

# Fertility Differential by Women Employment Status in Murshidabad District, West Bengal

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## Abstract

This paper attempts to find out fertility differential by women employment status in Murshidabad district, West Bengal. In modern, industrialized societies, there is generally a negative relationship between the two. This work is based on the primary survey during 2014; sampled size comprises 4888 women in the age groups 15-44 years. The mean children ever born (MCEB) is used to measure fertility and monthly income as the income variable. MCEB was found to be higher for women employed as agriculture and labour sector job with a low monthly income. Low MCEB was found those women they are employed in government and private sector jobs. Mean Composite Standard Index (MCSI) method is used to find out the relationship between fertility (MCEB) with women employment.

**Key Words:** Fertility, MCEB, CMSI and Women Employment

## 1. Introduction

Employment status of women influences fertility directly and indirectly through education and age at marriage. In general, higher occupation needs higher education, which in turn postponement the age of marriage and consequently leading to declining in fertility rate. Women participation in non-agricultural economic activities outside homes has been shown to reduce fertility, mainly by increasing opportunity cost of children. Edwin, D. (1963) observed that the wives of unskilled workers, agriculturists and artisans have higher fertility as compared to the wives of the clerks. Employment of wives also has a negative relationship with fertility. It Sharma, et al. (2007) pointed out that most of the educated women without children take up jobs. On the other hand, most of the women in jobs practice methods of birth control and restrict their families. Fertility is negatively associated with women's education and employment (Axinn et al, 2001, Mason et al, 1987). Improvement in women's

education increases their access to modern values and ideas that promote independence and social equality. Moreover, economic independence resulting from employment gives women the freedom to make decisions that affect their own lives, including decisions about their fertility, such as contraceptive use and the number of children they wish to have (Phan L.D 2016, Sarangi M. 1998, Larsen et al, 2003, Lee 2009, and Gore and Deanna L, 2010). Broeck and Maertens (2014) they find that female wage employment has a significant, negative impact on fertility rates. The effect is quite large: the reduction in the number of children ranges from 0.22 to 0.36. It also observed that the effect of female employment on fertility is strongest for illiterate women, suggesting that employment might be an empowerment mechanism for non-educated women (Canning and Schultz, 2012). Banerjee, B (2004). Employed women have lower fertility than the unemployment women. Participation in paid work is found to have a negative influence on fertility. Jamal, A and Siddiqui, F.A (2012) MCEB was found to be high for women with husbands employed as labours with a low monthly income. This was true for both the cohorts, but the fertility levels were much higher among the older cohort. Low MCEB was found with increasing income of husbands and for those in private jobs. Women employed outside home normally would exhibit a low level of fertility as compared to those who are not employed outside the home, even their status is same (Jayasree, 1989).

## 2. Objectives

The major objectives are

1. To discuss women employment status and fertility in Murshidabad district.
2. To find out MCEB in a different level of employment of the study area.
3. To examine the level of interrelationships between women employment status and fertility.

### 3. Database and Methodology

The study is based on household level data, collected through a structured questionnaire. A stratified and purposive sampling technique has been used for the selection of villages.

According to the 2011 census, there is 1925 inhabitant village in the district of Murshidabad. Thus, out of 1925 inhabited villages, 61 villages from 26 blocks were selected. The sampled villages by blocks are considered the representative of the rural block as a whole or rural population. In which 3765 married women are selected at the age groups of 15-44 years of Murshidabad district. Percentages of women respondents of their age at marriage have been calculated through the Mean [number] of children ever born (MCEB) was used to examine the differentials in women employment status and fertility. MCEB refers to the total number of live births to all women in the age group 15-49 is called mean child ever born. The average of the data calculated is set out to represent the block. The data arranged by blocks have been categorized into high, medium and low grade through mean and standard deviation methods. Maps and diagrams are drawn to highlight variations at the block level in women employment status and fertility (MCEB). This would identify the region as needing immediate attention, and would also give some indication of the factors causing it. The relationship between women employment status and fertility (MCEB) has also been presented through composite mean standard index (CMSI) method.

$$CMSI = \sum Si / N$$

where, CMSI is the composite mean standard index,  $S_i = (X_i - Min) / (Max - Min)$ ,  $X_i$  is the original value of the individual observation, Min and Max is the minimum and maximum value of the variables and N denotes the number of variables.

