Abuya et al., 2014). The country having higher number of educated individuals is having better life expectancy rates and significant improvements in health (USAID, 2008). Women having no education at all are highest (57%) among poorest strata and only 6 per cent belonged to richest strata. Status of primary education revealed that there is no much difference between poorest, poor or middle class women and they were concentrated around 14-16 per cent whereas among rich or richest class, the primary educated women were only 6 per cent.

Considering impact of women education on child nutrition, among better off caste, the stunted children were 47 per cent among whose mothers were not having any education compared to 18 per cent among higher educated women. Analysing the richest strata of the county, education have much impact on the nutritional outcomes as the difference of mother having no education and having higher education level, there was a difference of around 20 per cent. Studies have revealed that although prevalence of childhood malnutrition across the ethnic groups has declined in the country over the period, but the decline is remained lower among the SC/ST compared to the other caste groups in India. Still, the prevalence of childhood malnutrition is higher among the SC/ST children than the other social groups (IIPS, 2017). Even the economic status and education level contribute significantly in altering the malnutrition among children in India. Stunting is a marker for poor environmental, maternal and child factors, including poor sanitation, intra-uterine growth restriction, micro-nutrient deficiencies, and sub-optimal infant and young child feeding practices (Avula et al., 2016). Evidences support that parental educational attainments especially mother's education significantly reduces the risk of childhood malnutrition. Our findings also support the positive linkage between women's education and child nutrition in the country as the increasing level of women education reduced the burden of malnourished children. The finding is also found consistent with the previous studies revealed impact of mother education on child nutritional status (Abuya, et al., 2012; Mishra and Retherford, 2000).

The caste, class and education level also contribute to use of healthcare services especially family planning methods as one of the regulator of fertility behaviours in any society. However, with the increase in education level use of family planning method found reduced among

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currently married women. Whereas, analysis of caste revealed that the use of family planning methods is highest among better off caste groups. Significantly lowest use of FP methods is among Scheduled Tribe women in the country. In relation to the economic status, use of FP methods increases with increasing economic well being. It is recorded two times high among richest quintile of women as compared to the women from poorest quintile. Findings from the study provoke the issue of women education for better developmental and health outcomes. Hence, it is important for the women who have already cross the boundary of adolescence, for them community education for awareness and sensitisation on various dimension is very-much necessary. In a nut shell, the study suggests for women education irrespective of caste and class especially to those who are at the bottom level of caste and class hierarchy in our county.

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## Perceiving the Dialect of Violence and Reaction Formation: Case Study of an Urban Village of Lucknow

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*The present paper is an attempt to understand the dynamics of socio-cultural and economic changes that occur when a village gets integrated into a city. These changes create an environment of hostility among the residents and how this hostility gets expression with changing time is essential to understand because, in the long run, this interaction frame which is full of hatred and resentment creates a new urban space and civic life.*

### I

The urban phenomenon (urbanisation) in India is defined in terms of migration of the rural people to urban centres for employment, livelihood and settlement; here, the concept of rural is subordinate to urban. The situational change that occurs because of urbanisation takes into consideration only one frame where people move from rural area to urban area. It is silent when urban imposes itself upon rural. The newly established townships in India after independence in the form of industrial expansion and the decade of nineties onwards in the way of city expansion suggest a

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process of change. This process of change indicates subordination on the part of rural in comparison to urban.

The present case study is ethnographic fieldwork of one of the villages of the Lucknow district of India, which due to the expansion of the city get urbanised. The urban village may be defined in the context of the process of urbanisation. In the words of Darcy Bender:

"The term urban village may not be defined in a universal context, as these spaces have a very different history, development and the present use. Urban villages are often inhabited by recent immigrants and have dormitory-style living for much cheaper than the surrounding neighbourhoods, and many shareholders also can make a significant profit from renting out their buildings" (Bender, 2016).

The context may not be similar, but the interactions, reactions and rejections to a certain extent are the same.

The process of inclusion of the village in a city happens through a gradual process, and it involves the input of hostility and violence as well. The process of incorporation of the village may be explained only after taking into consideration a basic definition of the village. A M Shah describes the village as: "a village is made up of, first, a residential settlement (gaon-than or abadi area) where houses and huts are huddled together, and second, agricultural fields, pasture (gauchar) land, water tanks and ponds, car tracks, wasteland and other open territory all around it. The two together constitute a territorial unit called the 'revenue village' (mauza in most parts of India) with fixed boundaries recognised for local administration" (Shah, 2012).

Multiple locations of the border between the rural and the urban are also created when Indian cities expand horizontally, absorbing villages as they grow. The core village areas can retain a sense of the rural for decades after being absorbed into urban centres. The rural is then deeply embedded in Indian cities without some clarity on the role of the rural in them (Pani, 2014). In most of the cases when a village is in the process of integration to the urban setup, all the lands that belong to agriculture, pasture, wastelands are taken up by the developmental authorities; it is only the residential set up that is left as it is. It results in the unplanned village settlement with bad roads and poor sanitation. It is the condition even though the area gets incorporated in the municipality boundaries.

When the village lands get transformed into an urban layout plan, new houses, shops, malls, cinema theatres, offices, parks, and other buildings are constructed on them. The residential pattern of the village



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remains the same; muddy, narrow, dusty, roads, a mix of kuccha-pucca houses and huts, temple and little shrines, the village shops etc. The planners prepare the physical plan of the land area. Still, they do not incorporate the village residential settlement as a result of which there is always a problem of drainage, sewer and other waste disposal issues. The issue of the welfare of the village in the urban set up is still a challenge, and it remains a problem. "The architectural, economic, social, cultural and political changes that take place in these villages are important. It is easy to dismiss them as slums, but that would be shirking the responsibility of understanding the nature of this increasingly important segment of urban society. Even after a village is included in the city, the problem of rural-urban linkage remains and makes the categories 'rural' and 'urban' even more fuzzy than we have known them to be for long" (Shah, 2012).

## II

The process of urbanisation includes the input of violence, and these inputs of violence get expressed in different forms at different time periods. The present study takes into consideration, the hostility and violence at three levels: First, the hatred is visible concerning the policy of the government. This hostility asserts collectively and later individually. Second, the process of establishing township; where the pattern of interaction between the native and the new inhabitants gets manifested in the form of hate, violence, reaction and rejection. Third, the hostility and hatred are visible in the communication between the native and tenants. After the 1990s (the era of liberalisation, privatisation and globalisation), the migration from rural areas to the urban area increased. The population influx from a rural area in search for better employment opportunity was also visible in the city of Lucknow, and this has resulted in the prominence of the urban space. The houses of the native inhabitants provided cheap dwelling units to the new urbanites that had fewer resources at their disposal.

At all the three levels, the inputs of violence, hostility and reaction exist, but the nature of violence and hatred is different. The kind of urbanisation is also different at the three levels. The present paper takes a time-period of nearly 30 years and narrates the happenings in the whole process of change. The class formation at the first stage of urbanisation, the natives meet urbanites for the first time. The subordination of the natives is visible in comparison to new inhabitants, and this is the first frame of class formation that occurred some 30 years ago. At present, the nature of class formation has changed a lot. The natives are in interaction with new

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urbanites who have come from the villages to the city in search of work get abode in the less costly dwelling units offered by the original inhabitants that the natives are creating and providing a new urban space. It completes a circle, and now at the final stage, the class relationship of patron and clients seems to favour the natives as they have provided abode to the new urbanites. It is an effort to trace the underlying patterns of domination and subordination that emerged in the process of urbanisation in the village.

