Spatial Patterns of Socio-Economic Status of Women in India with Special Reference to Ahmednagar District of Maharashtra State

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Abstract: Gender inequality remains pervasive not only in a developing country like India but also in the developed countries of the world despite the socio-economic progress that has taken place during the last century. The term 'status' is used here to indicate the women's position in the society that varies from region to region, religion to religion, class to class and caste to caste, especially in Indian scenario. In this paper it is endeavoured to appraise overall socio-economic status of women in comparison to men in Maharashtra, which is one of the most industrialized and urbanized states in India at district level in general and at tahsil level in its Ahmednagar district in particular. The study is based on the secondary source of data mainly derived from census of India 2001 and 2011. For measuring the status of women as well as of men for comparison purpose composite indexes are computed using Prof. Kundu's method of normalization for the year 2011 at district level in the state and at tahsil level in the district of Ahmednagar for 2001 and 2011 to comprehend their position's pattern and changes that have taken place at micro-level. The status of women in comparison to men has been improving at faster rate and coming closer to that of men but in general women still lagging behind both at district and tahsil levels in the state. Higher the level of urbanization and exposure to modern facilities better is the status of women. It is inferred here that women's socio-economic status has improved and suggested that priority for raising their status be given to the most lagging tahsils and districts in the state of Maharashtra to slash the gap between men and women and regional disparities to have a strong base for the overall development of the state.

Key Words*: Women Status, Men Status, Gender Inequality, Sustainability.*

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1. Introduction

Women constitute about half of the world's total population, but still equality of women is not fully recognized. Their position and status have been inferior to male members of the society. Women's status is a multidimensional concept referring to women's access to and control over valued material and social resources, and/or women's power and autonomy, i.e. women's ability to control important events in their lives or their freedom from control by others within the household as well as without (Cain *et al.*, 1979; Safilios-Rotschild, 1985). The interplay of caste, class, age, religion and gender has produced an intricate matrix where education and socio-economic status are key players in the reproduction, maintenance and transmission of gender disparities from generation to generation (Patkar, 1995). The status of women is unequal as compared to male and varies from caste to caste, religion to religion and region to region. The term 'status' is used here to indicate women's position in the society. It involves roles, expectations, entitlements, rights and obligations. The general well being or position of women in the society is defined as the status of women (Ramotra, 1997).

The Human development Report (1995), presents a gloomy picture on the status of women in the world. The most striking point is that there is not a single country where women enjoy equality with men. India is a region of striking socio-economic and cultural diversity with wide variations. Due to the development of patriarchal society women have become a weaker section, her functions have been neglected to more procreation and attending to household chores. She has become a target of socio-economic exploitation (Bano *et al.,* 2014). Since independence, India has made tremendous progress in the social, economic, demographic and health fields, but there exists a very wide regional disparity in the development of socio-economic status of women.

There are several important indices to ascertain socio-economic status of women, in which the sex ratio is one of the most important indices to ascertain the prevailing inequality between males and females and regional imbalances in the status and plight of women in India or elsewhere in the world. The sex ratio is an index of the socio-economic condition prevailing in an area and useful for regional analysis (Franklin, 1956). As per 2011 census, it was identified that the most prosperous states of India like Delhi (866), Haryana (877) Punjab (893) and Gujarat (918) have the lowest overall sex ratio than the national average (940 females per 1,000 males). These well-off states are further highlighted with low child sex ratio (0-6 age group) viz. Delhi (866), Haryana (830) Punjab (846) and Gujarat (886) than the national average (914 girls per 1,000 boys). The state of Maharashtra, which is also

not an exception to an inequality between men and women, it is one of the advanced states in terms of industrialization and urbanization where the equality between them is expected more than the country as a whole But, in this advanced state overall sex ratio was 922 in 2001 and 925 in 2011, which remained below the national average of 933 in 2001and 940 in 2011. The child sex ratio has also come down disgracefully by 30 points from 913 in 2001 to 883 in 2011. The low sex ratio and missing girls in the state of Maharashtra is a serious concern (Ramotra and Bansode, 2012).

In fact, mostly geographers are involved in studying spatial variations in status of women. In Geography, Lee and Schultz (1979) have mapped regional patterns of socio-economic well-being, or status of women in the United States. Their study deals with determination of both the absolute (AFS) and relative (RFS) status of women, the composite female-status index was obtained by using three indicators viz. income, education and prestige occupation and by applying the Z-score method of standardization. Besides, Lee, in collaboration with the two psychologists, has mapped the female status scores separately in terms of social-education and economic status for seventy-five countries of the World (Lee *et al.,* 1979). Similarly, Andrews has measured status of women index (SWI) by using three social indicators, like Female life expectancy, literacy and total fertility rate. To combine three indicators into a SWI, she followed the Overseas Development Council's Physical Quality of Life Index (PQLI) model. In his studies India scored a low social-status for women (Andrews, 1982). The United Nations has also applied almost similar techniques, to compute the Human Development Index (HDI) or Women Development Index (WDI) in its Human Development Report (UNDP, 1995). All these indices give equal weightage to all indicators while computing the status of women.

2 Objectives

2.1 To appraise the overall socio-economic status of women in comparison to men in Maharashtra at district level in general and at tahsil level in its Ahmednagar district in particular.

3 Study region

Maharashtra state in general and Ahmednagar district in particular selected for the present study. The state of Maharashtra extends from 15^0 44**'** to 22^0 06**'** north latitude and 72^0 36**'** to 80^0 54**'** east longitude. The State is surrounded by the Arabian Sea in the west, Gujarat in the north-west, Madhya Pradesh in the north, Chhattisgarh in the east, Andhra Pradesh to the south-east, Karnataka in the south and Goa in the south-west. As per 2011 Census, It is

the second largest state in India both in terms of population and geographical area. It covers an area of 307,713 sq. km.

Ahmednagar district is situated partly in the upper Godavari basin and partly in the Bhima basin occupying a somewhat central position in the Maharashtra state. It lies between 18^0 2' and 19^0 9' north latitude and 73^0 9' and 75^0 5' east longitude. It is surrounded by Nashik and Aurangabad districts to the north, Beed and Osmanabad districts to the east, Solapur and Pune districts to the south and Pune and Thane districts to the west. Topographically the district can be divided into three parts. I.e. the Sahyadri ranges, plateau region and Bhima, Godavari basins. It is the largest district of Maharashtra state in terms of area. It covers an area of 17413 sq. km which is about 5.66 per cent area of the state. The total population of Ahmednagar district is 45, 43,159, out of which 51.56 per cent are male and 48.44 per cent are females in 2011.

4 Data sources and methods

4.1 Data sources

The present study is entirely based on secondary data. The data for the different socio-economic indicators were obtained from the 2001 and 2011 censuses of Ahmednagar and Maharashtra. The composite index has been computed considering the six indices such as, general sex ratio, child sex ratio, literacy rate, work participation rate, workers in non-agricultural sector, and proportion of urban population for measuring the status of women in comparison to men at district level in the state of Maharashtra in general for the year 2011 and at tahsil level in Ahmednagar district in particular during 2001 and 2011.

4.2 Methods

Composite index for measuring the status of women and men have been computed at district and tahsil level by using Kundu's method of normalization (Kundu, 1980). The preservation of real variation among the different observations is the primary objective of this method for computing the composite index. For that purpose the observations for each indicator have been divided by their corresponding mean values (mean of the mean) without affecting relative position of women and men variables at district and tahsil levels. Herein we have computed the mean of the mean of each indicator for 2001 and 2011 and accordingly the observation of each indicator were divided with their respective mean of the mean so as to have comparative analysis of men and women's status for the years 2001 and 2011.

As far as determinations of weightages are concerned, no special weightage has been assigned to any variable. In other words, equal weightage has been assigned to all the selected variables to compute the status of women. Thus after the removing of biasness of scale, the transformed values of each indicator are added up linearly and lastly the scored values of composite index of development put into descending order and classified into different categories for the purpose of mapping and analysis of the spatial patterns of gender development.