### The Study Area

The Murshidabad district is the north-western district of the Presidency division of West Bengal, lying is between 23° 43' 30" and 24° 50' 20" North latitudes and 87° 49' 17" and 88° 46' 00" East longitudes (Fig 1). It covers an area of about 5324 km<sup>2</sup>. Murshidabad with its headquarters at Berhampore belongs to the mature deltaic part (except Kandi sub-division) of a larger Ganga drainage system of India. Bhagirathi, the tributary of the Ganga flows almost in a southern direction along the middle portion of the district, dividing it into almost two equal parts having distinct characteristics in terms of physio-geological characteristics (O'Malley, L.S.S. (1914). The western portion of the river is locally known as Rarh while the eastern portion is named as Bagri. The district has 26 Community Development Blocks distributed over seven sub-divisions. According to the 2011 Census,

Murshidabad district has a total population of 7,103,807, among which 3,627,564 are males and 3,476,243 are females.

The population density of Murshidabad district is 1,334 per km<sup>2</sup>. According to District wise Human Development Index in West Bengal, 2004 the HDI and GDI Rank of Murshidabad district were 15th and 16th respectively among the seventeen districts of the West Bengal. The average literacy rate of Murshidabad in 2011 was 66.59 percent, with male and female literacy rates of 69.95 percent and 63.09 percent respectively. Various governmental, as well as non-governmental reports, identify the Muslim community as the most socio-economically backward minority groups in India. In the 2006 Report of Sachar Committee placed Murshidabad as one of the most backward districts out of 604 districts in India in terms of literacy, opportunities and awareness levels of specific women.

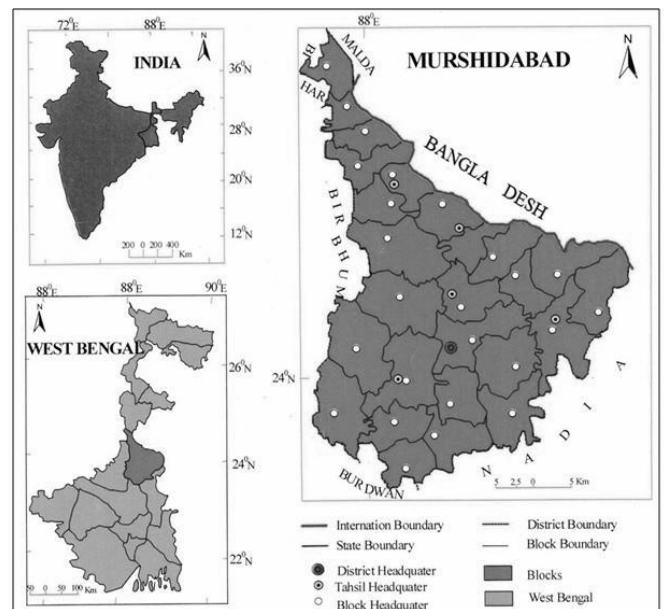


Figure 1

### 4. Result and Discussion

#### 4.1 Women Employment Status and MCEB

Employment, especially in government and the private sector, has increased in women empowerment, economically independent and decision-making. Working women have comparatively lower fertility than non-working or unemployed women. Bernhardt (1991) examined industrialized societies and observed that there was a negative relationship between fertility and employment. Srivastava (1990) observed that women's employed in non-agricultural activities outside homes has been the negative relation with fertility rate.

