2.1. Introduction

Development economists in the last three decades have proposed theories and the underlying analytical framework behind the factors influencing occupational shift away from agriculture in favour of non-agricultural activities in the rural economy. They tried to buttress empirical evidences in favour of their theories. In fact, there are several studies available primarily focusing the issue of the shifts in the rural occupational structure. The results of these studies have highlighted some factors responsible for occupational diversification. These factors may be broadly classified as demographic factors, socio-economic factors and factors influenced by state policies. It will be worthwhile to review the related literature available in this area which will not only provide better understanding of these factors but will also enable identification of the research gaps and distinguish this research from the earlier ones.

The chapter is structured as follows. Section 2.2 reviews the related literature to identify the broad categories of factors. Then Section 2.3 highlights the research in these areas with reference to India and its states. Section 2.4 discusses about the research gap and the contribution of this research study which will partly fulfill the gap identified. The chapter concludes with the Section 2.5.

2.2. Factors Affecting Occupational Shift

A large section of the literature related to employment seeks to identify the principal determining factors of rural occupational shift. A key debate question is whether this occupational diversification towards rural non-farm sector is a consequence of push diversification, or because it is responding to demand (pull), as the rural economy develops through linkages with the agricultural sector. Against this background, this section reviewed the previous literature based on different parameters, namely, demographic, socio-economic and state policies, operating at different levels, namely, personal or individual level, household level and society’s level.
2.2.1. Demographic Linkages

Demographics play a crucial role in determining the degree of occupational shift among agricultural workforce both in developed and developing economies. Though the factors are not identical for these economies, they help in giving a direction to analyze these factors. A large number of studies have been initiated in the past to examine the role of demographic parameters, namely, age, gender, marital status and social status, and its influence in occupational shift from agriculture to non-agricultural sectors in the rural economy across the globe. Hence, it will be interesting to understand the impact of various demographic factors on occupational diversification from agriculture in favour of non-agricultural sectors in the rural economy.

(a) Age

The household age composition is an often-cited measure of human capital used empirically in explaining the degree of occupational shift. This is evidenced by the available literature in this regard. As part of a major study of rural growth linkages in Australia, Applegate et al. (2002) noticed that age is inversely related to the phenomenon of occupational shift. Based on data from the Australian Bureau of Agricultural Resource Economics (ABARE), they argued that the tendency to shift towards non-agricultural employment decreases with an increase in age. This proposition was also supported by Abdulai and Delgado (1999), where they found that the probability to diversify into non-farm work decreases with higher age. Specifically, the probability of diversification from farm to non-farm work increases with age up to 45 years for men and 40 years for women, and is thereafter inversely related to age. Likewise, several studies based to rural employment of Ukraine (Bright et al., 2000; Ferreira and Lanjouw, 2001) and China (Zhang and Li, 2001) also showed that age of the worker plays a significant role in occupational diversification towards non-farm sector. In fact, study by Tuan et al. (2000) based on the data on Agricultural Census of China establishes that age group is one of the major factors affecting rural labour migration to non-farm activities even at part-time or full-time basis. A similar micro-level study (Bezemer and Davis, 2003a) of 900 households selected across rural Armenia also observed that average age is a factor that leads to occupational diversification. However, empirical studies (Malek and Usami, 2009; Hossain et al., 2002) related to rural
employment of Bangladesh notes that age of the household head is also an important determinant which influences the rural households to diversify from farm employment.

(b) Gender

The gender perspective adds a significant insight into rural livelihood diversification issues. In the reviewed studies, gender has emerged as an important factor influencing occupational patterns and trends in the rural employment. However, while some general commonalities were found across studied regions and countries, the role of gender in enabling or restricting access to economic activity also varies from country to country, and within country, from region to region. Aside from wide regional variation, it is also important to acknowledge that the relation between gender and livelihood opportunities and outcomes is not static, but one that evolves over time and varies across socio-economic groups. Ultimately, gender issues must be understood in the context of historical processes and the political and socio-economic conditions found in a given place and society (Davis and Bezemer, 2003; Mukhopadhyay, 2009).