5 Result and discussions

5.1 Spatial patterns of socio-economic status of women and men in Maharashtra, 2011

The states of India are at different stages of socio-economic and demographic development. Southern India is much more socio-economically and demographically developed than the northern India (Dyson and Moore, 1983; Bhat and Zavier, 1999; Kurian, 2000). A few empirical studies have focused on the multi-dimensional nature of gender inequality in India (Malhotra et al., 1995). While the effect of patriarchy on female autonomy and gender equality is seen as a powerful variable, social indicators such as female literacy and child mortality also affect fertility, and indirectly affect women's marriage age, female educational share, and social development. China and India are still in upward trends in sex ratio at birth (in favour of male). These countries are lagging behind in terms of economic and social development, and are likely to experience a time lag to show the weakening gender bias as in South Korea (Chun and Gupta, 2009). We have undertaken Maharashtra state for the measurement of women status in comparison to their corresponding men at district level and Ahmednagar district in particular to measure their status at tahsil level. Maharashtra is undertaken for the present study being one of the most developed states in the country and the Ahmednagar districts is also undertaken for the same to see that their the women status is lowest in comparison to the men so that we can develop a planning for raising the status of women in the most backward districts in the state as well as in the tahsils of Ahmednagar district.

Maharashtra is one of the highly urbanized and industrialized states in the country. In Maharashtra, socio-economic status of women is much higher as compared to other northern states especially most populated and Hindi speaking states like Uttar Pradesh, Bihar, Rajasthan, Haryana and Madhya Pradesh, while lower status as compared to southern and non-Hindi states of India viz. Karnataka, Kerala and Tamil Nadu. But, it is indicated that women status is low as compared to men's status in Maharashtra. Low literacy rate (74.01

per cent), low work participation rate (34.07 per cent), insignificant share of female workers in non-agricultural sector (26.34 per cent), less urban proportion (33.33 per cent) and generally low sex ratio (948 females per thousand males) and declining child sex ratio (900 girls per thousand boys) are the some of the causes of lower level of women status as compare to men in the state. The evidence is overwhelming that the low female-male ratio (FMR) arises due to higher female over male mortalities which are largely a result of discrimination against women operating through unequal access to life sustaining inputs such as food, nutrition and health care (Visaria, 1971; Miller, 1981; Rosenzweig and Schultz, 1982; Kishor, 1993; Murthi et al. 1995). Visaria and Visaria (1981) identified sex differentials in mortality as the main cause of the low FMRs, and Miller (1981) attributed the roots of these differentials to discrimination against women, and also emphasised greater bias in higher status and better off households.

Table 1 and Fig 2 reveal the spatial patterns of socio-economic status of women as compared to men at district level in Maharashtra (2011). The composite index is computed for Maharashtra state indicated that, Maharashtra state in general witnessed a lower status of women and comparatively higher status of men. The highest status of women is observed in Mumbai Suburban (9.02) and lowest in Hingoli (4.33) district of Marathwada region. Status of men is highest in Mumbai (11.31), while lowest status observed in Nandurbar district (5.33) of Khandesh region. Status of women is highest in the Mumbai Suburban and of men in Mumbai, because both are the major metropolitan cities in the state. Mumbai, adjoining Mumbai Suburban and Thane districts are also highly urbanized and industrialized. There is also higher level of development in educational, health and infrastructural facilities as compared to the rest of the districts of Maharashtra. Most of the working populations are engaged in services in government, public and private organizations. There is a tendency of people being increasingly drawn towards trade and commerce (Borgohain and Sharma, 1997). Lowest socio-economic status of women and men observed at Hingoli and Nandurbar, in fact, Hingoli district is from Marathwada region which is most backward one in the state being drought-prone region and Nandurbar is tribal district with more than 69 percent tribal population (2011). Most of the tribal population resides in hilly and forest regions. Low literacy, very less proportion of workers in non-agricultural sector and less urban proportion, etc. are the major causes behind their low status.

5.1.1 Very high level status (above 8.00)

It is worthy to note that there are as many as 2 districts in the very high class status of Women viz. Mumbai Suburban (9.02) and Mumbai (9.01) and comparatively 5 districts in the high class status of men i.e. Mumbai, Mumbai Suburban, Thane, Nagpur and Pune. All these districts are highly urbanized and industrial centres where high literacy, most of the workforce engaged in non-agricultural sector, therefore men and women's status is also comparatively high. Female workforce participation, henceforth, is considered to be the major determinant of the female economic 'worth' (Bardhan, 1974). Female literacy is the most significant weapon to break the shackles to free women from the age-old traditions, customs, superstition and male chauvinism. It will enhance their status also (Ramotra, 1996).

5.1.2 High level status (7.00-8.00)

In this category high status of women is found in Thane district (7.51) and 4 districts namely, Kolhapur, Nashik, Aurangabad and Raigarh show higher level of status with respect to men. Thane and Raigarh districts are adjacent to the Mumbai district which is highly developed, all these districts mostly industrialized and urbanized, hence, we found better socio-economic position of men and women compared to the rest of the districts of Maharashtra.

5.1.3 Moderate level Status (6.00-7.00)

Pune (6.67) and Nagpur (6.85) districts fall in the category of medium status of women, on the other hand 17 districts mostly from Marathwada and Vidarbha regions fall in the medium status of men. Remaining districts include Ahmednagar, Satara, Sangli, and Solapur. It clearly indicates that women status is much lagging behind as compared to men. Moderate status of men and low status of women also exists in Ratnagiri and Sindhudurg districts of Konkan region, because of geographically these districts are in the hilly and coastal region and less developed districts having male dominance in out migration towards Mumbai and Thane.

5.1.4 Low level status (5.00-6.00)

Low status of women is observed in 10 districts, which are mostly located in Vidarbha region (5 districts) viz. Akola, Amravati, Wardha, Chandrapur and Gondiya and the remaining five districts are Nashik, Aurangabad, Solapur, Kolhapur and Raigarh. Comparatively low status of men is observed in 9 districts which include 5 districts from Vidarbha viz. Buldhana, Wasim, Yavatmal, Gondiya and Gadchiroli, 3 districts from

Marathwada viz. Jalna, Hingoli and Osmanabad and only Nandurbar district from Khandesh region. Districts of Western Maharashtra namely Satara, Sangli, Kolhapur and Solapur have also reflected low status of women whereas moderate to high status of men, due to hilly areas and several permanently drought prone tahsils.

5.1.5 Very low level Status (Below 5.00)

In 2011, there were 20 districts identified with very low level status of women, out of which, 7 districts from Marathwada region, 3 from North Maharashtra, 5 from Vidarbha, 3 from central and south western Maharashtra i.e. Ahmednagar, Sangli, Satara and remaining 2 from Konkan region (Ratnagiri and Sindhudurg districts). Status of women is lagging much behind the men as not a single district was found in this category with respect to men's status. Mostly districts located in Marathwada region of central part and adjoining districts of Vidarbha as well as tribal districts of North Maharashtra indicate very low level status of women. Women's status is determined by many factors that affect her economic dependence on men (Cain, 1985). Female literacy plays a major role in their status improvement. Baseline studies carried out at the district level in different states across the country consistently reveal a strong correlation between poor status and low literacy levels (Patkar, 1995).

5.2 Spatial patterns of socio-economic status of women and men in Ahmednagar district, 2001

The composite index of socio-economic status of women and men indicates (Table 2 and Fig. 3) that, the status of women's index is lowest in Karjat tahsil (3.82) and highest in Nagar tahsil (8.75), whereas status of men's index is lowest in Akole tahsil (5.54) and highest in the Nagar tahsil (11.54). The values of composite index show that the both women and men index is higher in the Nagar tahsil, it is mainly because of district headquarters, having more urbanization and industrialization as compared to other tahsils and also there is progress in educational, health and infrastructural facilities, whereas Karjat tahsil indicate lower socio-economic status of women due to low female literacy, females in non-agricultural activities and non-urban tahsil. Akole tahsil shows lowest status of men due to tribal tahsil, uneven topography, small land holding size, most of the scheduled tribe population, comparatively higher women status in the tribal society and family due to matrilineal descent, less literacy, less employment opportunities in non-agricultural sector. Further, it is noticed that in 2001, though there is remarkable variation between women and men status at tahsil level, but in the tahsils where the men's status is high the women's status is also high.