Banerjee (2004) observed unemployed women have seen higher fertility than employed women and it also higher in other socioeconomic and demographic variables. Women work participation is thus seen to have a negative influence on fertility. Therefore, providing more employment opportunities for women might be a major step in controlling the human fertility of the country. The employment status of women is closely related to the income of the family and consequently the fertility of the region under study. The higher employment category denotes the higher income level and higher duration of work is inversely related to fertility. This inverse relationship between the two can be studied in terms of higher levels of skills or educational standards required for higher employment categories. Fertility is not uniform at women's employment level. It varied from one employment to another because different levels of employment create different socio-economic environments and thus different attitudes towards family size and family planning. Generally, people engaged in primary sector or low paid jobs had higher fertility as compared to tertiary sector jobs. In the present study, the respondents are categorized into five occupation groups of agriculture, laborers, business, government service and private sectors.

#### 4.2 Women in Agriculture Sector and MCEB

The present study investigates fertility differentials by women employed in the agricultural sector. The fertility rate in this sector is higher than other sectors of women employed in the district. From the Table 1, it is quite evident that the average number of living children is the highest among the agriculturists (3.06), it varies from 2.35 to 4.00 children per woman in rural areas of the district. The main reason behind this high fertility is that the agriculturists believe that a larger number of children are of greater help and assistance to them in the household front as well as outside in their agricultural fields. There are about 6.86 per cent women of the district employed in the agricultural sector, they reported 3.06 (MCEB) in the study area. The block wise distribution of MCEB of women employed in agriculture is arranged into three categories of high (above 3.47), medium (3.04-3.47) and low (below 3.04) grades (Fig 2a). The high grade of MCEB (above 3.47 children per woman) is observed in the north and southern parts of the district. These blocks are Samsorganj (4.00), Nowda (4.00), Bharatpur-I (4.00), Farakka (3.60), Bharatpur-II (3.60), Lalgola (3.50), Jalangi (3.50) and Domkal (3.50). The north-western and eastern parts of the district experienced medium MCEB (3.04-3.47 children per woman), these blocks are Suti-I (3.40), Nabagram (3.38), Burdwan (3.35), Raghunathganj-II (3.33), Hariharpara (3.33), Bhagwangola-I (3.25), Raninagar-II(3.25), Bhagwangola-II (3.20),

Raghunathganj-I (3.17), Sagardighi (3.17) and Raninagar-I (3.17). The low MCEB (below 3.04 children per woman) observed in seven blocks, constitute two distinct regions. One lies in the northern part and another in the south-west and central parts of the district. These blocks against their MCEB are Suti-II (3.00), Berhampur (2.86), Kandi (2.83), Beldanga-I (2.75), Beldanga-II (2.67), Murshidabad-Jiaganj (2.44) and Khargram (2.35).

#### 4.3 Women in Labour Sector and MCEB

The women employed in labour and their MCEB have marked variations in its distribution in Murshidabad district. The Table 1 and Fig 2b shows that the fertility rate is higher among the labours. They are basically poor and uneducated class of people. They also believe that a number of children will provide them greater financial and old age security in the years to come. In Murshidabad district, the share of women employed in labour is 7.81 per cent with MCEB by women employment in labour is 2.77 children per woman. The distribution of MCEB of women employment in labour is very uneven pattern across the block of the district. It ranges from 2.09 in Murshidabad-Jiaganj to 3.67 children per woman in Lalgola block. The block-wise grade distribution indicates that high MCEB (above 3.19 children per woman) has been recorded in Lalgola (3.67), Samsorganj (3.50), Raninagar-II (3.40), Farakka (3.33), Suti-II (3.25), Bhagwangola-II (3.29), Nowda (3.25), Jalangi (3.20) and Kandi (3.20) blocks. These blocks are concentrated in north-eastern and southern parts of the district. Medium grade of MCEB (2.84-3.19 children per woman) by women employed in labour reported in ten blocks. These blocks are mainly concentrated in south and central parts of the district. They are Nabagram (3.17), Hariharpara (3.17), Raghunathganj-II (3.00), Sagardighi (3.00), Bhagwangola-I (3.00), Domkal (3.00), Beldanga-II (3.00), Burdwan (2.92) Bharatpur-I (3.00) and Bharatpur-II (3.00). The central and western parts of the district experienced low MCEB (below 2.84 children per woman) by women employment in labour. These blocks are Raghunathganj-I (2.83), Suti-I (2.80), Beldanga-I (2.80), Khargram (2.63), Raninagar-I (2.50), Berhampur (2.43) and Murshidabad-Jiaganj (2.09).