A gender-wise analysis of occupational shift in rural Canadian households indicates a higher diversification of female workforce than of male operators (Chartrand, 2005). Similarly, several macro-level studies (Bright et al., 2000; Ferreira and Lanjouw, 2001) of Ukraine reveals that gender have a significant role in occupational diversification towards non-farm sector. In fact, a study by the Institute for Economic Research and Policy Consulting (IERPC) (2010) in Ukraine using over 9000 rural households’ survey also substantiated the importance of gender in occupational diversification. However, unlike Canada, here women are expected to have fewer tendencies to shift.

By analyzing the data related to rural employment of Ghana, Newman and Canagarajah (1999) revealed that diversification towards non-farm activities was more rapid for women, especially married women and female heads of household, than for men. In fact, women were more likely to combine agriculture and non-farm activities than men (Appleton, 1999; Deininger and Okidi, 2003). Other cross country studies which assess the impact of gender on occupational shift also draw similar conclusions. For example, Tongroj and Yongyuth (1988) found that in rural
Thailand, the degree of female occupational diversification in favour of non-farm employment is more pronounced in comparison to its male counterpart. An assessment of Ecuador by Lanjouw (1998) also observed that the shift is more evident among the female population when compared with the males. Gender also often plays a significant role in rural occupational diversification in China (Zhang and Li, 2000).

However, in rural Uganda, women participate more actively in crop farming than men, whilst the latter are more involved in non-farm activities. There has been a gradual shift since nineties towards non-farm employment, especially among men and female-heads of household (Smith et al., 2001). The need to sustain the household, combined with greater control over resources, seems to have pushed female-heads, whose number has increased significantly following the spread of AIDS, into non-farm employment (Appleton, 1996). In the rural areas of Armenia, Georgia and Romania, it is men who generally start and manage small and medium size non-farm businesses, often combining that activity with farming (Kharatyan and Janowski, 2002; Bezemer and Davis, 2003a,b,c; Davis and Gaburici, 2001).

There are quite a few studies in India which examines the impact of gender on the occupational shift towards non-agricultural sector (Mitra, 1993; Visaria, 1995; Pal et al., 1995; Unni, 1998a). Though the shift of male rural agricultural workers are witnessed dominating throughout India at the cost of farm employment, however, an increase in the share of female workforce in non-farm sector was also reflected in some of the major states (Pal et al., 1995).

(c) Marital Status

While there is a wide spread believe that occupational shift towards non-farm sector becomes compulsive after marriage to enhance means of income to sustain the needs of the expanding family, it is also true that pre-marital period is the time for people to take risks in looking for non-agricultural sources of income. The available literature throws up evidence which paint different pictures for both scenarios. Zhang and Li (2000) did a micro-level survey in North and North-East China to identify whether marital status has any role in occupational diversification. They found that married males are more inclined to diversify towards non-farm sector than that
of bachelor males. Marriage also has a significant effect on female occupational shift. It considerably reduces a woman's chance to diversify in non-farm activities. After marriage, women are more likely to be left behind to work on the family farm and take care of their families. These observations also suggest a strong labour division between husband and wife and an obvious bias against women diversifying in non-farm jobs.

In contrast, in Ghana, it is found that the relationship between bachelors and occupational shift to non-farm employment is positive (Newman and Canagarajah, 2000). The study found that it is less risky for bachelor males than married male to move towards potentially higher-return jobs outside agriculture. However, among females, it was observed that diversification towards non-farm activities was more rapid for married women and female head of household (Appleton, 1999; Deininger and Okidi, 1999).