5.2.1 Very high level status (above 7.00)

Very high level status of women was identified in Nagar tahsil (8.75), while very high level men's status was observed in 6 tahsils viz. Nagar (11.54), Shrirampur (8.72), Kopargaon (7.74) Rahuri (7.55), Rahata (7.39), and Sangamner (7.1) respectively. It is clearly found that mostly urbanized, industrialized, irrigated and agriculturally sound tahsils, which are located in the central and northern parts of district show moderate to higher level status of women, whereas high to very high level status of men.

5.2.2 High level status (6.00-7.00)

High level of women's status was noticed in Shrirampur (6.55) tahsil only, while 3 tahsils namely Jamkhed (6.91), Pathardi (6.09) and Shrigonda (6.06) recorded with high status of men. High status of women was closely related with the agriculturally developed tahsils, having better standard of living, better female literacy, work participation and female workers in non-agricultural sector. It is further found that, higher status of men as compared to women in drought prone tahsils because of gender discrimination in the society.

5.2.3 Moderate level status (5.00-6.00)

There are as many as 5 tahsils in this category like Rahuri (5.79), Kopargaon (5.66), Sangamner (5.49), Rahata (5.25) and Jamkhed (5.17), which indicates moderate level status of women, whereas Nevasa (5.52) Shevgaon (5.41), Karjat (5.41) Parner (5.39) and Akole (5.34) tahsil fall in the moderate level status of men. Moderate status of men and women index is observed especially in drought-prone tahsils of eastern, western, southern and south eastern part of the district.

5.2.4 Low level status (4.00-5.00)

Low socio-economic status of women was identified in 4 tahsils, which are mostly located in drought-prone zone and plateau region of the study area. These tahsils include Pathardi (4.61), Shrigonda (4.55), Parner (4.10) and only single Akole (4.28) tahsil is in hilly, forested and tribal in nature. It is fact that, status of men is much higher than the women, therefore not a single tahsil falls in lower status category with respect to men status.

5.2.5 Very low level status (below 4.00)

It was found in 3 tahsils such as Shevgaon (3.92), Nevasa (3.88) and Karjat (3.82), which show a very low level status of women, while not a single tahsil falls in very low level of status in case of men. It is further found that agriculturally less developed, less urbanized, non-urban, drought-prone and tribal tahsils having lower level of literacy, lowest overall and

child sex ratio, more workers are engaged in agriculture and allied activities responsible for low to very low socio-economic status of women, while moderate level status of men. In the study area women prefer sons, as it is often one of the ways to increase their status in the society. It is very surprising to note that, the rate of sex ratio decline in rural areas is twice than that of urban area, because of easy availability of health facilities ultrasound test and better transportation and communication facilities along with the ability to pay for the services are the important factors responsible for rapid growing practice of female feticide even in the rural areas of the study region (Pawar, 2013).

5.3 Spatial patterns of socio-economic status of women and men in Ahmednagar district, 2011

The composite index of status of women and men is constructed at tahsil level (Table 3 and Fig. 4), shows that, the status of women index is lowest in Shevgaon (3.96) and highest in Nagar tahsil (9.17), whereas status of men index is lowest in Parner (5.31) and highest in the Nagar tahsil (11.31). Status of women and men index is highest in the Nagar tahsil, because of it is the district headquarters, highly urbanized and industrialized tahsil. There is also development in educational, health and infrastructural facilities as compared to other tahsils. In contrast, Shevgaon tahsil shows lower socio-economic status of women due to low female literacy, lower proportion of females in non-agricultural activities and non-urban tahsil, while Parner tahsil denotes lowest status of men, it is because of the fact that it is geographically located in drought-prone area, mostly plateau area, less developed and non-urban tahsil, hence, less generation of employment opportunities, therefore mostly male workers migrated towards Pune and Mumbai for employment opportunities.

5.3.1 Very high level status (above 7.00)

In 2011, very high level of women's status was observed in Nagar (9.17) tahsil only, while very high level of men's status found in the Nagar (11.31), Shrirampur (8.33), Rahata (7.53), Kopargaon (7.34) and Rahuri (7.17) tahsil. High magnitude of status of men and women was mostly confined around agriculturally, industrially developed and mostly urbanized tahsils. There was also progress in educational, health and infrastructural facilities. Kerala, compared with the rest of India, has often been depicted as a ''model'' in terms of its human development indicators, especially in education (very high female literacy) and health (Dreze and Sen, 1989). In addition, the larger development concern with enhancing women and children's health and child welfare (Agarwal, 2004). Literacy rate is an important indicator associated with the improved socio-economic development indicators, as well as

some demographic indicators. It is also likely to show greater improvement in women's status when their literacy level rise (Nayak and Narayankar, 2010). It is also noted that, among the developed tahsils, state highway and railway routes, etc; all play a significant role.

5.3.2 High level status (6.00-7.00)

High status of women was observed in Shrirampur tahsil (6.64), whereas high level of status of men was observed in 4 tahsil viz. Sangamner (6.94), Jamkhed (6.83) Pathardi (6.02) and Shrigonda (6.00). Shrirampur tahsil consistently obtained higher level status of women and occupies second rank after Nagar tahsil, due to high urbanization, industrialization, availability of various types of educational facilities, maintained sex ratio in general and child sex ratio as compared to district average, higher proportion of female workers in non-agricultural activities, and higher proportion of urban females. Geographically, plain area and fertile soil, along with fully irrigated through canals of Godavari river, mostly monoculture sugarcane cropping pattern, etc. responsible for high status of women and men.

5.3.3 Moderate level status (5.00-6.00)

Moderate level status of women was noticed in 5 tahsils, like Rahata (5.72), Kopargaon (5.59), Rahuri (5.52), Sangamner (5.41), and Jamkhed (5.33), while moderate level status of men was found in four 4 tahsils viz. Karjat (5.59), Nevasa (5.50), Akole (5.33), Shevgaon (5.33) and Parner (5.31). Except Jamkhed, remaining all adjoining agriculturally industrially developed and urbanized tahsils have been made significant improvement in literacy rate, work participation and participation in non-agricultural sector. Though Jamkhed tahsil is backward agriculturally and industrially, but there is much improvement in the status of women due to increase in proportion of urban females, literacy and generation of employment to the females in non-agricultural activities like construction activities, various services, cloth market centre, Hospitals, Primary health centre, banking, daily and weekly market centre, etc.

5.3.4 Low level status (4.00-5.00)

Low socio-economic status of women was identified in six 6 tahsils, like Shrigonda (4.66), Pathardi (4.64), Akole (4.36), Karjat (4.23), Nevasa (4.11) and Parner (4.10). Status of men is much higher than women; hence, not a single tahsil falls in this category with respect to men. It is mainly because most of the tahsils located in drought-prone area, lack of fertile land, agriculturally and economically less developed, while Akole tahsil located in hilly and forested area where majority of tribal population is found. No doubt the composite index

value in 2011 has augmented over 2001. Low level of literacy, declining child sex ratio, less land holding and less generation of employment opportunities, etc. are major causes of their lower status. The isolation of scheduled tribes from the mainstream population for many years led to the continuation of the relatively high status of tribal women and the absence of gender discrimination in many tribal communities. The evidence of gender discrimination in some tribal communities has also been these days noticed due to the assimilation of many tribal groups within the mainstream of Hindu culture and traditions (Thamizoli, 1997; Maharatna, 1998).

5.3.5 Very low level status (Below 4.00)

Only Shevgaon (3.96) tahsil was identified with very low level status of women, while not a single tahsil was found in this category of very low level status of men in 2011. It clearly indicates that, status of women is much lagging behind as compared to men's status. Shevgaon is the most backward tahsil with respect to women's status. There was some progress in case of women's socio-economic indices during the last decade 2001-2011. But due to the fact that Shevgaon tahsil is basically entirely rural, low proportion of workers in non-agricultural sector, low literacy rate and declining child sex ratio, hence all these factors determine the lower position of women.

It is worthy to note that, low and declining sex ratio in general and child sex ratio (0-6 age) in particular adversely affecting the women's status at tahsil level in Ahmednagar district, at district level in the state of Maharashtra and states of entire India. The societies in East Asia and South Asia have exhibited higher birth rates for boys because of prenatal female selective abortion or excess mortality of girls after birth (Choe, 1987; Croll, 2002; Das Gupta et al., 2003; Kim, 2004; Miller, 2001; Park and Cho, 1995; Sen, 1992, 2003; Zeng et al., 1993).