#### 4.4. Women Employed in Business and MCEB

The fertility rate is comparatively lower among the women employed in business than those women employed in agricultural and labour. The business class people prefer having more children because more children mean more helping hands, which would ultimately enable greater profit. The percentage of women employed in business is 7.77 per cent with their 2.25 MCEB in Murshidabad district. The block-wise spatial of women employed in business is quite uneven, with a maximum of 3.00

Blocks Name	Employment Status									
	Agriculture		Labour		Business		Government Service		Privet Service	
	MCEB	%	MCEB	%	MCEB	%	MCEB	%	MCEB	%
Farakka	3.5	5.94	3.09	10.89	2.4	4.95	1.33	2.97	1.5	1.98
Samsorganj	3	5.56	3	5.56	0	0	0	0	2	5.56
Suti-I	3.2	8.2	2.8	8.2	2	1.64	1	1.64	0	0
Suti-II	3	6.85	3.17	8.22	2.5	2.74	1.5	2.74	2	1.37
Raghunathganj-I	3	6.49	2.67	7.79	2	2.6	1.5	2.6	1	1.3
Raghunathganj-II	3	2.94	3	2.94	3	5.88	1.5	5.88	2	2.94
Lalgola	3	4.17	3.67	12.5	2	2.08	2	2.08	0	0
Sagardighi	3	5.13	2.83	7.69	2.5	2.56	0	0	0	0
Bhagwangola-I	3.5	5.13	2.2	12.82	2	2.56	2	2.56	0	0
Bhagwangola-II	3.4	5.32	3.25	8.51	2.33	3.19	1.67	3.19	2	1.06
Raninagar-I	3	3.85	2.83	7.69	2.67	3.85	1	2.56	1.67	3.85
Raninagar-II	3	4.29	3	7.14	2	4.29	1.67	4.29	2	1.43
Jalangi	3.5	2.5	3.4	6.25	2.67	3.75	1	2.5	2	1.25
Domkal	3.33	4.76	3	4.76	2.33	4.76	2	4.76	2	3.17
Murshidabad-Jiaganj	2.75	5.97	2.83	8.96	2	4.48	1.25	5.97	1.5	2.99
Nabagram	3.5	4.55	3.5	4.55	2.5	4.55	1	2.27	0	0
Khargram	2.89	11.84	2.6	6.58	2	1.32	2	1.32	0	0
Kandi	3.17	6.59	3	5.49	2	4.4	1	2.2	0	0
Berhampur	3	5.26	2.5	5.26	2	3.95	1.33	7.89	2	2.63
Hariharpara	3.2	4.24	3	5.08	2.5	3.39	1.75	3.39	2	0.85
Nowda	4	4	3.33	6	3	4	1.5	4	2	2
Beldanga-I	2.67	3.3	2.67	3.3	2.2	5.49	1.4	5.49	2	2.2
Beldanga-II	2.8	6.76	3	5.41	2	4.05	1.5	2.7	2	1.35
Bharatpur-I	3	9.52	3	9.52	0	0	2	4.76	0	0
Bharatpur-II	3.33	6.98	2.75	9.3	2.5	4.65	1.5	4.65	0	0
Burwan	3.44	11.69	2.71	9.09	0	0	1	1.3	0	0
<b>Murshidabad</b>	<b>3.15</b>	<b>5.8</b>	<b>2.95</b>	<b>7.18</b>	<b>2.32</b>	<b>3.44</b>	<b>1.46</b>	<b>3.21</b>	<b>1.83</b>	<b>1.32</b>

Table 1: Block-wise Distribution of Women by Employment (Percent) Status and MCEB (Children per Women) in Rural Area of Murshidabad District.