Purania is a village located in Lucknow Tehsil of Lucknow District, Uttar Pradesh with a total of 274 families residing within it. The Purania village has a total population of 1447 of which 754 males while 693 are females as per the population Census 2011. In Purania, village population of children of ages 0-6 is 226 which make up 15.62 per cent of the total population of the village. The average sex ratio of this village is 919, which is higher than the state average of 912. The child sex ratio for the Purania village as per Census 2011 is 965, and the literacy rate is 65.11 per cent. Male literacy stands at 75.74 per cent, while the female literacy rate was 53.44 per cent (Census, 2011). Along with the natives, the village provides abode to the migrant population settled in Lucknow for the search of employment. It makes the population of the village double as was enumerated in the Census.

Lodh and Yadavas mainly inhabit the village; Chamar is the other caste group residing in the Purania village. The division of the village based on caste-line is visible. These caste groups are mainly Lodh, Chamars and Yadavas. A continuous history of the conflict is there among these caste groups, and this caste conflict has often led to murders of the members of different members of caste groups. This continuous murder game is related to the land distribution and the compensation they received. Some of the families who did not get the proper amount as compensation have taken recourse to extortion and other illegal activities. Due to their actions, the village Purania has gained a negative identity as a notorious village.

In the decade of 1970-80, due to the expansion of the city of Lucknow, Lucknow Development Authority (LDA) acquired the agricultural land around the village under the Aliganj Expansion Scheme. During the process of acquisition, the farmers were paid compensation. Those who were the owners of the property received the payment. But the landless were at the receiving end as they did not have the ownership right to claim the compensation.

Those who received the compensation may be categorised into the following categories: (i) The big landholders: they received more

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compensation, and few of them invested their money in buying the land in the villages adjoining the city boundary. They tried to conserve the traditional family land as selling of the land is considered to be against the prestige of the traditional communities. By investing the money received from compensation, they are not only continuing with the tradition they are also making a wise investment. (ii) The big landholders: they have invested their compensation money at the roadside of Lucknow-Sitapur highway. The decision on the part of this group is wise enough to get a better return in future. (iii) The middle landholder: this category of landholders had small landholdings. They were the worst victims of urbanisation, the mode of livelihood and production that is agricultural land is no more with them. They had a small sum of money received as compensation, and that money was in a continuous flow of spending on daily needs, and finally, they ended up as landless labourers who do not have any skills. The large families have their problems as the money they have received as compensation could not be invested as they needed this for the maintenance of the family members. (iv) The landless have their own set of problems as they have to search for work outside the domain of agriculture and move to urban centres for employment.

The reaction of all the group towards the government is full of hostility and violence. They held the government responsible for their alienation from the land. Initially, this reaction was uniform across the village community but later on, the response of the different groups differed in orientation and approach. The earlier response was united and collective and later on it was fragmented into group specific, and these groups also transformed into individual reaction formations, hostility and violence.

The various landholders and landless, the different caste categories (Lodhs, Yadavas and Chamars) reacted collectively but later on depending on the land ownership, investment capability, entrepreneurship and the level of education, they responded to the approach of the government differently, and that disintegrated the group unity. It is also important to note here that the reaction they showed as a unit against the government decision was also motivated by the common cultural sharing that they were carrying from a very long period in the form of village tradition. The traditional community values that bind them together provided the boost to the reaction against the policy of the government. But the moment differential gains were put before them in the form of monetary compensation by the government, the unity of the community disintegrated and the priority of individual interest dominated over collective interest.

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Later on, individually the big landholders invested their money in the agriculture land nearby. Some of them who were educated and a bit enterprising invested in the property on the sides of the highway. The main problem was with small and marginalised landholders as the compensation they received was only enough for the maintenance of their family requirements, and they were not at all in the position to invest that amount in the land. There was another challenge as the agricultural land was no more with them, no alternative employment was there for them, and resultantly, for a substantial time, they depended on the amount they received as compensation. Some of them indulged in conspicuous consumption like spending on a pucca house, television, motor-cycle etc. It has created another set of problems for them in the long run.

### **III**

With the construction of a new urban colony, the second phase of violence, hate, reaction and rejection followed. The development of a new settlement and the inhabitations of the new residents initiated a new phase. The natives considered the new urban inhabitants as the encroachers, and that is why their orientation and approach towards the new inhabitants were of suspicion and hostility.

The young urbanites with education and etiquette on their part asserted supremacy over the native young counterparts resulting in violence and hostility now and then in the changing situation. The lifestyle of the native villagers differed from the new urbanites of the area. One good example was the use of toilets. A majority of villagers did not use the closed toilets, and they defecated on the sides of the roads or in the open plots. It has created a problematic situation for villagers as well as for the new urbanites.

Alienation of means of livelihood of natives by the acquisition of the agriculture land by the government has created problems. For an extended period of transition, they searched for the alternate means of livelihood, and for such period, they depended on the compensation money received. This compensation showed a conspicuous consumption for few, but for the majority, it was the only source of livelihood. The majority of villagers were unskilled, but they ceased from working for the urbanites. They always considered them to be superior to the new urbanites. The mismatch between actual status and the projected status of the native villagers led to a strain, and this resulted in the theft and other illegal activities by the villagers. The hefty compensation amount of money they received led them to enter into

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liquor and drugs also. Some of the residents of the village gained prominence due to their criminal activities. One such inhabitant gained fame due to his illegal activities. His brothers operated small businesses to run the household. In the whole process, he confronted the other stakeholders within the village and outside the village; these confrontations were often violent and led to the murder his brother. As a result, a special police post was established on the outskirts of the village to contain violent episodes; the festival season often led to such type of violent situations. This period of transition of native villagers confused them towards the role they had to perform in the new changing scenario, and this chaos and confusion in terms of behaviour projected them as anti-social to the urbanites. For a very long period, this sense of hostility prevented them from having good relations with the urbanites. It has also led to inhibition on their part to work in urban households.

The temple embodied and was the guardian of all traditional culture, literary and art. It must be borne in mind that the past culture was largely religious and even its secular part was clothed in the religious arrangement. The village temple became the predominant centre of village culture; and the cultural life of the village, religious and secular artistic and literary, moved round the village (Desai, 2006). All turning points in the process of agricultural production such as sowing, reaping and others are signified by religious rituals. Thus, the temple, the visible expression of rural religion plays an important role in the economic life of rural society (Desai, 2006).

Since the government acquired the agricultural land of the village for the expansion of the urban colony, the agrarian activities also could not be carried out by the villagers. It resulted in the changing role frame of the village temple. The village gets neglected for several years as the traditional rituals associated with agriculture, where the temple had a vital role to play could not sustain because of non-practice of agriculture in the village, though, the village inhabitants visit the temple premises regularly to seek the blessings of the deity. The temple was the source of ethical and moral values which regulated the life of the people, but in recent times the control has been diminishing.