6 Conclusions

Maharashtra is one of the highly urbanized and industrialized and relatively prosperous states in India. Though, socio-economic status of women in Maharashtra is much higher as compared to many northern Hindi speaking states while lower status as compared to southern and non-Hindi states, also their status is low as compared to men's status. In the spatial view higher level of socio-economic status of women and men has been consistently restricted to mostly urbanized and industrialized districts like Mumbai, Mumbai Suburb, Thane, Pune, Nagpur, and Nashik, while remained lower in Marathwada and Vidarbha

regions of the state. Tahsil level study clearly indicates that, socio-economic status of women was lower in all the tahsils of the study region compared to the status of men, but there is narrowing gap and disparity within and between women and men's development from 2001 to 2011. Women's status increases with the augmentation of men's status, that means both women and men's socio-economic status rises hand in hand. Female status was high where male status was high (Lee and Schultz, 1982).

In 2001, Nagar and Shrirampur tahsil identified with very high and high level status of women and very high status of men, while in 2011 remains maintained the status of women and men. It is because of high literacy rate, high work participation, high proportion of urban population and most of the workers engaged in non-agricultural activities. However, drought-prone tahsils like Shrigonda, Pathardi, Akole, Karjat, Nevasa, Shevgaon and Parner denotes very low and low level status of women in 2001 and 2011, while only Shevgaon tahsil fall in very low level of women status in 2011. During 2001, tahsils like Rahuri, Kopargaon, Sangamner, Rahata and Jamkhed fall in medium level status of women and men and also maintained the place of development in 2011. There is a north-south divide observed in terms of status of women and men, especially, northern agriculturally sound, mostly urbanized, industrialized, irrigated tahsils show moderate to high status of women and moderate to very high status of men, whereas less urbanized, agriculturally less developed, drought-prone eastern, western and southern tahsil denotes very low to low level status with respect to women and men.

It is further investigated that, drought is major natural restraint hence, migration is common phenomena especially from drought prone tahsils towards the agriculturally, industrially developed and urbanized tahsils of the study area. Therefore status of women and men significantly improved in developed tahsil as compared to less developed tahsils of drought prone region. Finally it is concluded, that the socio-economic status of women in the study region improved in 2011 over 2001, but the remaining lagging much behind as compared to the men. The districts in the state of Maharashtra viz. Nandurbar, Dhule, Jalgaon, Buldhana, Jalna, Bid, Osmanabad, Latur, Parabhani, Nanded, Hingoli, Wasim, Yavatmal, Bhandara, Gadchiroli, Ahmednagar, Satara, Sangli, Ratnagiri and Sindhudurg and tahsils like Akole, Parner, Shrigonda, Karjat, Nevasa, Shevgaon, Pathardi in the Ahmednagar district lagging much behind in terms of women status as compared to men be given top priority for raising the status of women by providing educational and employment opportunities to them to bring them at par with men as far as possible.

References

Agarwal, B. (2004). Children's welfare and mother's property. Special guest panel, The State of the World's Children, 2005. New York: UNICEF.

Andrews, Alice C. (1982). Toward a status of women index. *Professional Geographer*, 34 (1), 24-31.

Bano S. & Mishra A. P. (2014). Spatial variation of women's development in Varanasi city. *Transaction, Institute of Indian Geographers*, 36 (1), 91-100.

Bardhan, P. (1974). Size, productivity and returns to scale: an analysis of farm level data in Indian agriculture. *Economic and Political Weekly*, 9, 6-8.

Bhat, P., & Zavier, F. (1999). Findings of national family health survey: regional analysis. *Economic and Political Weekly*, 34(42/43): 3008-3032.

Borgohain, P., & Sharma, H. N. (1997). Pattern of socio-economic disparities in Guwahati city. *The Indian Geographical Journal*, 72(1), 47-56.

Cain, M., Khonam, S. K., Nahar, S. (1979). Class, Patriarchy and the Structure of Women's Work in Rural Bangladesh, Centre for Policy Studies Working Papers No. 43, The Population Council, New York.

Cain, M. (1985). Women's Status and Fertility in Developing Countries: Son Preference and Economic Security. World Bank Staff Working Papers, No. 682, *Population and Development Series*, No. 7. Washington, D.C., U.S.A.

Choe, Minja Kim (1987). Sex differentials in infant and child mortality in Korea. *Social Biology*, 34(1), 12-25.

Chun, Heeran & Das Gupta, Monica, 2009. Gender discrimination in sex selective abortions and its transition in South Korea. *Women's Studies International Forum*, 32, 89-97.

Croll, Elisabeth. J. (2002). Fertility decline, family size and female discrimination: A study of reproductive management in East and South Asia. *Asia-Pacific Population Journal*, 17(2), 11-38.

Das Gupta, Monica., Jiang, Zhenghua., Xie, Zhenming., Li, Bohua., Chung, Woojin., & Bae, Hwa-Ok (2003). Why is son preference so persistent in East and South Asia? A cross country study of China, India and the Republic of Korea. *Journal of Development Studies*, 40(2), 153-187.

Dixon, R. B. (1976). Measuring equality between the sexes. *Journal of Social Issues*, 32, 19- 32.

Dreze, J., & Sen, A. (1989). Hunger and public action. Oxford: Clarendon Press.

Dyson, M., & Moore, M., (1983). On kinship structure, female autonomy, and demographic behaviour in India. *Population and Development Review*, 9(1), 35-60.

Franklin, S.H. (1956). The pattern of sex ratio in New Zealand. *Economic Geography*, 32, 162-180.

Kim, Doo-Sub (2004). Missing girls in South Korea: Trends, levels, and regional variations. *Population*, 59(6), 865-878.

Kishor, S. (1993). May god give sons to all, gender and child mortality in India. *American Sociological Review*, 58: 247–265.

Kundu, A. (1980). Measurement of urban processes- a study in regionalization. Bombay: Popular Publisher.

Kurian, N. J. (2000). Widening regional disparities in India- some indicators. *Economic and Political Weekly*, 35(7): 538-550.

Lee, David & Schultz, Ronald (1979). Regional patterns of the status of women in the United States. Paper presented at the 75th annual meeting, Association of American Geographers, Philadelphia, April 1979.

Lee, David & Schultz, Ronald (1982): "Regional Patterns of Female Status in the United States", Professional Geographer, 34 (1), 32-41.

Lee, David., Stewart, A. J., Winter, D. G. (1979). The geography of female status: a world-wide view, *Transition*, 9, 2-7.

Malhotra, A., Vanneman, R., Kishor, S. (1995). Fertility, dimensions of patriarchy, and development in India. *Population and Development Review*, 21 (2).

Maharatna, A. (1998). On Tribal Fertility in the Late Nineteenth and Early Twentieth Century India,Working Paper Series No. 98.01, Harvard Center for Population and Development Studies, Harvard University.

Miller, B.D. (1981). The Endangered Sex. Cornell University Press, Ithaca, NY.

Miller, Barbara. D. (2001). Female-selective abortion in Asia: Patterns, policies, and debates. *American Anthropologist*, 103(4), 1083-1095.

Murthi, M., Guia, A., Dreze, J. (1995). Mortality, Fertility and Gender Bias in India: A District Level Analysis, DERC Discussion Paper No. 61. London School of Economics.

Nayak, L.T., & Narayankar, D. S. (2010). Regional disparities in the socio-economic status of women in Karnataka. *Trans. Inst. Indian Geographer*, 32(2), 137-153.

Park, Chai Bin, & Cho, Nam Hoon (1995). Consequence of son preference in a low-fertility society: Imbalance of the sex ratio at birth in Korea. *Population and Development Review*, 21(1), 59-84.

Patkar, Archana (1995). Socio-Economic Status and Female Literacy in India. *Int. J. Educational Development*, 15 (4), 401- 409.

Pawar, S.N. (2013). Declining trend of child sex ratio in Ahmednagar district (Maharashtra): A Geographical analysis. Indian Streams Research Journal, 3 (5), 16-23.

Primary Census Abstract of Ahmednagar, 2001 and 2011.

Provisional Population Totals, Census of Maharashtra, 2011.

Ramotra, K. C. (1996). Spatial patterns of status of women in India, In: Tripathi R S, Parmar S B Singh, (Eds.) Social and Economic Development in India. New Delhi: Ashish Publishing House, 453-61.