(d) Social Status

Social status, such as, ethnicity and caste often acts as a significant factor in influencing occupational shift. Ethnicity can play as both an enabling and constraining role. Where a number of different ethnic groups live in the same area, whether in the same village or not, anecdotal evidence suggests that often there is occupational specialization along ethnic or ethno-religious lines, which affects both current participation in different occupations and the potential which individuals and households have for diversification (Fafchamps and Minten, 1998). For example, the Iteso in Uganda are traditionally agro-pastoralists, and have only recently started to diversify into sedentary agriculture and non-farm employment, therefore, they lack basic business experience and skills (Smith and Zwick, 2001). More generally, the spatial distribution of Uganda’s ethnic groups have in the past influenced the allocation of public investment, with Baganda areas in the central and south-western parts of the country benefiting from relatively advantageous access to economic infrastructure, education and health provision (Smith et al., 2001). Higher levels of public investment in those two regions contributed to wider economic opportunities than elsewhere in the country. Ethnicity was also identified as a determinant of rural employment patterns in Romania (Davis and Cristoiu, 2002; Janowski and Bleahu, 2002). Bleahu and Janowski (2002) maintained in the case of Romania...
that some ethno-religious groups have internal social characteristics, which make it relatively easier for them to diversify out of subsistence agriculture. This is likely to enable members of that group to collaborate in, for example, marketing agricultural products. It also enables members to succeed in entering non-agricultural activities; where one member is already involved in a certain niche occupation and he or she will facilitate the involvement of other members of the ethnic group. This is what has also happened in Transylvania, where ethnic Germans (Saxons) appear to be much better at helping each other gain entry to non-farm retail trading activities than their ethnic Romanian neighbours within the same village (Bleahu, 2001). Consequently, this group has had an involvement in trade and commerce which the Romanian ethnic group has not had because they operate more effectively through networks of kin and neighbours. Bleahu and Janowski (2002) also noted the impact of discriminating against particular ethnic groups. In their study, Roma gypsies were essentially excluded from accessing most forms of local non-farm employment.

The caste system remains a major stratifying force in rural India, especially at the village level. Field research in states like, Madhya Pradesh and Orissa, shows that members of the upper castes tend to dominate local power dynamics and to enjoy better asset endowments, higher social status and capital, and more favourable access to non-farm employment (Dasgupta et al., 2002; Pandey et al., 2002). Hence, the participation in economic activity has gradually transcended the traditional caste-based division of labour (Rath et al., 2002; Som et al., 2002).

2.2.2. Socio-economic Linkages

Invariably, socio-economic factors at the personal level, household level and society’s level also greatly influence the decision of agricultural workforce to shift from farm to non-farm sectors in rural economies. While the demographic factors determine the causes for the shift, the socio-economic factors generally determine the degree of shift of agricultural workers. Therefore, a good understanding of these factors and the degree of impact on the shift behaviour is imperative to explain the occurrence of such phenomena. In this context, it will be worthwhile to review the available literature in this area.
(a) Education

Literature concerned with occupational shift emphasizes the importance of education and its impact on workforce diversification. In fact, several studies carried out in the past have identified education as a fundamental factor to explain the causes of growth-led occupational shift towards non-farm employment in rural economies. It is generally believed that with increase in levels of education, there is a greater tendency of the workforce to seek more remunerative alternatives other than agriculture. Specifically, level of education is expected to have a positive impact on occupational diversification. A number of studies have been undertaken in India (Visaria, 1995; Unni, 1998a; Chadha, 1999) to look into the contribution of education in occupational shift. The studies highlights that primary education increases the productivity of the workforce, and secondary education encourages entrepreneurial ability in trade and rural industry (Islam, 1987). It signifies that the rates of return to education in rural non-farm activities are high (Ravallion and Datt, 1999). A similar study based on rural areas of Poland establishes the fact that the continued increase of the rural population’s level of education has contributed to the growing rural entrepreneurship (Frenkel, 2006; Charakterystyka, 2006). Other studies based on countries like, Canada (Chartrand, 2005; Alasia et al., 2007), Netherlands (Woldehanna et al., 2000), Armenia (Bezemer and Davis, 2003a), Ukraine (Gordon and Craig, 2001), Thailand (Rief and Cochrane, 1990) and Australia (Applegate et al., 2002) detailed similar observations. It found that diversification towards off-farm work is influenced positively by higher levels of education. In other words, all the studies showed that increase in education level enhances the possibility occupational diversification towards non-agricultural sector. Tuan et al. (2000) found that increase in educational opportunities significantly increases the migration of rural labour from agricultural to non-agricultural activities in China. This is more relevant to younger than older rural persons (Yang, 1997).