Temple is an important place in any village set up. In Lucknow, the village deity is Bhuiyan Devi (the goddess of the agriculture class or farmers). The villagers were mainly dependent on the agriculture land, and that is why the deity becomes essential. The village was acquired for the expansion of the urban space; therefore, the village, as well as temple, were

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initially neglected. Later on, some of the inhabitants initiated the renovation of the temple, and for this, they constituted a committee. The committee chalked out a work-plan and undertook the work to clean and renovate the temple premises. The villagers, when they came to know about the initiative of the committee themselves, started the temple renovation work without any involvement of the committee. The new urban inhabitants made efforts to renovate the temple, but this invited a notion of resistance from village residents. Later they accepted the support of the outsiders in this endeavour. The original village inhabitants took the responsibility of the renovation of the temple in their hands. However, the resources on the part of villagers were not sufficient to manage the renovation work.

In the whole process of change, the temple which was an important institution in the socio-cultural and economic life of the village now incorporated another set of roles and rituals. Earlier, the temple had only 'Bhuiyan Devi' as an essential deity, but at present, the temple includes other Gods and Goddesses as a part of the village temple. The temple premises accommodates many deities; the devotees of almost all Gods and Goddesses have a place to show their devotion. Shiva, Hanuman, Shani, Durga etc. are incorporated as essential deities along with 'Bhuiyan Devi' in the present temple. The plural-frame of the temple led to a paradigm shift in the composition of devotees also. Earlier, only villagers visited the temple, but at present, the urbanites also visit the temple. The transformation of the temple concerning the composition of deities also transformed the composition of devotees. The frame of resistance that was earlier visible on the part of villagers is no more as the deities who get incorporated in the village temple premises were worshipped by the urbanites also.

The new inhabitants of the area acted as assertive citizens having certain rights and duties. They are the new owners of the land, and for this, they had paid to the government. The expectation on their part was a peaceful life along with basic civic amenities. The government colony was inhabited by the employees from the different parts of India. The colony is adjacent to the village and located in the Lucknow Development Authority (LDA) plan. The colony was a no-access zone to the villagers. Initially, one or two incidents happened where the youth from the two groups clashed with one another. Since there were intra-group divisions in the village, they could not sustain the conflicting ambience for long, and that is why their hostility towards the other group did not get an assertion. Later on, while co-residing for a very long period, they established a reasonable rapport with the new residents.

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#### IV

In the decade of 1990s, the new economic regime of globalisation, liberalisation and privatisation led to another phase of growth of urban space. This creation of urban space was within the city as well as outside the boundary of the city. In the present case, the growth of urban space is created by the compulsory emigration of the new inhabitants from the rural areas in the city. The urban village accommodates the village migrants from outside and provides them with the cheap dwelling units. It has created a new sense of ownership in the minds of the native villagers who had lost their land to the government and ultimately to new urbanites. This sense of ownership is more meaningful for them as this creates for them a new source of income. Accommodation of the new inhabitants in the village has led to a transformation of the village space into a congested space only a shade better than a slum. Urban life is expensive, so the migrants from the rural areas who are not well off have taken recourse to slums, and those who had some resources have taken recourse to these urban villages as their abode in the urban space. It is crucial to perceive the reaction of the village (native) inhabitants towards these new inhabitants who get dwelling in their houses. The reactions may be visualised in two different frames: one, the responses of the inhabitants may be perceived as a relationship of patron and clients, where the original inhabitants assume a role of authority and ownership as they are providing space to the migrants from rural areas. They are also receiving monetary incentives in the form of rents of the houses. The whole new relationship may be perceived with respect to an association of patron and client. Second, if we compare the relationship regarding a time-period of 30 years; when the government was in the process of acquiring the land and the natives were in the process of losing the sense of ownership. After 30 years, again, the sense of ownership is re-gained by the natives by providing living space to the migrants who settled down in the urban area.

It completes a full one circle, where at the initial stage they were deprived of their agriculture land because of city expansion or the encroachment of urban on the rural landscape, the natives felt deprived not only regarding land but also about employment, ambience and primary ecosystem. Later, when the new urbanites occupied their area, the second part of deprivation and hostility was visible, and this was more painful as they felt a relative deprivation in every field, whether concerning resources, amenities, education and culture. But after spending nearly 30 years, the deprivation and hostility get converted into familiarity and the relationship changed to a cordial one. The late 1990s and early years of the 21st century

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led to massive city expansion and migration from rural to urban centres. Lucknow was one of the foremost centres for the migrants providing better opportunity, and the original natives of the village provided them with easy and affordable dwelling units, a sense of ownership once again created in them confidence. The feeling of ownership is giving them back a feel of patron regarding owner and tenant relationship in the changing time.

J.C. Mitchell distinguishes between processual and situational change. By the former, he means the historical changes that occur over some years and the latter means changes that happen when people move from the rural areas and participate in the urban situation (Mitchell, 1966). One may view the situational modifications from the paradigm of the orthogenetic and heterogenetic frame. In the whole process of urbanisation, it is urban, which becomes essential, and the rural seems to be subordinate to this. In contrast, in the actual frame of urbanisation in India, the urban encroach upon the domain of rural and creates new dimensions and challenges for the rural inhabitants. This situational change from rural to urban creates a lot of problems. The challenges are different for different periods and different classes. Landowners who received the compensation and landless who did not receive any compensation did face altogether very different socio-cultural and economic challenges. 'Plenty of villagers do not own land even though they may lease or be employed by or work on someone's (or common/village) land. Those who maintain Indian village life are not necessarily landowners. Reducing rural life to two cut and dried categories of landowners and non-owners, with only the former worthy of compensation arising from land acquisition for big urban projects, is to undermine further the social and cultural complexity and livelihood strategies of the rural' (Goldman, 2011).

The class formation that has emerged in the present study first confronted the government, the fission in the unity of village inhabitants led to the fragmentation of this unity and the classes which appeared had clashes with one another. The next phase starts with reference to the relationship of the original inhabitants with the new urbanites who settled on the lands of the villagers. The feeling of hostility was always there, and the ties were still strained. But after a long period of residing together, the relationship converted into an informal and cordial one. After the year 2000, the migrants from the nearby districts who came to Lucknow in search of better opportunity were provided cheap dwelling units by the original inhabitants of the Purania village. In the final stage, they had a feeling of ownership as they have tenants, and this empowerment on the part of the



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villagers provided them with a sense of pride and satisfaction. Though the physical map of the village changed for the better due to the efforts of the Municipal Corporation, the space available for the new inhabitants who are provided housing facilities by the original inhabitants is just like slums. Nearly all the villagers have an occupation, the relationship is still decided and dictated by the land, and in this case, the housing area possessed by the residents.