Ramotra, K. C. (1997). Socio-economic status of women in India and Maharashtra. *The Indian Geographical Journal*, 72 (1): 39-46.

Ramotra, K. C. (2008). Development processes and the scheduled castes. Rawat Publications, Jaipur.

Ramotra, K. C., Bansode, R. B. (2012). Sex ratio imbalances in Maharashtra. *Annals of the Rajasthan Geographical Association*, 29: 39-51.

Report of the High Level Committee on Balanced Regional Development Issues in Maharashtra, Government of Maharashtra Planning Department, October, 2013.

Rosenzweig, M., Schultz, T. P. (1982). Market opportunities, genetic endowment and intra family resource distribution: child survival in rural India. *American Economic Review*, 72, 803–815.

Satilios-Rotschild, C. (1985). Socio-economic Development and the Status of Women in the Third World, The Population Council: New York.

Sen, Amartya (1992). Missing women. *British Medical Journal*, 304(6827), 587-588.

Sen, Amartya (2003). Missing women- revisited. *British Medical Journal*, 327 (7427), 1297-1298.

Sen, A.K. (1998). Mortality as an indicator of economic success and failure. *Economic Journal,* 108, 1-25.

Sopher, D.E. (1980). The geographical patterning of culture, in India. In: Sopher, D.E. (Ed.), An Exploration of India: Geographical Perspectives on Society and Culture. Longman, London, 289–326 Chapter 10.

Thamizoli, P. (1997). Gender inequality, tribal and caste women, past and present: a case study of the Nilgiries, Tamil Nadu. *Man in India*, 77 (1).

UNDP (1995). Human Development Report, New Delhi, Oxford University Press.

UNDP (2001). Human Development Report, New Delhi, Oxford University Press.

Visaria, P. (1971). The Sex Ratio of the Population of India, Monograph No. 10, Census of India, 1961. Office of the Registrar General, New Delhi.

Visaria, P., & Visaria, L. (1981). Indian population scene after 1981 census. *Economic and Political Weekly*, 16 (44, 45 and 46, Special Number), 1727–1780.

World Bank (2001). Engendering Development, A World Bank Policy Research Report, New York, Oxford University Press.

Zeng, Yi., Tu, Ping., Gu, Baochang., Xu, Yi., Li, Bohua, & Li, Yongping (1993). Causes and implications of the recent increase in the reported sex ratio at birth in China. *Population and Development Review*, 19(2), 283-302.

Table 1: Spatial Patterns of Status of Women and Men in Maharashtra, 2011

Sr. No.	District	1	2	3	4	5	6	*WCI	1	2	3	4	5	6	**MCI
1	Nandurbar	0.98	0.94	0.7	0.95	0.32	0.48	4.36	1.02	1.05	0.89	1.18	0.66	0.52	5.33
2	Dhule	0.94	0.89	0.81	0.82	0.45	0.83	4.75	1.05	1.11	0.98	1.21	1.04	0.84	6.23
3	Jalgaon	0.92	0.84	0.87	0.74	0.44	0.95	4.76	1.08	1.18	1.06	1.2	1.04	0.95	6.51
4	Buldana	0.93	0.85	0.94	0.87	0.26	0.64	4.49	1.07	1.16	1.12	1.22	0.72	0.63	5.92
5	Akola	0.94	0.91	1.03	0.63	0.53	1.19	5.23	1.05	1.09	1.14	1.24	1.11	1.18	6.82
6	Washim	0.93	0.86	0.93	0.89	0.25	0.53	4.39	1.07	1.15	1.12	1.22	0.61	0.52	5.7
7	Amravati	0.95	0.93	1.03	0.63	0.5	1.08	5.11	1.05	1.06	1.13	1.26	1.01	1.07	6.59
8	Wardha	0.94	0.91	1.01	0.76	0.49	0.98	5.1	1.05	1.08	1.14	1.31	1.12	0.97	6.67
9	Nagpur	0.95	0.92	1.05	0.52	1.36	2.05	6.85	1.05	1.07	1.14	1.25	2.08	2.04	8.62
10	Bhandara	0.98	0.94	0.95	0.95	0.49	0.58	4.89	1.01	1.05	1.12	1.27	0.97	0.58	6
11	Gondiya	1	0.95	0.96	0.95	0.63	0.51	5	1	1.04	1.14	1.29	0.99	0.51	5.97
12	Gadchiroli	0.98	0.95	0.82	1.09	0.36	0.33	4.53	1.01	1.03	1.02	1.33	0.68	0.33	5.41
13	Chandrapur	0.96	0.95	0.9	0.84	0.53	1.05	5.22	1.04	1.04	1.07	1.29	1.25	1.06	6.75
14	Yavatmal	0.95	0.92	0.94	0.89	0.31	0.65	4.66	1.05	1.08	1.11	1.28	0.77	0.64	5.93
15	Nanded	0.94	0.9	0.82	0.78	0.46	0.81	4.71	1.06	1.09	1.04	1.19	0.98	0.82	6.18
16	Hingoli	0.94	0.88	0.85	0.93	0.27	0.46	4.33	1.06	1.13	1.08	1.22	0.67	0.45	5.6
17	Parbhani	0.94	0.88	0.79	0.8	0.38	0.93	4.73	1.05	1.12	1.02	1.19	0.94	0.92	6.25
18	Jalna	0.93	0.86	0.75	0.91	0.37	0.58	4.41	1.06	1.14	1.01	1.2	0.83	0.57	5.82
19	Aurangabad	0.92	0.85	0.87	0.7	0.62	1.31	5.27	1.08	1.16	1.08	1.18	1.39	1.31	7.2
20	Nashik	0.93	0.88	0.94	0.77	0.6	1.26	5.39	1.07	1.12	1.09	1.23	1.38	1.28	7.16
21	Thane	0.88	0.92	0.99	0.48	1.96	2.27	7.51	1.13	1.07	1.1	1.28	2.48	2.33	9.38
22	Mumbai Suburban	0.86	0.91	1.07	0.41	2.79	2.99	9.02	1.16	1.09	1.15	1.3	2.81	2.99	10.5
23	Mumbai	0.83	0.91	1.07	0.42	2.79	2.99	9.01	1.2	1.09	1.13	1.35	2.81	2.99	10.57
24	Raigarh	0.96	0.93	0.95	0.55	1.27	1.07	5.73	1.04	1.06	1.1	1.25	1.99	1.13	7.58
25	Pune	0.91	0.88	1	0.61	1.45	1.81	6.67	1.09	1.12	1.12	1.27	2.13	1.84	8.57
26	Ahmednagar	0.94	0.85	0.88	0.92	0.51	0.6	4.69	1.06	1.17	1.07	1.24	1.02	0.6	6.16
27	Bid	0.91	0.8	0.84	0.95	0.34	0.6	4.44	1.09	1.23	1.06	1.2	0.83	0.59	6
28	Latur	0.93	0.88	0.86	0.71	0.47	0.76	4.62	1.07	1.12	1.04	1.17	1	0.76	6.17
29	Osmanabad	0.92	0.86	0.87	0.84	0.44	0.51	4.44	1.08	1.14	1.06	1.23	0.78	0.5	5.8
30	Solapur	0.94	0.88	0.85	0.74	0.75	0.99	5.14	1.06	1.12	1.05	1.21	1.22	0.95	6.62
31	Satara	0.99	0.89	0.94	0.76	0.66	0.56	4.8	1.01	1.11	1.11	1.25	1.18	0.58	6.23
32	Ratnagiri	1.12	0.93	0.92	0.8	0.58	0.47	4.82	0.89	1.06	1.13	1.19	1.4	0.51	6.18
33	Sindhudurg	1.03	0.92	0.99	0.61	0.84	0.37	4.75	0.96	1.08	1.13	1.23	1.3	0.39	6.09
34	Kolhapur	0.95	0.86	0.92	0.68	0.83	0.94	5.19	1.04	1.15	1.1	1.27	1.53	0.95	7.04
35	Sangli	0.96	0.86	0.92	0.67	0.79	0.77	4.97	1.03	1.15	1.09	1.24	1.16	0.76	6.43

Note: *WCI - Composite index, Women ** MCI - Composite Index, Men

Source: Based on Provisional Population Totals, Census of Maharashtra 2011.