On the other hand, a number of studies (Hansen, 1969, 1985; Richards and Nagaar 1983; Commander 1987; Richards 1994; Datt and Olmsted 1998) related to the rural employment structure of Egypt observed that the poor tend to live in large families, have low levels of education, work as agricultural labourer and be concentrated in low-paying unskilled activities. These rural dynamics are the main roots that pushed the rural poor of Egypt to shift towards
menial non-farm jobs (El-Laithy et al., 2003; Assaad et al., 2000). Lanjouw (1998) noticed that in Latin America, while the shift among the rural rich is due to high level of education, for the poor it was driven by the low-levels of options available in agriculture.

However, the study by Zvyagintsev et al. (2007) in rural Russia found that higher educational attainment has a negative effect on the likelihood to diversify towards non-farm activities. Better educated people tend to follow the demand-pull process and look for more remunerative occupations than the menial opportunities of non-farm self-employment in rural Russia.

(b) Total Number of Workers and Structure of the Household

The total number of working members in the family and its structure (i.e., whether it is a nuclear or a joint family) often determines the tendency of shift away from farm activity into non-farm activities. It is often found that the number of people available within the family who are ready to work and occupational shift are directly proportional (Bhaumik, 2007a). Families with larger number of working members show greater inclination towards occupational shift, while those with smaller working members show lesser tendency towards shift. Also while nuclear families have a low interest for occupational shift, joint families tends to show greater preferences for shift.

Woldehanna et al. (2000) used a double hurdle model to investigate off-farm work decisions of Dutch cash crop farmers and found that large number of working people in the family is positively related to the desire to participate in off-farm employment. Similar results were also observed by Dirven (2004) in Latin America, Davis (2003, 2004) in Armenia and Malek and Usami (2009) in Bangladesh. In China also, the large size of workers in the household increases the pressure for labour migration to non-agricultural activities (Meng, 1990; Parish et al., 1995; Rozelle et al., 1999). Few studies undertaken at the micro-level in rural Thailand, especially at the household level, finds that the number of adults in the joint family acts as a major factor contributing to occupational shift (Wichaiwattana, 1982; Yasno, 1982; Yongyuth, 1982). The nuclear families are more confined in their respective specialization and are not so keen to take the risk to venture into new avenues of employment (Rief and Cochrane, 1990).
Zvyagintsev et al. (2007) by studying two regions (Perm and Ivanovo Oblast) of Russia found that big size working members in the family and number of unemployed push family members to find additional income sources, which are not regarded as a potential for future primary employment but rather as a stopgap.

(c) Land Holding

The relationship between land holding (either in terms of ownership or in terms of operated area) and movement towards the non-farm economy is a complex one. Theoretically, the relation between land holding size and the share of non-farm income in the total household income is likely to be depicted by a negatively sloped curve (Ranjan, 2006, 2009a). The reason is that rural households with good access to land are not compelled to diversify into non-farm employment to the same extent as landless or marginal farming households, and tend to show a strong attachment to farming as a way of life, thereby having a tendency to specialize in agriculture and allied activities. Those with limited or no access to land either have to work as agricultural labourers or engage in non-farm activities in order to earn a living. In fact, sometimes they have to migrate as a response to limited local employment opportunities.