Source: Based on Field Survey, 2014



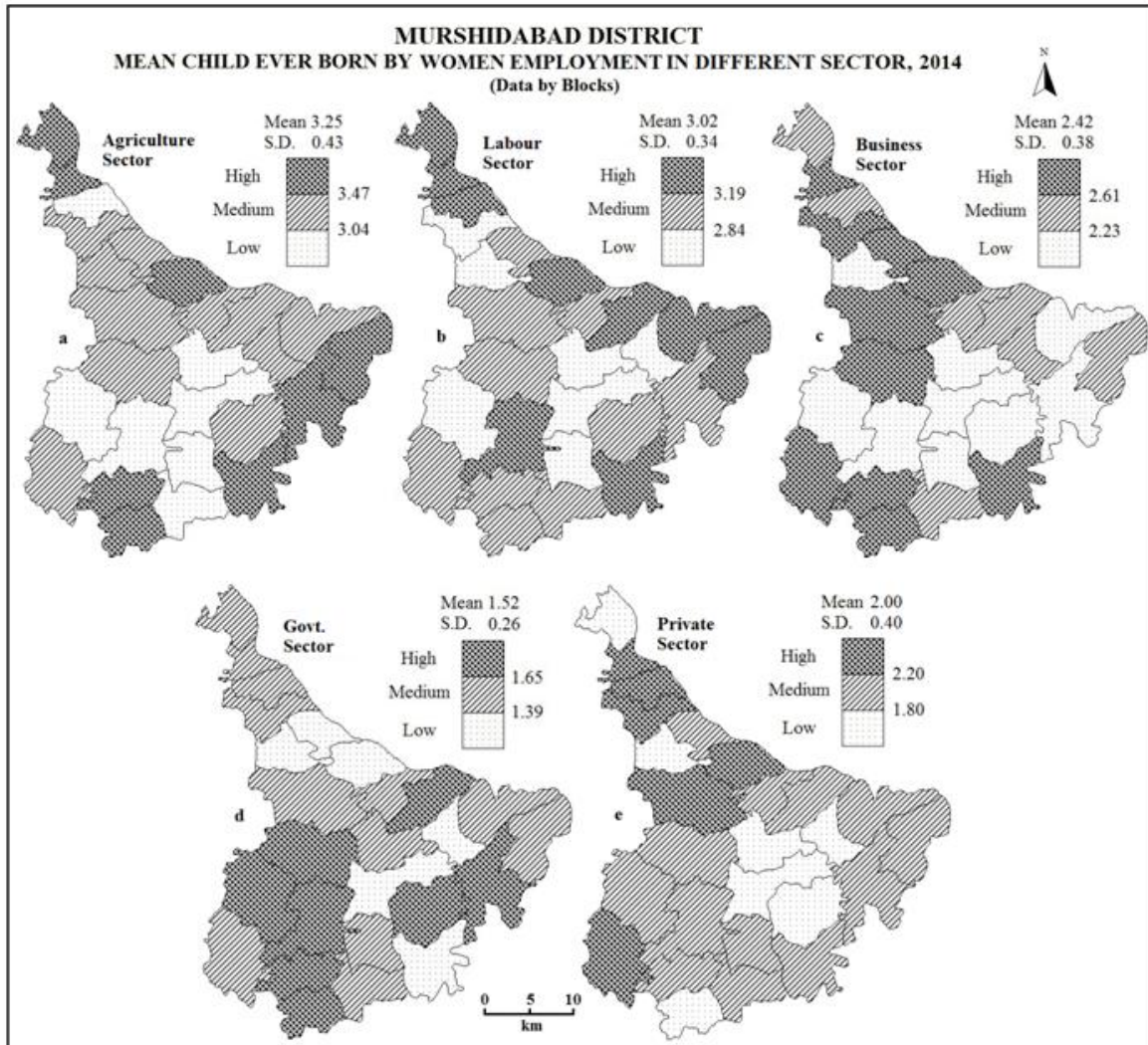


Figure 2

children per woman in Samsorganj, Raghunathganj-II, Nowda and Bharatpur-I blocks and minimum of 1.75 children per woman in Domkal block (Table 1). The distribution of MCEB of women employed in business is broken into three grades of high (above 2.61), medium (2.23-2.61) and low (below 2.23).