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## **Corporate Media vs. State Media: Tension in Post COVID Communication Dissemination**

**Arunima Mukherjee\***

*The paper strives to analyse the distinction between state-sponsored media and corporate house-sponsored media and their functioning in the present time. In this paper, pattern of media dissemination in India is analysed in the context of COVID-19. The paper also highlights negativities associated with state owned media as seen in China during the pandemic and analyses post-COVID period new communication structure in India. The paper concludes with arguing that the re-emergence of state and its administration should not be seen as 'hazards' in communication flow but as a fulcrum of information flow in the larger society.*

### **Introduction**

In the time of corporate media and new social media, the state-sponsored media is getting oblivious and receding to the background of public imagery of information dissemination structure. In this age globalisation of technology, dissemination of information fully giving credence to Foucauldian perspective of 'knowledge is power'. In such transformed era even the presence of nation-state was also limited in scope only to be a regulator of law and order for creating a milieu of free and uninterrupted supply of labour, goods and services across the globe. With the emergence of COVID, first time since disintegration of Soviet Union in

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1989 the market dominated neo-liberal economic model brings the state back in the centre of discussion on real world. While even after 2008 global financial crisis, the state-market debate or in other words the debate between integration and contraction of economic linkage was mainly centered in Europe culminating in BREXIT. But COVID has spread the discussion globally. With the new normal of following state directives of lockdown and phase wise unlocking in policy domain, communication aspect between government and citizen and among citizen have been thronged by new normal of factual and counterfactual information flows. Hence the infotainment of pre-COVID times was replaced by bipolar information disorder in COVID times where government information about COVID affected and deaths are seen as shallow, half-truth and false and private news media information are seen as 'critical mass' to interrogate the government information. In this backdrop, keeping India as a case, the paper runs through four sections: the first section analyses distinction between state-sponsored media and corporate house-sponsored media mode of functioning, the second section highlights situations in democracy like India, the third section highlights negativities associated with state owned media as seen in China, and the final section analyses post-COVID period new communication structure in India. The paper concludes with arguing that the re-emergence of state and its administration should not be seen as 'hazards' in communication flow but as a fulcrum of information flow in society and in that regard state-sponsored media has a situation of a new era to be unfolded before it.

### I

#### **State-owned and Corporate-owned Media**

State media is a tool for public diplomacy, and states the power to shape narratives. Unlike publicly-funded outlets, state media lack editorial independence from government bodies and institutions. Many countries have maintained official state media broadcast outlets across television, radio, print, and increasingly social media to communicate their points of view to the world. These media properties are sometimes called 'white propaganda' entities - a reflection of the fact that the attribution of the message to the state actor behind it is fully transparent. While much of the study of state-sponsored online influence has focused on bots and subversive accounts, this paper focuses instead on the white propaganda capability of the People's Republic of China on social media, and examines how it has been leveraged in an information conflict around the 2020 novel

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Corona virus pandemic. The paper tries to comprehend how overt online propaganda properties are developed and leveraged to shape international public opinion and provides us with a more complete grasp of the narrative manipulation capabilities available to well-resourced state actors, and how it leads to potential gaps in tech platform misinformation policies. Despite the rise of the internet, state-dominated media-especially television-remain a crucial tool for regime control in authoritarian societies. Governments in China and Russia are the forefront of the state media model, but such systems dominate in countries as diverse as Azerbaijan, Iran, Rwanda, Vietnam, and Zimbabwe. To achieve dominance state media seek to influence four audiences: regime coalition elites; the populace at large; internet users; and the opposition and civil society. The authoritarian media strategy is not designed to block everything, but instead is aimed at obstructing news about politics or other sensitive issues from consistently reaching key audiences. The internet may offer a freer alternative to state-dominated media, but the Internet's fragmented character makes it a poor match for the disciplined messaging of authoritarian regimes that have a single-minded focus on self-preservation. State-sponsored influence campaigns on social media platforms are broader than fake accounts and bots. Addressing overt state media is a policy challenge, not a detection challenge. Given evidence that the Client to Client Protocol (CCP) has amassed over a hundred million followers on its state media accounts, our findings suggest that although platforms such as Facebook are primarily behaviourally-focused when it comes to taking down misinformation, there is still a need to consider whether affording governments the ability to use advertisements to push misleading content is a policy gap in counter-misinformation efforts. We believe it is, and that social media platform advertisement policy requires an update. Some platforms, such as Twitter, have already elected to no longer accept paid state media advertisements that boost highly slanted coverage; this action was taken in response to Chinese state media promoting tweets misrepresenting events during the Hong Kong protests of 2019. Other platforms should adopt this position in the interests of minimising targeted propaganda and misinformation. Additionally, more research is urgently needed to better assess how this content shapes public beliefs. In all it is true that state has really been in a dilemma in COVID times. In pursuant with its new found role of controlling and managing the entire society, it has started controlling corporate media houses as well instead of giving more priority to popularise, contemporise

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and place state-media like Doordarshan, Lok Sabha and Rajya Sabha TV and All India Radio in the forefront of communication dissemination structure.

Looking into the mainstream media structure, it is the online social media that has been ruling the roost. A pressing problem with modern-day online media is the spread of misinformation - this has been much talked about in political spheres but has also been a prevalent issue in healthcare regarding sentiment towards vaccination. The spread of mis-information on SARS-CoV-2 has been no different - theories have been floating around that the virus was engineered in a lab as a bio-terrorism agent, or that the symptoms are actually caused by the 5G mobile network. In addition, thousands of listings on Amazon promoting fake COVID-19 cures have been reported, and the prices of some sanitizers and facemasks have increased by over 2000 per cent, despite in many cases not being fit for purpose. Another challenge in the social media age has been avoiding stigma. Early in the COVID-19 outbreak, before the disease or the virus were officially named, many outlets referred to the virus as 'Wuhan virus' or similar, with this hashtag trending on Twitter. Unfortunately, this wording has a tendency to stigmatise individuals from that city, and also builds an association with those of a certain ethnicity, in some cases stoking fear and xenophobia. Building stigma is incredibly bad for outbreak control - it can drive individuals to hide illness in order to avoid discrimination. It can prevent people from seeking healthcare and it can also discourage people from seeking healthy behaviours, all of which aids to viral spread. The World Health Organisation (WHO) has stressed out this standpoint, with Director-General Tedros Adhanom Ghebreyesus stating in several press conferences: "This is the time for science, not rumors. This is the time for solidarity, not stigma ". However, it is important that trusted media sources do not just ignore misinformation but attempt to counter it. This can be done by thinking about to whom their audience might trust, bringing in credible experts, showing empathy with those affected, using appropriate language, and thoroughly and carefully explaining terminology, for example, what does a 'community case' mean? One example of this is the WHO 'myth buster' section, which addresses some misbeliefs about COVID-19. Appropriate language can also be important in countering stigma - particularly with reference to places or countries. The virus does not differentiate between nationalities or otherwise, so there is no reason journalists should. In addition, questions have been raised around terminology such as 'patient zero' and 'superspreaders', with much criticism raised when the identity of the first British case of COVID-19 was released in the UK media. Reporting

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should look at the bigger picture and move away from the details of individuals, to avoid stigma and its potentially devastating impacts. Finally, in addition to reporting the story, journalists can offer practical information to audiences – or 'news you can use' – for example relevant local telephone numbers for healthcare services or advice on handwashing. These smaller, practical steps from trusted and up-to-date sources could help inform the public on the advice coming from broader governing bodies that they may otherwise not hear (Walker and Orthung, 2020).

Corporate backed media houses remained fully unlocked even in the high days of lockdown and reporters became living soldiers in the battlefield fighting against high risks of being corona affected. Therefore media has been the only sector in COVID times which continued to work even economic downturn was not on its card. But the news reporters from field hardly had any role to find out how and in what ways their reported news is twisted and turned for presentation as per media house guidelines. So as against the state sponsored media, the corporate media houses provides competitive news and creates a kind of polarisation in public image regarding approach to the government and opposition. It is quite clear that political parties in government and in opposition find sit safe now a days to invest some portion of their assets on private news channel for propaganda purpose not in the sense of earlier era of highlighting one's image and acts but now to denigrate other' image and acts. Interesting to note is that in times of COVID when everything seems to be changing the operational orientation of providing service, the private news media have not changed their orientation. Even in times of COVID they have tried to contextualise the management of COVID in political terms in a polarised manner and talking even of electoral choices instead of food and job choice availability for the public.