Table 2: Spatial Patterns of Status of Women and Men in Ahmednagar District, 2001

Sr. No.	Tahsil	1	2	3	**4**	5	6	*WCI	1	2	3	4	5	6	**MCI
1	Akole	0.97	0.94	0.78	1.07	0.50	0.00	4.26	1.02	1.04	1.11	1.16	0.99	0.00	5.34
2	Sangamner	0.94	0.89	0.88	0.89	0.74	1.16	5.49	1.06	1.11	1.16	1.10	1.48	1.19	7.10
3	Kopargaon	0.93	0.88	0.86	0.77	0.59	1.63	5.66	1.07	1.12	1.16	1.11	1.64	1.64	7.74
4	Rahata	0.94	0.86	0.93	0.69	0.85	0.99	5.25	1.07	1.15	1.19	1.12	1.85	1.01	7.39
5	Shrirampur	0.95	0.87	0.92	0.60	0.98	2.23	6.55	1.05	1.13	1.19	1.11	2.03	2.20	8.72
6	Nevasa	0.94	0.87	0.85	0.85	0.39	0.00	3.88	1.07	1.14	1.15	1.14	1.03	0.00	5.52
7	Shevgaon	0.95	0.89	0.77	0.98	0.33	0.00	3.92	1.05	1.11	1.13	1.13	1.00	0.00	5.41
8	Pathardi	0.95	0.89	0.77	1.00	0.34	0.66	4.61	1.05	1.11	1.13	1.07	1.03	0.70	6.09
9	Nagar	0.90	0.85	1.04	0.52	1.51	3.92	8.75	1.11	1.15	1.25	1.11	2.92	4.01	11.54
10	Rahuri	0.93	0.86	0.88	0.94	0.77	1.40	5.79	1.07	1.14	1.16	1.20	1.57	1.41	7.55
11	Parner	0.99	0.89	0.80	1.11	0.31	0.00	4.10	1.01	1.11	1.14	1.17	0.97	0.00	5.39
12	Shrigonda	0.94	0.87	0.85	0.96	0.32	0.61	4.55	1.06	1.13	1.13	1.18	0.94	0.61	6.06
13	Karjat	0.93	0.88	0.81	0.89	0.31	0.00	3.82	1.07	1.11	1.12	1.15	0.96	0.00	5.41
14	Jamkhed	0.95	0.89	0.74	0.87	0.42	1.31	5.17	1.05	1.11	1.10	1.10	1.23	1.33	6.91

Note: 1) General Sex Ratio 2) Child Sex Ratio 3) Literacy Rate 4) Work Participation Rate 5) Workers in Non-Agricultural Sector 6) Urban Population.

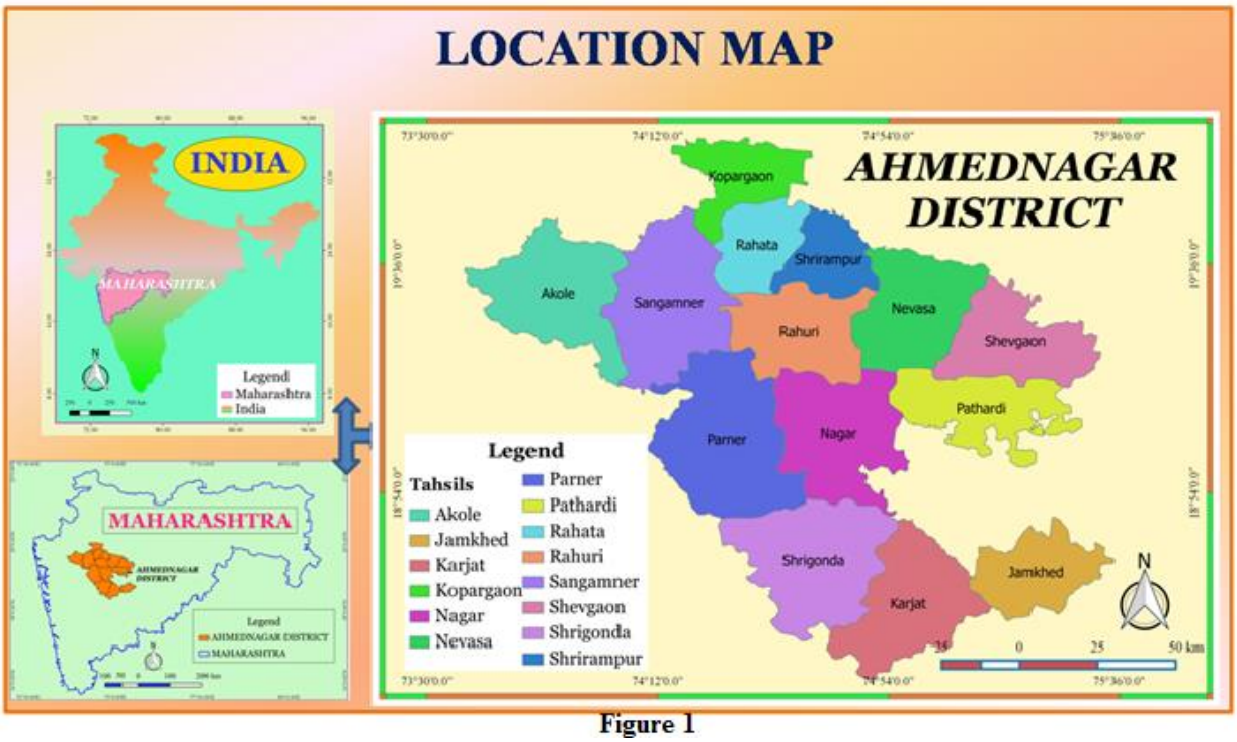
Source: Based on Primary Census Abstract of Ahmednagar District 2001.

Table 3: Spatial Patterns of Status of Women and Men in Ahmednagar District, 2011

Sr. No.	Tahsil	1	2	3	4	5	6	*WCI	1	2	3	4	5	6	**MCI
1	Akole	0.97	0.88	0.84	1.03	0.43	0.21	4.36	1.02	1.10	1.08	1.12	0.78	0.22	5.33
2	Sangamner	0.94	0.84	0.93	0.87	0.70	1.13	5.41	1.06	1.15	1.13	1.11	1.37	1.12	6.94
3	Kopargaon	0.94	0.88	0.92	0.73	0.75	1.37	5.59	1.06	1.11	1.13	1.11	1.59	1.34	7.34
4	Rahata	0.94	0.83	0.97	0.66	1.18	1.14	5.72	1.06	1.17	1.14	1.13	1.89	1.15	7.53
5	Shrirampur	0.96	0.85	0.96	0.63	1.26	1.98	6.64	1.04	1.14	1.15	1.12	1.97	1.92	8.33
6	Nevasa	0.93	0.84	0.90	0.90	0.54	0.00	4.11	1.07	1.16	1.11	1.14	1.01	0.00	5.50
7	Shevgaon	0.95	0.83	0.82	0.95	0.41	0.00	3.96	1.05	1.17	1.08	1.12	0.91	0.00	5.33
8	Pathardi	0.92	0.82	0.82	1.02	0.39	0.66	4.64	1.08	1.19	1.09	1.09	0.90	0.67	6.02
9	Nagar	0.93	0.85	1.04	0.56	1.86	3.93	9.17	1.07	1.14	1.18	1.11	2.89	3.92	11.31
10	Rahuri	0.93	0.83	0.92	0.77	0.72	1.35	5.52	1.07	1.18	1.12	1.14	1.31	1.36	7.17
11	Parner	0.95	0.83	0.86	1.07	0.40	0.00	4.11	1.05	1.17	1.08	1.16	0.86	0.00	5.31
12	Shrigonda	0.92	0.82	0.87	1.03	0.39	0.62	4.66	1.08	1.18	1.08	1.18	0.87	0.61	6.00
13	Karjat	0.91	0.81	0.84	1.01	0.34	0.31	4.23	1.09	1.20	1.06	1.17	0.76	0.31	5.59
14	Jamkhed	0.92	0.81	0.80	0.93	0.50	1.37	5.33	1.08	1.20	1.06	1.14	1.02	1.32	6.83

Note: 1) General Sex Ratio 2) Child Sex Ratio 3) Literacy Rate 4) Work Participation Rate 5) Workers in Non-Agricultural Sector 6) Urban Population.

Source: Based on Primary Census Abstract of Ahmednagar District 2011.