Fig 2c show that high grade of MCEB (above 2.61 children per woman) is located in north-western and southern parts of the district comprising the blocks of Samsorganj (3.00), Raghunathganj-II (3.00), Nowda (3.00), Bharatpur-I (3.00), Suti-I (2.67), Nabagram (2.75), Lalgola (2.67), Sagardighi (2.67), Bharatpur-II (2.67) and Burwan (2.67). The medium grade of MCEB (2.23-2.61 children per woman) is reported in seven blocks. These blocks are Farakka (2.60), Suti-II (2.50), Bhagwangola-I (2.50), Beldanga-II (2.50), Raninagar-I (2.33), Bhagwangola-II (2.25) and Jalangi (2.25). They are mostly concentrated in north-eastern and southern

parts of the district. It may be observed that prominent and notable region of low MCEB (below 2.23) is located in central and southern parts of the district. It includes Raghunathganj-I (2.20), Hariharpara (2.17), Beldanga-I (2.13), Raninagar-II (2.00), Khargram (2.00), Kandi (2.00), Berhampur (1.90), Murshidabad-Jiaganj (1.82) and Domkal (1.75) blocks.

**4.5 Women in Government Sector and MCEB**

The fertility rate is comparatively less among the government (1.69) and private sector employees (1.97) because in this category of people more educated, adopted the idea of the small family norm, they understand the cost and benefits involved in having more children and they also have an awareness of the various family planning measures. In the district level, about 9.29 per cent women are enrolled in the government sector and their MCEB is 1.69 children per woman. The block wise

distribution of MCEB by literate women is depicted in Table 1 and Fig 2d. The graded distribution of inter-block MCEB by women in the government sector varies from 1.00 in Raghunathganj-II, Raninagar-I, and Nowda to 2.00 children per woman in Bharatpur-I and Bharatpur-II block. For the study of block wise MCEB of women employed in the government, sector is categorized into three categories i.e., high, medium and low. The high MCEB (above 1.65 children per woman) by women employed in the government sector is found in the south-western part of the district. These blocks are Bharatpur-I (2.00), Bharatpur-II (2.00), Domkal (1.75), Khargram (1.75), Kandi (1.75), Hariharpara (1.75), Bhagwangola-II (1.67) and Nabagram (1.67). Medium grade MCEB (1.39-1.65 children per woman) is reported in twelve blocks, namely, Farakka (1.60), Sagardighi (1.60), Murshidabad-Jiaganj (1.55), Samsrganj (1.50), Suti-I (1.50), Suti-II (1.50), Bhagwangola-I (1.50), Raninagar-II (1.50), Jalangi (1.50), Beldanga-II (1.50), Burwan (1.50) and Beldanga-I (1.43). These blocks are scattered over the district. Low grade of MCEB (below 1.39 children per woman) is reported in Berhampur (1.36), Raghunathganj-I (1.33), Lalgola (1.33), Raghunathganj, II (1.00), Raninagar-I (1.00) and Nowda (1.00).

#### 4.6 Women in Private Sector and MCEB

In Murshidabad district, about 5.67 per cent women employed in the private sector and MCEB by this proportion of women is 1.97 children per woman. The fertility rate (MCEB) of women in the private sector is lower than the other sectors of women. The block wise distribution varies from 1.00 to 2.76 children per woman of the district (Table 1). Fig 2e shows that all the blocks in the district, grouped into three grades of high, medium and low, are based on mean and standard deviation method. High grade of MCEB (above 2.20) is found in the northern part of the district, these blocks are namely Samsrganj (2.67), Suti-II (2.67), Lalgola (2.67), Burwan (2.67), Suti-I (2.33) and Sagardighi (2.33). The majority of the blocks (thirteen blocks) associated with medium grade of MCEB (1.80-2.20), are mainly concentrated in the south and eastern parts of the district, these blocks are Raghunathganj-II (2.00), Bhagwangola-I (2.00), Bhagwangola-II (2.00), Raninagar-II (2.00), Jalangi (2.00), Domkal (2.00), Nabagram (2.00), Khargram (2.00), Kandi (2.00), Nowda (2.00), Beldanga-I (2.00), Beldanga-II (2.00) and Bharatpur-I (2.00). Seven blocks mostly located in the central part of the district fall under low grade of MCEB (below 1.80 children per woman), these blocks are Farakka (1.67), Raninagar-I (1.67), Berhampur (1.67), Hariharpara (1.67), Bharatpur-II (1.50), Murshidabad-Jiaganj (1.43) and Raghunathganj-I (1.00).