However, an inverse correlation between land holding and the share of non-farm income at the household level may not always verified empirically on account of following reasons. First, access to land is only one amongst many factors that influence employment and income patterns across households. Second, successful farming may constitute an entry point for agricultural processing and trading and provide financial resources for investment in non-farm enterprises, while at the same time constituting a safety net that enables riskier and potentially higher-return household investments. In other words, medium and large farmers tend to be better positioned to engage in more remunerative self-employment in the non-farm sector because of resource and risk conditions. Thus, the possible role of land holding in the occupational shift is mixed (Ranjan, 2006, 2008, 2009b).

Literature based on India shows that the share of non-farm income and employment in total income and employment of rural households decline as the size of landholding and income goes down.
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up (Papola, 1992; Panda, 2008). The study for 11 countries of Latin America by Dirven (2004) noticed that small size of land holding is one of the major factors that contributed to the shift of agricultural workers towards rural non-farm employment. Ellis and Freeman (2004) based on the work in the Sub-Saharan Africa, makes similar conclusion that decreasing farm size irrespective ownership or holding increases the opportunity to shift.

Rietveld (1986) showed that shift to non-farm activities has traditionally been much more important for the landless and small-scale farmers than for large-scale landholders in Indonesia. But, low-income non-farm activities in many cases have been a survival strategy for the poor and compensated for a lack of agricultural income opportunities. Especially in the rural Java, characterized by high population density and marginal landholding due to land scarcity, poor households have for long been forced to seek income outside agriculture to make ends meet (Effendi and Manning, 1994). There is a negative correlation between farm size and occupational shift in these areas. Labour absorption capacity of agriculture is relatively low and escalating land scarcity creates growing need for diversification (Evers 1991, Nibbering and Schrevel, 1982). Both White and Wiradi (1989) and Meindertsma (1997), however, conclude that equalizing effects on the rural income distribution from agricultural or non-agricultural employment tend to be negligible. The more wealthy rural households formed a more dynamic strategy of accumulation and they dominated in the higher-paid off-farm employment opportunities.

A study of North-Eastern Brazil by Ferreira and Lanjouw (2001) observed that cultivators who are cultivating in their own land do not have the inclination of shift towards non-farm sector, but there is high proportion of shift among the landless agricultural labourers. It indicates that landless people who were engaged in farm sector as agricultural labourers have a tendency to shift towards non-farm sector for better income and standard of living.

Studies based on rural Canada found that the size of the farm in terms of operated area and farms proximity to urban centres are major factors that influences occupational shift (Howard and Swidinsky, 2000; Alasia et al. 2007). The studies based on Thailand (Tongroj and Yongyuth, 1983), South Africa (Hayami and Ruttan, 1985) and Bangladesh...
(Malek and Usami, 2009; Hossain et al., 2002) also draws similar conclusions. Tuan et al. (2000) suggests that institutional changes on landholding pattern in China can greatly increase migration of rural workforce from agricultural to non-agricultural activities.

(d) Productivity

The process of changing rural occupational structure with respect to productivity is viewed in the development literature from two perspectives (Koppel et al., 1994; Unni, 1988, 1991, 1996). The first is the development perspective, wherein forces of economic growth, such as, agricultural prosperity (crop output per capita of agricultural population), agricultural productivity (crop output per acre of agricultural land) and agricultural modernization have led to creation of job opportunities, leading to the emergence of a diversified occupational structure. This growth process, first analyzed by Kuznets (1966), is mediated by agricultural transformation, attendant upon the mechanization of agriculture accompanied by a rise in the productivity of agricultural labour and its surplus. The notion behind the argument is that growth of agricultural production and productivity may create a surplus, which may be invested in non-agricultural enterprises, where, an increase in rural incomes due to agricultural prosperity may alter the pattern of demand for goods and services. Generation of agricultural surplus and a changing pattern of consumption demand could lead to an increase in demand for labour in the non-agricultural sector (Unni, 1994a,b). In the course of development, increase in demand for services from both primary and secondary sectors leads to growth of the tertiary sector (Clark, 1940). The expansion of the non-agricultural sector is, in Kuznets’ theory, prosperity-induced or growth-induced.