Therefore, it is suffice to say that both state-owned media and corporate house-owned media are very much self-interested and self-praiseworthy and therefore runs parallel in approaching dissemination of communication of information and services to the public. It is particularly relevant to mention that COVID times have not affected media houses their orientation to news, information and social image-construction measures.

## **II**

### **Indian Context**

In times of crisis, democratic governments may take a dangerous autocratic turn. In such a situation, journalism has a great role to play in a

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democracy, as it has been ideally visualised as a platform for objective information and critical-rational discourse. Thus, the health of journalism in a country can be examined in the times of a crisis. However, corporate control over most media bodies also means that they become an instrument of the ideological apparatus of the state. There are many concerns associated with the COVID-19 crisis: ill-equipped public health systems, policies to combat the pandemic, and the lack of planning and support to the vulnerable sections. These issues demand serious examination, but the mainstream media, barring some courageous exceptions, seems to be forgetting its democratic role. Just before the announcement of the nationwide lockdown till 14th April 2020, Prime Minister Narendra Modi reportedly called upon print and electronic media owners and editors of the country and asked them to support government efforts to combat the pandemic and also advised them to present 'positive news' related to COVID-19. Plainly put, these were the owners and editors who control most of the Indian media at the national and regional levels who were advised to abide by the official narrative and present information was provided to them by the government about COVID-19. It seems that most media organisations were compelled to cover the labourers' plight because of its sensational value, but this coverage was inadequate. However, the media outrage that followed was clearly an extension of the already prejudiced and polarised coverage, as the Tablighi Jamaat was blamed for violating lockdown rules and for 'Corona Jihad', 'Islamic Insurrection', and 'Corona Terrorism'. This is clearly an example of fake news propagated by the mainstream media to further the predominant agenda. Muslims were also attacked in various parts of the country after this propaganda. The government seems rather unwilling to let critical voices have their say about the way in which the crisis is being dealt with. There is an explicit expectation that the media's coverage should be 'positive' and follow the official line. While much of the media, corporate-owned as it is, has surrendered, a small section is courageously following journalistic ethics (Singh, 2020).

Having witnessed a massive drop in advertisement volumes due to the COVID-19 crisis, there is a growing chorus of media voices demanding immediate clearance of advertising dues by the Directorate of Advertising and Visual Publicity (DAVP) and other state-owned bodies to help companies tide over cash flow problems and avert possible job losses.

Top media officials say the move will help the industry sustain itself at a time when advertisers are not spending, payments due from corporate are stuck, supply chains - like in the case of print newspapers - have been

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disrupted and traditional drivers of media consumption, sports and live entertainment, have all but ground to a halt. DAVP is the nodal agency of the central government for advertising by various ministries and organisations, including public sector undertakings (PSUs) and autonomous bodies.

Last month, the radio industry, under the aegis of the Association of Radio Operations for India (AROI) had appealed to the government for a slew of reforms including restoration of government advertising on radio to normal levels and payment of government dues on advertising from DAVP, National Film Development Corporation and Bharat Sanchar Nigam Ltd. (Laghate, 2020).

The Indian context of interaction between state and corporate media houses in times of COVID has been one of bargainings and not cooperation. While the state wants to have control on the informative communication dissemination sphere of the corporate media houses the latter in turn wants some financial cushioning. As a result, the orientation of both forms of media in India is economic rather than communicative in the true sense of the term mass communication. In this situation, the paper floats the idea of refashioning the state owned media which has its own centralised disadvantages as the situation in China shows.

### **III**

#### **State-owned Media - The Pros and Cons**

In a recent study conducted by Vaneesa Molter and Renee Diresta, it is learnt that to gain insight into how Chinese state media is communicating about the Corona virus pandemic to the outside world, a collection of posts from their English-language presence on Facebook reflects three recurring behaviours: sharing positive stories and promoting the Chinese Communist Party's (CCP) pandemic response, rewriting recent history in a manner favourable to the CCP as the Corona virus pandemic evolved, and using targeted advertisements to spread preferred messages. Although spin is not unique to state actors, paid advertisement campaigns to promote government-run state media pages containing misinformation and conspiracies are problematic (Molter and Diresta, 2020). The findings of this study suggest that platforms should implement clearer disclosure of state-sponsored communications at a minimum, and consider refusing paid posts from such entities. The perception of China's handling of the novel Corona virus has been a messaging challenge for the Chinese Communist Party's (CCP). There have been a significant number of allegations among Chinese



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people on China's domestic social media platforms, as well as in the global press that the CCP mishandled the crisis and covered up the outbreak's severity. To manage the public relations crisis, the CCP has attempted to control the narrative and deflect blame since early in the pandemic, domestically and abroad. It has done this by drawing on its substantial state media apparatus. China has extensive and well-resourced outwardly-focused state media capabilities which it employs for its public diplomacy strategy. These channels, such as the CCP's properties on Facebook (which is banned in China), relay the government's messaging to other countries' governments and citizens.

According to another study by Xavier Hernandez, China is still deep in the throes of a public health crisis, with more than 79,000 confirmed cases of Corona virus infections and at least 2,700 deaths. Factories in many areas have halted production, and the authorities have imposed lockdown measures across much of the country, beginning in January 2020 in the central city of Wuhan, the centre of the outbreak. The government is now working to promote the idea that international experts enthusiastically endorse its approach. A recent story by Xinhua, a state-run news agency, featured experts from several allies of China, including Russia, Cuba and Belarus, lavishing praise on Chinese leaders for showing 'openness' and a 'highly responsible attitude' in dealing with the outbreak. The party has sought to play up themes of patriotism and sacrifice and to reframe the crisis as a heroic battle against the virus with Mr. Xi at the helm. News sites show photos of medical workers stationed at airports, with the word 'attack' splashed across the images in bright red letters. Cartoons circulating online depict doctors and security officials marching in step alongside the words, 'we will win this battle!' The authorities have dispatched hundreds of state-sponsored journalists to produce sentimental stories about front-line doctors and nurses. Communist groups have created cartoon mascots meant to stir patriotic feelings. That approach has often provoked blowback from the public. By trying to reframe the crisis as a vindication of the party's governance model, propaganda officials appear to be trying out yet another message (Hernanades, 2020).

Analysing the recent studies on the recent orientation of state owned media as practised for years together in China, it can be said that while the state can have a decent loyal communication dissemination pathways to the public in the form of state owned media. The challenges before state to allowing freedom to those media and also to allow some other media channels particularly online social media is immense. So in adopting a state-

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owned media approach in a vibrant democracy like India, the Chinese model is surely not going to be fruitful. Nevertheless, COVID-19 spread forced us to think alternatively and think deep.

#### **IV**

#### **New Communication Dissemination Structure for Post-COVID India**

In an insightful article, Ronojoy Sen has recently argued that the impact of the pandemic might be felt most in the expansion and reach of the state and the centralisation of power. Both these trends had been visible in India over the past few years, but the pandemic is likely to accentuate them. Firstly, the enormous increase in state surveillance in the wake of the pandemic, which has happened worldwide, is unlikely to be rolled back in a hurry. More significantly, we are likely to see a much bigger role for the state and state-owned enterprises. Contrary to what many saw as the free market and reformist leanings of Modi in 2014, he has shown little inclination to cut the bloated Indian state to size. Centralised decision-making is also likely to outlive the pandemic. It is often said that the shambolic Indian state rises to the occasion during emergencies. The response to the pandemic partly bears that out. The lockdown might well have saved lives, but also had a disastrous impact on livelihoods, the extent of which is yet to be worked out. The government, which so far has not announced any big stimulus package, will now have to deal with the economic fallout of the lockdown and the life-threatening impact on the poor. Mr. Modi has shown that he is willing to disrupt or rewrite the traditional rules of politics in India. The pandemic's aftermath will test whether Mr. Modi is capable of systemic changes to the Indian state to ensure better and equitable governance (Sen, 2020).