The women employed in agriculture and labour sectors seem to have higher MCEB because they desire a number of children in their family, the greater can be the income levels than the other employees. Thus, women employed in this sector tend to have higher MCEB, because of the low levels of income and people tend to have a number of children in their family, assuming that supplementary income levels can be achieved and support to them in their work in Murshidabad district. On the other hand, MCEB is lower among those women who have employed in government and private sectors. The main reason is that these women are educated and the late age at marriage tends to have low MCEB.

#### Women Employment vis-a-vis Fertility (MCEB) Linkages

The spatial distributional linkages between women employment and fertility status by block in Murshidabad district depicted in Fig 3. The spatial distribution of women employment and fertility is uneven all over the blocks of the study areas and present a complex picture. The figure reveals a high level of employment (above 0.416) and high level of fertility (above 0.700) is noticed in two blocks i.e. Samsrganj and Lalgola. High level of women employment with a medium level of fertility (0.463-0.700) has been observed in Bharatpur-II and Bhagwangola-I. The Bharatpur-I and Murshidabad-Jiaganj blocks associated with high women employment with low MCEB (0.463). The maximum number of blocks falls under the medium grade of women employment. Five blocks (Nabagram, Sagardighi, Nowda, Suti-I, and Burwan) reported under medium grade women employment (0.222-0.416) with high MCEB. Medium level of women employment with medium level MCEB has been reported in the blocks of Raghunathganj-II, Domkal, and Khargram. The blocks, i.e. Berhampur, Beldanga-I, Raghunathganj-I and Raninagar-II observed in the medium grade of women employment linked with a low grade of MCEB. Low level of women employment (0.416) with a high grade of fertility is noticed only one block i.e. Suti-II. Five blocks, i.e. Farakka, Kandi, Bhagwangola-II, Jalangi and Hariharpara fall under low women employment linked with medium MCEB and rest of two blocks (Beldanga-II and Raninagar-I) fall under low women employment with low MCEB (below 0.463).

From above discussion, it is fittingly clear that in the study area women employment is negatively associated with MCEB. But some blocks Samsrganj and Lalgola associated with high MCEB with high women employment due to women in these blocks engaged in primary sector of employment that's why their high MCEB as compared to women employment in government and private sector job. Therefore, providing more



employment opportunities in government and private sectors for women might be a major step in

controlling for women might be a major step in controlling the population explosion of the county.