In sharp contrast to the development perspective, McGee (1971) is skeptical of the growth prospects offered by agricultural labour and industrial transformation. McGee sees agricultural labour surplus more as a consequence of agrarian distress, i.e., a surplus that finds no ready absorption into productive employment in the non-agricultural sector. The surplus workforce then has no other option but to settle into a low-productive job in the tertiary sector. This expansion of the non-farm sector, from McGee's perspective, is distress-induced. Seasonal migration of the poorer households to urban areas in search of unskilled or menial employment
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in the informal sector can be considered as a typical case of such distress occupational diversification. The deterioration trajectory is caused by factors inimical to growth and prosperity, such as, degradation and depletion of the natural resource base, agricultural stagnation and rapid population growth, compelling livelihood diversification of a distress nature. This diversification has been alternatively put forward as residual sector hypothesis by Vaidyanathan (1986), which occurs when labour is not fully absorbed in the agricultural sector and the non-agricultural sector acts as a sponge for the excess labour. In this context, Bhalla (1989) identifies two kinds of distress diversification in which the non-agricultural rural activities become residual labour force absorbers. The first is the case of supplementary workers who have no main occupation, but engage in some subsidiary work to supplement household income and the second is the case of persons with a main occupation who also engage in secondary activities. However, it is also plausible that agricultural prosperity will lead to an increase in demand for workers in agriculture, leading to better absorption of labour therein and there would be less spillover of excess labour into non-agricultural employment (Vaidyanathan, 1986).

Araujo (2004) observed that there is a shift in the employment structure of rural Mexico towards the non-agricultural sector due to low labour productivity in agriculture. The study noticed that the shift has taken place mainly in the lower strata of the population, i.e., the poor households of the rural areas were mainly pushed to non-farm sector to have an enhancement in their income. Howard and Swidinsky (2000) observed that low level of dairy production causes labour movement towards non-agricultural sector in Canada. However, Mendoza (2008) argues that the main motivations for farm household diversification into value-added activities in Canada were to increase profitability of the farm operation and increase the chances of survival of the farming operation as well as to be able to maintain a farm lifestyle.

The factors implicated in the study of the Sub-Saharan Africa by Ellis and Freeman (2004) suggest that declining yields due to declining soil fertility and degrading natural environments, increased climatic variation, and, declining returns from farming are the major reasons for occupational diversification. However, the study by Timmer (1990) related to South Africa’s agricultural sector identifies that the farm workers are compelled to participate in off-farm work
due to reduction in the productivity of agricultural land due to extensive farming, and, use of modern technology in agriculture.

The study conducted by Islam (1997) in eight developing economies, namely, China, India, Bangladesh, Republic of Korea, Thailand, Malaysia, Philippines and Indonesia, noticed that the availability of abundant labour in these countries is the primary reason for occupational shift. According to the study, the occupational shifts in these countries are stimulated by both push and pull factors. If agriculture is stagnant, surplus unemployed labour is pushed into non-farm sector, often into low productivity activities at wages lower than these workers earned in agriculture. However, if growth in the rural non-farm sector is stronger than that in the farm sector, labour is pulled to the non-farm sector by higher wages. When agriculture is stagnant, the activities that provide a large share of rural non-agricultural employment are: cottage (household) industry, earthworks and miscellaneous rural activities with low productivity and low wages. Yang and Li (2000) argued that due to increase in agricultural productivity in China the surplus rural workers are attracted into non-agricultural production activities and, consequently, they have the opportunity to increase their off-farm income. In a separate study in rural Thailand, Tongroj and Yongyuth (1983) observed that agricultural growth or prosperity is considered to be one of the most important determinants of the occupational shift. In other words, the growth of rural non-farm employment is mainly attributed to agricultural prosperity and land/asset constraints; with the coefficient for the former are positive and the latter negative.