LOCATION MAP
INDIA
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Maharashtra
India
MAHARASHTRA
AHMEDNAGAR DISTRICT
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AHMEDNAGAR DISTRICT
MAHARASHTRA
AHMEDNAGAR DISTRICT
Kopargaon
Rahata
Shrirampur
Akole
Sangamner
Rahuri
Nevasa
Shevgaon
Pathardi
Parner
Nagar
Shrigonda
Karjat
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Tahsils
Akole
Jamkhed
Karjat
Kopargaon
Nagar
Nevasa
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Pathardi
Rahata
Rahuri
Sangamner
Shevgaon
Shrigonda
Shrirampur
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25
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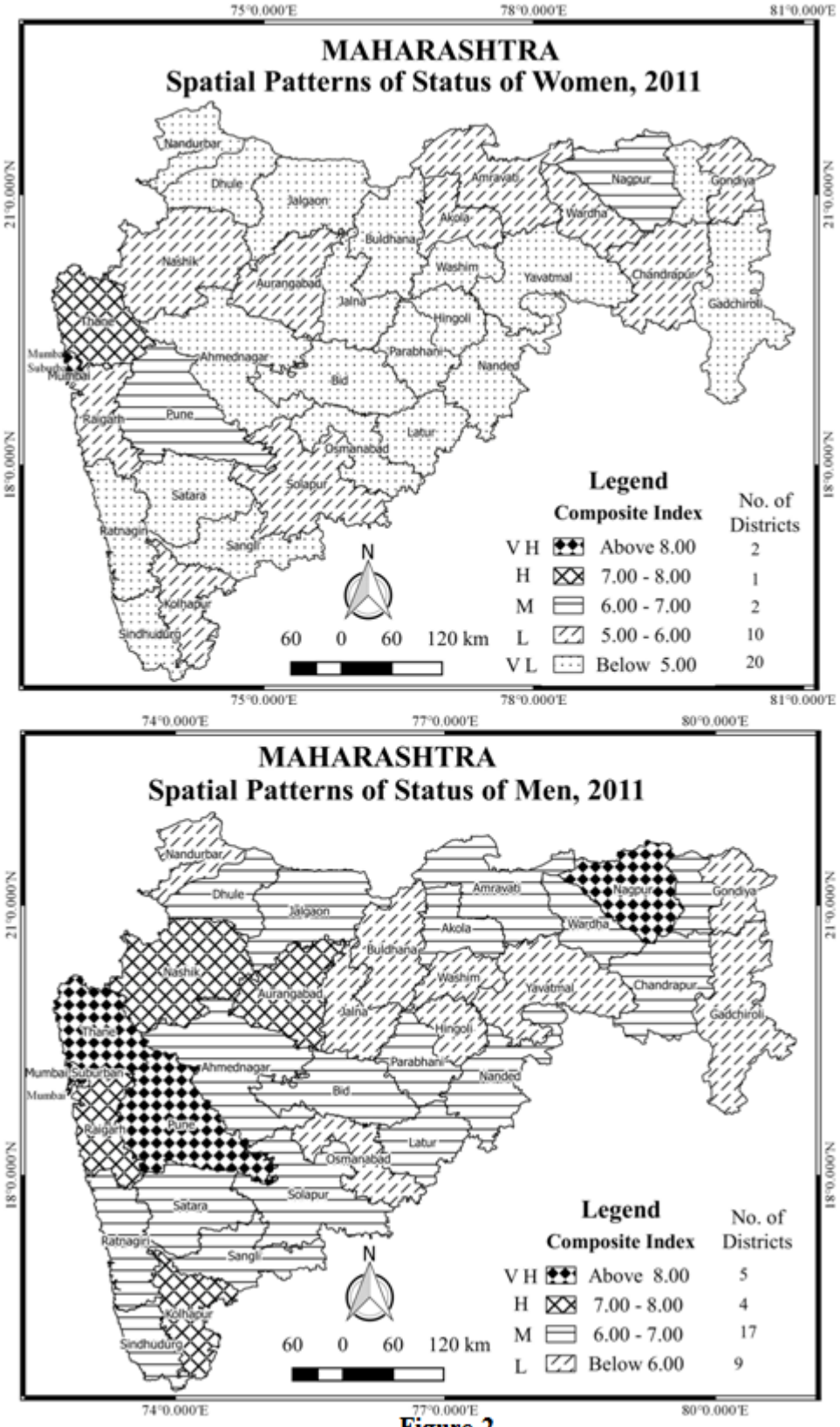
Figure 1


MAHARASHTRA
Spatial Patterns of Status of Women, 2011
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78°0.000'E
81°0.000'E
21°0.000'N
18°0.000'N
Nandurbar
Dhule
Jalgaon
Amravati
Nagpur
Gondiya
Akola
Wardha
Buldhana
Nashik
Washim
Yavatmal
Chandrapur
Aurangabad
Jalna
Gadchiroli
Hingoli
Thane
Mumbai Suburban
Mumbai
Ahmednagar
Parbhani
Nanded
Bid
Raigarh
Pune
Latur
Osmanabad
Solapur
Satara
Ratnagiri
Sangli
Kolhapur
Sindhudurg
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Legend
Composite Index
No. of Districts
V H Above 8.00 2
H 7.00 - 8.00 1
M 6.00 - 7.00 2
L 5.00 - 6.00 10
V L Below 5.00 20
MAHARASHTRA
Spatial Patterns of Status of Men, 2011
74°0.000'E
77°0.000'E
80°0.000'E
Legend
Composite Index
No. of Districts
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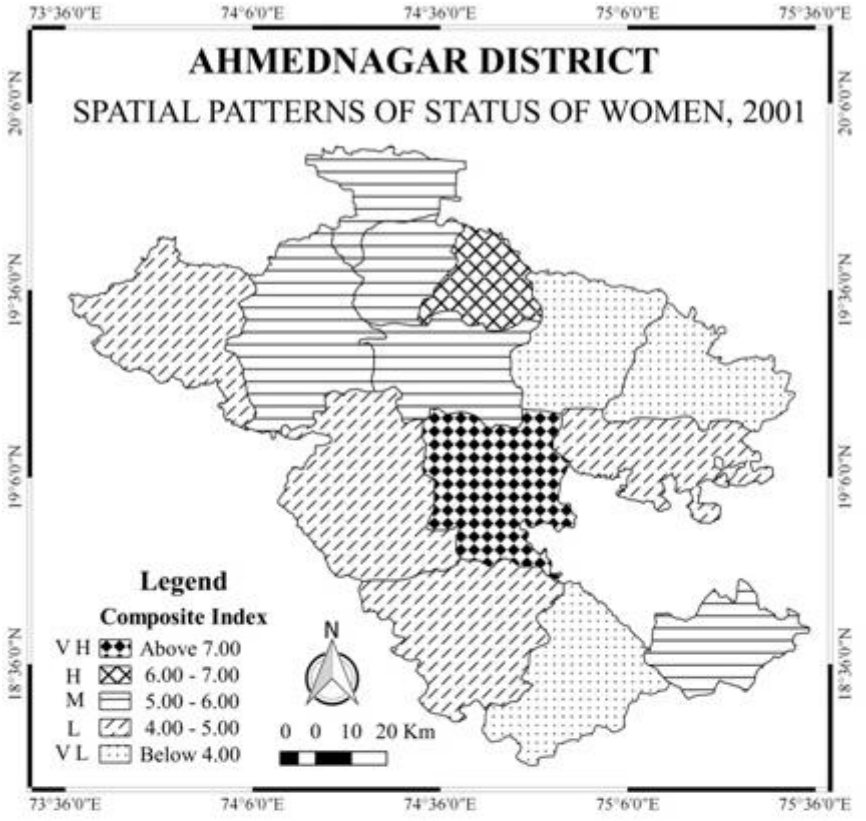
H 7.00 - 8.00 4
M 6.00 - 7.00 17
L Below 6.00 9