Translating the insights of Sen in media sphere it can be argued that Prime Minister Modi is always upto something special, out of the box and adventurous. So at one extreme Modi-led Indian state can step out to control not only corporate own media houses regarding their information flowcharts but can also extract individual information through what is called 'surveillance capitalism' of data societies in which situations can be so suffocating that the call may be "we do not need laws alone, we need public commissions that talk about truth. We need truth commissions"(Gupta and Banerjee, 2020). But at other extreme Modi government led Indian state can also do the unthinkable and which is the thrust of this paper - rebuild and refashion state owned media riding on a nationalist spire to give a tough competition in the 'information game' of Indian democracy. The COVID-19 period has shown how meticulously Central Health Ministry communicated

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in depth informative daily status of COVID situation in the country for months together. But such data were then scrutinised by private corporate owned media houses in their own ways which becomes politically charged and meaningful giving a false imagery of politics in public mindset which is that politics is a self-interested economic business but not selfless public service which ought to be the image in public mind. Therefore, the paper argues that Modi government can put into frame all information available for communication dissemination across the society and also analyses the information from formal, academic and policy perspective and not political perspective. However, this strategy must be official as well as democratic. The paper concludes by stating that much of next electoral appeal for Modi government can be on the issue of state-owned democratically arranged media communication channels and newspapers. Thereby media sphere can truly be vibrant in India in post-COVID period.

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***Book Review***

**Farming Futures:  
Emerging Social Enterprises in India**

**Ajit Kantikar and C. Shambu Prasad**

**Upfront Publishing Services Private Limited (2019), New Delhi  
Pages 552, Rs. 795, (Self-Published through Kindle, Amazon, India Ltd.)**

**Rudra Narayan Mishra\***

Social entrepreneurship is a fast growing phenomenon in India. Currently the social enterprises (SEs) are active in the field of health care, agriculture, clean energy, water and sanitation, micro credit, affordable housing and grass root innovations (Satar 2016). Of late documentation of the successful social entrepreneurs and enterprises gain momentum in academic world with both quantitative and qualitative tools help building knowledge base for future social entrepreneurs, prospective investors and researchers alike.

Conceptualising a general definition of social entrepreneurship is still an evolving process (Hamid et al, 2017). Often these enterprises try to make a balance between 'value creation' and 'value appropriation' to ensure growth and sustainability of their business models (Mizik & Jacobson, 2003, Seelos et al., 2005). Poon (2011) suggests five different factors that influence the emergence, growth and sustainability of social enterprise sector viz., the

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political environment, legal environment, cultural environment, social environment, and institutional environment.

### **Social Enterprises in Indian Context**

There are close to 2 million SEs in India by 2016 and list is growing (British Council 2016). Satar (2016) documented various state policies and legal framework for setting up of the social enterprises in India. At present the social enterprises in India are registered as non-profit, for profit and hybrid of above two, and all these criteria give certain advantages and disadvantages in tapping various sources for raising fund, setting up of the organisational structure, paying taxes and expansion of the business model. For example Swayam Krishi Samgam (SKS)<sup>1</sup> and Spandana started as SEs in field of micro credit and later became for profit organisation. State run institutions like Small Industrial Development Bank of India (SIDBI), National Bank for Agriculture and Rural Development (NABARD), Entrepreneurship Development Institutions (EDIs), Indian Institute of Managements (IIMs), most of the Indian Institute of Technology (IITs) still dominates the sector while it comes to raising seed capital and man power, albeit though corporate world forthcoming in recent years.

A brief history of social enterprises in post Independent India could be traced to Vinoba Bhave's land gift movement in 1950's followed by setting up of Amul Dairy Cooperative by Dr. Verghese Kurien. Amul spearheads 'white revolution' and turned India into largest milk producer in the world through its milk cooperatives (British Council, 2016). Next comes Fabindia founded by John Bissell in 1960 that linked 80,000 artisans to the urban market through his venture which offered rural artisans both regular income and share in company's profit. Ashoka foundation set up in 1981, formally introduced the concept 'social entrepreneurship' and promotes individuals and organisations developing business ideas for low income markets. SELCO solar and BASIX in 1990's were next major land mark in the evolution of social enterprises in India, mostly focusing on rural credit to promote rural livelihood (ibid).

### **Need of Social Enterprises in Agriculture Sector in India**

India has 17 per cent of world population but with 2.3 per cent of world geographical area and 4.2 per cent of world's water resources. Agriculture plays a very important role in Indian economy. It contributes to a less than fifth of GDP of the country but engages nearly half of the labour force, mostly in rural India (Chand 2019). Out of the total net sown area (142 million hectares) only 45.5 per cent of has some source of irrigation (ibid). Four out of every five farmers falls in marginal and small category of land holding, belong mostly to lower strata of the society. Lower productivity,

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low level of mechanisation, lack of crop diversity and subsistence farming plagues the sector (ibid).

The small and marginal farmers face difficulty in availing credit, lack access to transportation and marketing and often face difficulty in covering operational cost. Natural calamities like flood and drought often plagues the sector. Degradation in soil quality due to increasing salinity, over use of fertilisers and pesticides pose sever threats to sustainability of India agriculture. There are abundant micro and meso level studies related to challenges in Indian agriculture sector. As per National Crime Bureau Record, between 1995 and 2017, 379604 farmers committed suicide. Most of these suicides are due to crop failure and indebtedness (Goyal et al, 2016, Kamble et al, 2018).

Though central and state governments in India have various policies for farmers related to credit, marketing, supply of farm inputs at subsidised prices and storage, the benefits often does not reach to intended beneficiaries, most of who belongs to marginalised communities (Chand 2019). Therefore SEs can play an important role in the sector in providing credit to farmers, modern and cost effective tools, technologies and practices, linking farmers to market, promoting sustainable farming to maintain ecology, crop diversification, value addition to raw produce, storage for their produce, an effective social net for small producers and creating farmer collectives to enable them to negotiate with state and large corporates.

It is essential to develop an enabling atmosphere for individuals/ organisations to set up social enterprises in agricultural sector in India where half of the workforce still engaged for their livelihood. It is equally important to document these enterprises to build a knowledge base for future social entrepreneurs and enable policy makers to evolve policies that ensure growth of these enterprises and educating investors to invest in such ventures. In this context the editors and authors of the book 'Farming Futures: Emerging Social Enterprises in India' have made an honest attempt. The book consists of 18 chapters, 15 of which are individual case studies, all related to agriculture, selected from various states in India.