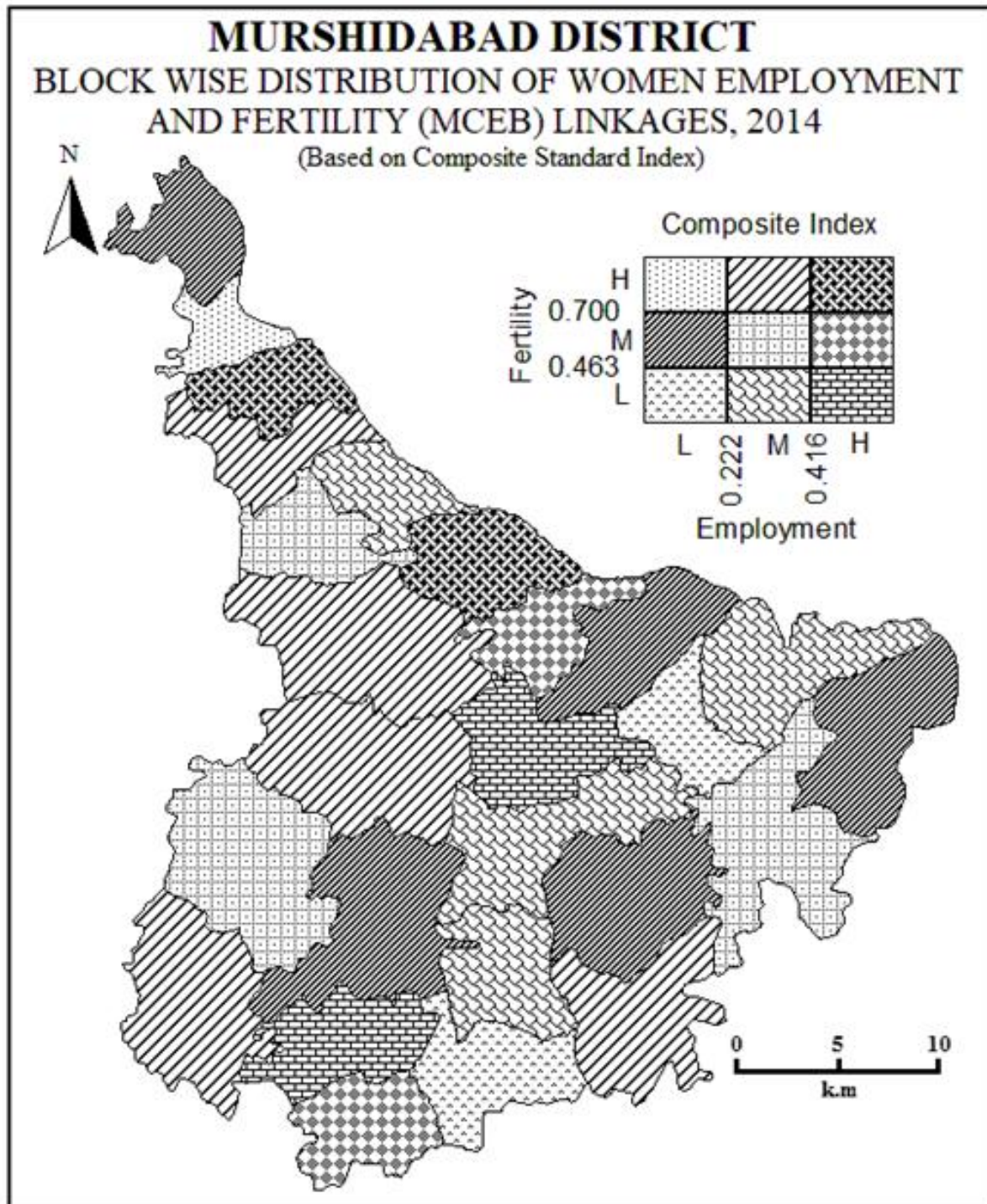


Figure 3

**Conclusion**

The study concluded that primary sector is a positive relationship with fertility, but the inverse relationship has been observed between women employment in services sectors. Women who are working as agriculture and labour have a high fertility rate because they want more helping hands

in their work and fertility rate is steadily declining through women employed in labour, business and private sectors and lowest in the government sector. Women employment patterns play a significant role in women empowerment, as they are key contributors to fertility reduction. Economic empowerment, women can gain financial autonomy,

enter into participation in work (service sector), and have equal opportunities for decision making about their family planning. The change in fertility could be achieved only through the younger generation; hence it is very necessary to make efforts to educate them about family planning seriously. The contraceptive prevalence rate is high among the young cohort, but there remains a need to mobilize more people towards family planning. In this regard, the government's scheme could be more effective. The government has set up family planning centers at the block level and at the village level. Therefore, to ensure that more and more people get these profit. The government of India has launched many schemes, like safe delivery and cash incentives for women who undergo female sterilization; even so, many people are still not aware of them and are not able to utilize them. It is repeatedly said that a high fertility differential exists when a society is passing through the early demographic transition. In due course of time, when the knowledge and accessibility of contraceptives become more widespread, this differential in fertility will gradually disappear. Consequently, every effort should be made to promote the use of contraceptives as extensively as possible, particularly in the younger generation.

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