Figure 2


AHMEDNAGAR DISTRICT
SPATIAL PATTERNS OF STATUS OF WOMEN, 2001
73°36'0"E
74°6'0"E
74°36'0"E
75°6'0"E
75°36'0"E
20°6'0"N
19°36'0"N
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Legend
Composite Index
V H Above 7.00
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M 5.00 - 6.00
L 4.00 - 5.00
V L Below 4.00
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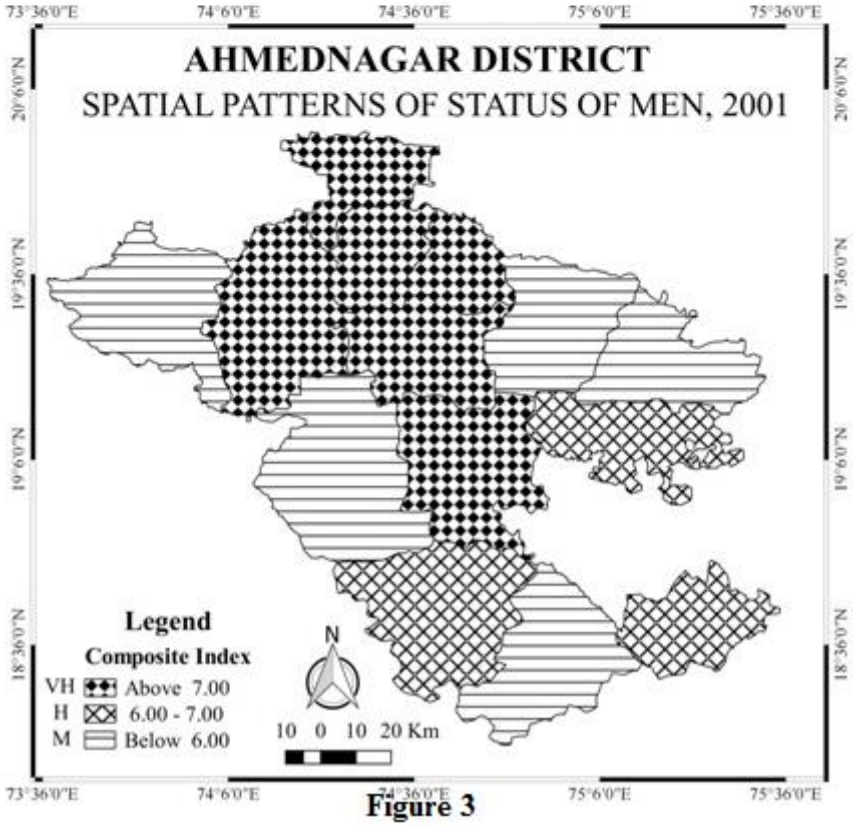
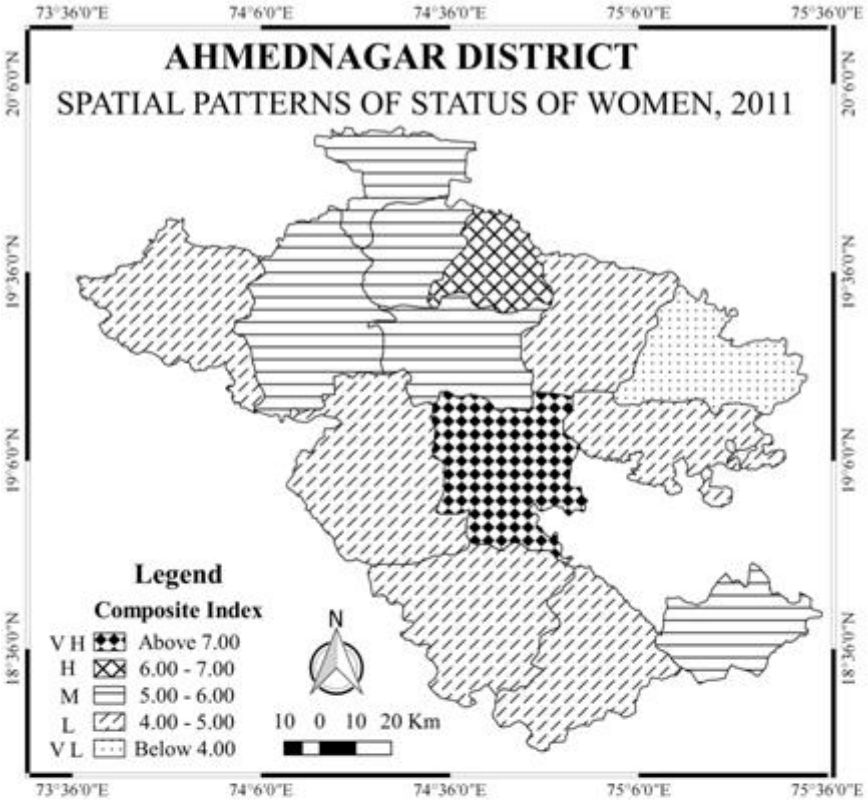

AHMEDNAGAR DISTRICT
SPATIAL PATTERNS OF STATUS OF MEN, 2001
73°36'0"E
74°6'0"E
74°36'0"E
75°6'0"E
75°36'0"E
20°6'0"N
19°36'0"N
19°6'0"N
18°36'0"N
Legend
Composite Index
VH Above 7.00
H 6.00 - 7.00
M Below 6.00
N
10 0 10 20 Km

Figure 3


AHMEDNAGAR DISTRICT
SPATIAL PATTERNS OF STATUS OF WOMEN, 2011
73°36'0"E
74°6'0"E
74°36'0"E
75°6'0"E
75°36'0"E
20°6'0"N
19°36'0"N
19°6'0"N
18°36'0"N
Legend
Composite Index
V H Above 7.00
H 6.00 - 7.00
M 5.00 - 6.00
L 4.00 - 5.00
V L Below 4.00
N
10 0 10 20 Km

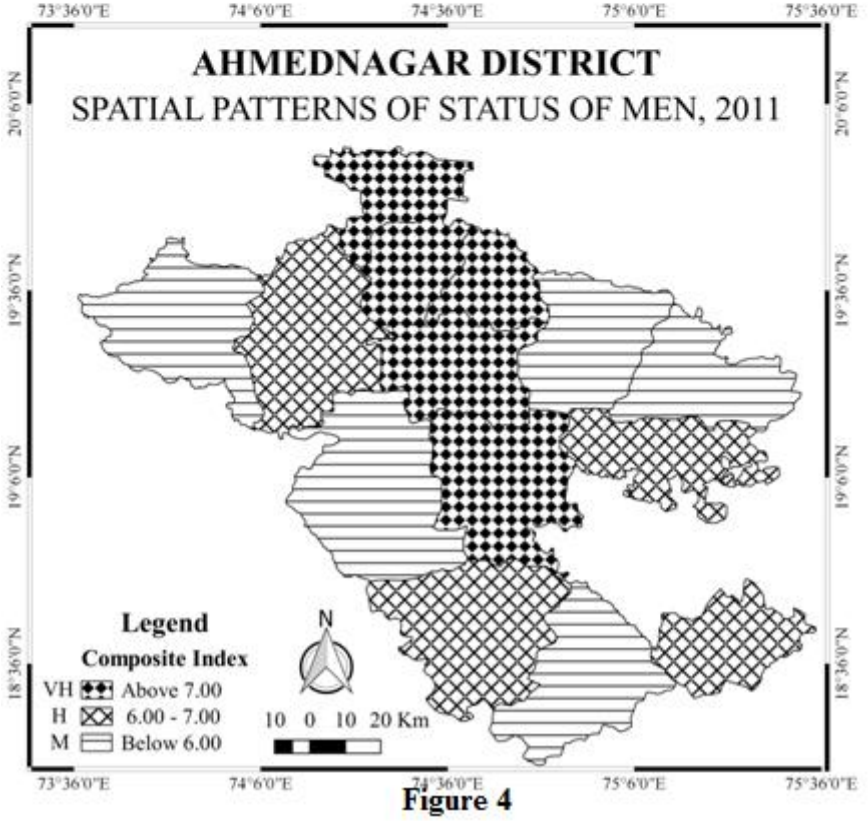

AHMEDNAGAR DISTRICT
SPATIAL PATTERNS OF STATUS OF MEN, 2011
73°36'0"E
74°6'0"E
74°36'0"E
75°6'0"E
75°36'0"E
20°6'0"N
19°36'0"N
19°6'0"N
18°36'0"N
Legend
Composite Index
VH Above 7.00
H 6.00 - 7.00
M Below 6.00
N
10 0 10 20 Km

Figure 4