The editors are clear from the beginning in production of this volume about its purpose. While acknowledging 'theory building' is necessary in any academic exercise, given the evolving nature of definition of SEs in a given socio-political-economic-cultural landscape, they choose to focus on 'practice of social entrepreneurship' in different contexts and geographies. The entire 'business operation' of an SE is seen as a tool to achieve positive social impact and improving lives of producers who often comes from lower social strata. The motive behind 'profit' is to further the social objective of the enterprise rather than monetary gains from such enterprises. The 15 SEs, case studies of which are presented in the book were carefully selected from a list of 250 such enterprises started between 2004

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and 2015, all from rural areas, operating for more than four years and spread across the value chain. Relatively larger SEs operating in relatively large geographies and with large number of farmers had been selected. Thus, it facilitates to generalise the findings to other comparable SE models.

The case study method was used with standard quantitative and qualitative tools to study farm's social and commercial operations. A set of questions were prepared to assess social impact and economic value of these enterprises along with management practices (pages 13-14). The selected SEs were mix of for-profit (10 out of 15) and remaining are hybrid (registration and organisation as two entities; one registered for profit and another as an NGO/Trust) but exclude women self-help groups, micro finance institutions, farmer producer groups, reason being large volume of academic research has already been carried out on them.

Thus the book narrows down to SEs which produce and market a given product(s)/service(s) and looks for expansion in terms of volume of output, revenue and market. All selected entrepreneurs are highly qualified (13 out of 15 were post-graduate from different disciplines) but except for one none of the others have formal agriculture back ground. Seven out of 15 entrepreneurs were having business management degrees which helped them to guide their ventures. The specific social problem identified by the individual SEs and products/services created to address these problems along with the social goal of each venture, are presented in tabular form for benefit of the readers of the book (pages 23-27).

### **A Brief Summary of Case Studies**

AgSri promotes Sustainable Sugar Initiative (SSI) among sugarcane farmers in Maharashtra, Telengana, Uttar Pradesh and Karnataka with close to 4000 farmers. The sugarcane plants are first raised in a nursery in controlled environment which save water and cost of raising the plant. As per one farmer's account he gets now 80-100 tons of sugarcane using plants grown through SSI method, almost twice that of compared to conventional method. But it faces financial constraints to scale up the operation though demonstrating the potential of the technology for millions of sugarcane farmers. Earth 360 Eco Ventures (P) Limited, Kadiri, Andhra Pradesh is a SE promoting millets in dry lands of Royalseema (Anantapur district) where due to state government intervention (Rs. 2 per kilogram rich scheme), groundnut got replaced the millets. Apart from encouraging farmers to return to growing millets this particular SE provides online market platform for their produce as well. It currently handles 250 tonnes of nine different millets from 500 acres of land. The farmers now get Rs. 90-120 per kg for their millets instead of Rs. 20 or so earlier. It also undertakes online campaign for including millets in diet for Indian consumers, thus bringing behaviour change for balanced diet and sustainable ecology. Recently the SE

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started another arm Millet Machines and Tools LLP (MMT) to manufacture and market a huller and a combined grader-aspirator to process different millets. Ekgaon Technologies Private Limited, based on vision of 'Gram Swaraj' principle of Mahatma Gandhi, promotes farmer collectives. Currently it works with 30000 farmers from Jharkhand, Madhya Pradesh and Tamil Nadu help. This SE helps small producers to aggregate their produce and sell them through its own platform for a better price. Currently its online store sells 160 products from 60 producer companies in 600 cities and towns in India. Apart from marketing service the SE also helps small producers with soil enrichment programmes, water management, weather services, pest and disease management, providing better seeds and crop practices and credit linkages through its own field schools and public sector agriculture extension programmes. The SE use the mobile platform to reach producers and consumers alike. It also spreads awareness among customers about the product they consume through 'know your product' initiative.

Ergos Business Solutions Private Limited from Bihar provides micro ware housing services and scientific crop management practices to marginal and small farmers in Bihar within 5 km of their fields in districts of Muzzafarpur, Samastipur and Begusarai at present. The SE plans to spread to seven more districts in the state. Lack of storage for long affected Indian agriculture. Periodic price volatility in cereals and crops like potato, onion and tomato in recent years rather become regular features in India affecting consumers from lower strata of the society. Following an 'asset-light' model, the SE hires unused storage facilities and building in rural area for the purpose and store crops like paddy, wheat, maize, soya and mustard seeds of small producers. It has also introduced grain ATMs. At present 1956 farmers are benefitting from this SE in three districts, out of which 533 are small farmers are having 1-2 acres of land. Flybird Farm Innovation Limited, Bengaluru works to promote 'scientific micro-irrigation' to reduce use of water in agriculture for sustainable agricultural practices, thereby reducing input cost for farmers. More crop for every drop is now the focus of Government of India as well. The technology of Flybird helps motors controlling sprinklers turn on automatically in the field based on temperature and humidity around the crop. The company also provides range of farm tools for optimal use of fertilisers and other inputs at affordable prices under brand name 'Siri' and currently operated in both India and African countries. The company started in 2015 is yet to reach 'breakeven point' in its operation but hopeful in near future it will be able to achieve this. Currently the SE has tied up with Mahindra to sell its tools.

Fresh Produce Value Creation Services Private Limited (FPVCS), Navi Mumbai links farm producers to retailers, institutional kitchens, restaurants, food producers and exporters. The SE has two brands; 'Go4Fresh' which deals with suppliers in general and 'Tree Story' which sell



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produce directly procured by FPVCS. This one is an example of hybrid SE whose non-profit arm Krishi Pragati Foundation (KPF) carries out agri-support services and identify farmer producers to supply produce to FPVCS. Often farmers were forced to sell the high grade of their produce by private retail corporates like Reliance and left with lower quality ones. This problem is being addressed by the above SE. Removing the middle men and reducing the number of intermediaries between farm producers and end consumers, they ensure producers get higher share from the sale and also check wastages involved in sorting at various level of intermediaries. Started in 2013, the farm is catering to 4500 farmers of Maharashtra and have a turnover of 17 corers in 2018.

Started as Business to Consumer model (B2C, both FPVCS and KPF are now ventured in to Business to Business (B2B) model.

Green Agrevolution Private Limited (KGPL), is a hybrid for-profit SE from Bihar along with its not for profit NGO arm Farms-n-Farmers (FnF). This SE works in Bihar, Odisha and Uttar Pradesh with 52000 farmers and provide end-to-end solutions to them, right from crop selection to marketing. The SE had a turnover of 43 crore in 2018-19. The SE selected 'DeHaati' from the local traders through a selection process and he becomes one-stop centre for both farm inputs and procures the farm produce, cereals, pulses, vegetables, fruits and herbs on behalf of SE. Each DeHatti operates in a 3 km of his vicinity and caters to 700-800 farmers. These DeHattis also provides crop management and advisory services to farmers. DeHattis got financial remuneration from both the entities; salary from FnF and a percent from produce sold. Thus the DeHattis both franchise owner for the SE and also a micro entrepreneur on his own. Knids Green Private Limited (KGPL) operating from Patna city in Bihar is one of the hybrid SEs. While Knids Green is for-profit entity, the Kaushalya Foundation (KF) is not-for-profit NGO arm, it is promoting 13 farmer producer companies (FPCs) which supply green vegetables from 22000 farmers to Knids Green at the time of the study. In 2017-18 the SE has turnover of Rs. 45 lakhs which includes Rs. 82000 profit. Through KF the founders also venture into education, environment and health. The SE and its NGO arm ensures market linkage to farmers and undertake grading, sorting, transporting and selling their produce. Currently Big Bazar and Reliance Fresh constitute 80 per cent of their turnover and hotels and restaurants constituting another 10 per cent. The SE faces dilemma in their business strategy as the farmers are not willing to sell their produce to KGPL when prices are higher and wants the SE to procure when market prices are at lower bottom. Even consumers in Patna city expects to purchase at low price from their stores as their organisation is an NGO. Surely the SE needs to come out of 'thin margin' to stay afloat in future. Till date family and friends are major source of credit for working capital for the venture and lacks any government support. In

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fact they have pending bills worth 35 lakhs for items supplied to Government of Bihar.

Krishi Direct Private Limited (Krishi Star), Mumbai is a SE which focus on procuring quality tomato for the consumers. The SE's business model was reversed from first sourcing the product for customers to first identifying prospective customers. The entrepreneur understood the difficulty in changing farm practice in a given time and change his model to 'demand-based model to source produce'. This will ensure demonstration effect on other farmers to grow quality products. Due to change in the business model the SE loose most of the 3000 farmers who were member in previous model to just 400 ones. But he has 100 assured customers who produce various products from tomato. His business-to-business model brought stability to SE which choose to work with limited number of farmers but to impact others through demonstration effect. The SE looks to break even in 2020 and in 2018-19, it supplied 250 tonnes of tomato at Rs. 45 lakhs to 100 tomato processing farms. Milk Mantra Dairy Private Limited (MM) based in Odisha is a medium-scale entrepreneurship started in 2009. Its revenue stands at Rs. 170 crore in 2017-18 and have 55000 dairy farmers from 1700 villages of three states from eastern region; Odisha, Jharkhand and Chhattisgarh. At present on a given day basis it procures one lakh liters of milk from 20000 farmers and sell milk and milk products in 10000 company outlets. The brand of their product is known as 'Milk Moo'. In 2017-18, the company earned a profit of Rs. 4.85 crore. The author of the particular case study choose to use the term 'practice of conscious capitalism' instead of SE for describing the Milk Mantra. The evolution of MM is starting its journey from setting up of milk processing plant unlike the 'grass root' mobilisation one sees in other case studies dealing with farmer produce directly. But in term of scale of operation and stability it seems to be largest among them. In an economically backward state like Odisha initiatives like MM has lot more meaning.

Safe Harvest Private Limited (SHPL) operating from Bengaluru, Karnataka is a for profit SE, that promotes organic farming as well as farmer collectives. Facing initial hiccups the company works with 25 farmer collectives spread across 13 states in India mainly in rainfed areas. The SE helps farmers to sell their produce on e-platforms like Grofers, Big Basket and Flipkart. The SE procures the produce through farmer collectives there by saving transportation and storage cost for farmers, charges by commission agents at APMCs and give a premium for their organically grown products. This SE completely transformed itself from a non-profit to for-profit to ensure stability and move up the scale. Simple Farm Solutions Private Limited, Bengaluru, Karnataka is a for-profit SE that develops farm tools to address labour shortage in farming through developing alternative farm tools (mostly tractor attachments) that are low cost, efficient and

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suitable for small farm lands. Under brand 'Kamal Kisan' the SE's tools are eligible for government subsidies. The SE uses social networking sites like whatsapp groups to get referrals for other farmers apart from selling products through commercial dealers offering good margin to them. Since the SE uses 'contract manufacturing' it saved a lot of investment for the farm. Of late some of her products like vegetable planter is copied by local manufacturers while her high end products face difficulty to reach small farmers due to affordability issues. The SE is barely covering its cost. It is one of the exceptions among 15 case studies which perhaps yet to achieve social contribution as the small and marginal farmers face challenged to afford its products.

Skymet Weather Services Private Limited, Noida, Uttar Pradesh started its operation in 2003 and provides weather advisory services for multiple stake holder including farmers. Through its 6500 automated weather data collection centres, the SE provides weather predictions that is being used by service providers in agri-insurance and reinsurance services, crop surveillance and monitoring and forecasting renewable energy supply to help farm sector. The SE faced difficulties in introducing automated weather stations across the breadth of the country due to rigging by contract staffs, staffs from insurance companies and maintenance issues but overcome with home grown solutions and now they have world's one of the advance geo-tagging platforms to tackle any manipulation in data received from their centres. The social impact of the SE is immense as it provides free weather information to farmers and also helps agri-insurance providers to honor the claims. The wind farms and steam based electric generation became more efficient. The services of Skymet also ensure state governments also honour their commitment for loss of crops. Largest of the all 15 SEs, in terms of number of staffs and revenue, the SE has operational profit for past five years. Tamul Plate Marketing Private Limited from Assam tries to address unemployment among youths by promoting leaf plates from sheath of the areca nut palm trees and giving sustainable livelihood to 2000 youths from ethnic strife ridden Bodo areas of the state. The SE promoted over 100 micro enterprises in disposable plate making and provide marketing support. Started in 2009 and incubated by an NGO Dhriti the SE provides an alternative to styrofoam (a type of plastic) made disposable plates, thereby promoting ecological sustainability. Now the SE exports 22% of its leaf plates and two of the clusters are operated by women alone. The hybrid SE through Tamul executes the marketing and technical support while Dhriti organises the production. The SE makes the plates for high end customers, food chains and public gatherings. However the total revenues from sales of plates have increased while revenues from sale of leaf making machines have come down between 2014 and 2017 but that is due to high share of later in 2014-15 and 2015-16 for orders from Assam government. One of the co-founders of

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the SE has suffered personal financial loss in the business and thinking of disassociating himself. However he thinks if government do away with Styrofoam plates which is harmful to environment his product will have better market and revenue. The last case study Uner the Mango Tree Naturals and Organics Private Limited (UTMT) is a hybrid SE started in 2009 in Mumbai Maharashtra. While the UTMT society works as an NGO and organised bee farmers, UTMT Limited market the produce. This SE promotes organic honey market and currently support 4000 farmers mostly tribals from Maharashtra and Gujarat. The produce is marketed by UTMT limited through Godrej's nature basket chain and FabIndia. Along with honey, the SE trained farmers to grow mango, guava, custard apple and cashew. It earned Rs. 5.1 crore in financial year 2018-19. The social impact of the SE is mainly for tribal bee collectors who got Rs. 300 for a kg of honey they sell which was a very high amount if they sell it to middlemen in private market.

### **Learning from Social Enterprises in the Book**

The book in all its 15 case studies shows the struggle of the SEs to arrange working capital to stay afloat. Though all of these SEs have got limited financial support from government or corporates like Mahindra, Trusts run by Tatas, still they are far from having reliable long term credit support from financial institutions which are not forthcoming as expected. The financial crunch prohibits their market expansion, increasing man power and improving the technology. All these enterprises encourage participation of women in their operation. Since they work with producers and consumers who belonged mostly to financially weaker sections, increasing price for their products and services is hardly possible. The book meticulously documented the journey of each of the SEs and their founders who often face personal hardships and put their own 'sweat capital' to realise their ideas. All SEs demonstrated their ability to use mobile and web based platforms to reach their producers, input suppliers and end consumers in the value chain. The SEs have ensured quality of the product they are selling to the consumers. They also encourage women and small producers in their operation thereby strengthening both the economic and social base of these marginalised sections. Given the disruption in supply chains and logistics due to ongoing pandemic it will be interesting if the authors could do a revisit of their case studies and bring new insights for future social entrepreneurs and policy makers alike.

### **End Notes**

1. In 2016, SKS Microfinance was renamed to Bharat Financial Inclusion Ltd.

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