(e) Income

The theoretical models related to employment from the mid-1930s provided a leading paradigm in initial discussions regarding occupational diversification from agriculture and change in income through creation of opportunities in non-farm employment (Fisher, 1935; Clark, 1940; Kuznets, 1959, Mellor, 1976). These theoretical models suggested that development-led shift in any country should bring about significant changes in the structure of the workforce, particularly, in the wake of enhanced growth of income. Augmentation of income culminates in increased demand for manufactured goods and services of diverse sorts as compared to agricultural products because of differences in income elasticity of demand for various goods and services.
Such alterations in demand would have concomitant effects on agriculture's share in real income. Besides, the share of the agricultural labour force will also decline unless productivity per unit of labour decreases (Fisher, 1935). Clark (1940) noticed a shift in the allocation of labour from primary to secondary and secondary to tertiary employment which he then explained on the basis of changes in income and domestic demand. However, Kuznets (1959) making use of time series and cross section data for different countries authenticated the hypothesis that with rising per capita agricultural income, the proportion of workers in agriculture and allied activities falls markedly and that of workers in manufacturing industries rises correspondingly. Hymer and Resnick (1969) have advanced the argument by denoting rural occupational diversification as inferior goods and thus the tendency of shift will decline as rural income increases. Resnick (1970), provided empirical evidence in support of this claim by tracing the corroding of rural industry in Burma, Philippines and Thailand from 1870 to 1938. Kuznets hypothesis, however, remains insufficient to explain certain elements of the Indian case. According to Vyas and Mathai (1978), there exist a weak linkage between agricultural and non-agricultural sectors and lack of employment buoyancy in industries that meet the demands of the more affluent segments of the peasantry.

In general, household income greatly influences the members' decision to shift from farm to non-farm activities or concentrate only on farm activities. While generally, there is an inverse proportion between levels of income and occupational shift, it is also found that higher income levels may induce some of the members of the household to shift to non-farm activities also. In fact, Zvyagintsev et al. (2007) observed that in rural Russia, a substantial portion of the people still engaged in agriculture is not only depending on agriculture for their livelihood but also depend on a diverse portfolio of activities and income sources. Diversification is positively correlated with family income, i.e., when a family is engaged in more activities, its income increases (Chandra, 2002). Similarly, in Georgia, Bezemer and Davis (2003b) revealed that the households with diverse sources of income, particularly with access to non-farm income (pensions, off-farm jobs, handicrafts production, etc.), appear to be better placed to cope with hardship, poverty, and increased livelihood insecurity (Davis et al., 2004).
The study by Araujo (2004) in Mexico found that the poor households of the rural areas are mainly pushed to non-farm sector to have an enhancement in their income. The shift from engagement in agriculture to non-agricultural activities in Uganda has been most evident amongst the households belonging to subsistence level farming. Data identifying higher earnings in non-farm activities suggest that these households are gaining increasingly higher incomes (Newman and Canagarajah, 1999). By studying Romania, Davis and Cristoiu (2002) observed that the main priority of majority of rural inhabitants is to cover their basic needs. Thus, though farming is the primary activity in rural areas, the farmers also try to select a secondary activity because income from agriculture alone cannot cover the household needs. It shows that rural non-farm activities are important in supporting poor households’ livelihoods, complementing farming activities. In Bangladesh, though agriculture performed relatively well in the nineties and the growth of agricultural incomes was estimated at 3.5 per cent in the 1990s compared to 2.6 per cent over the 1974-90 period, nevertheless, the proportion of workers engaged in agricultural activities reduced by six per cent points from 41 per cent in 1987-88 to 35 per cent in 1999-2000 (Hossain et al., 2002). This implies the medium and large groups of farmers also try to supplement their agricultural income from non-farm (Hossain, 2002).

(f) Consumption

The impact of consumption on occupational shift can never be over emphasized. Research evidence points to the fact that consumption deficit in a household leads to greater movement towards non-farm activities, while consumption surplus limits this phenomena. The generation of agricultural surplus and a changing pattern of consumption demand can also lead to an increase in demand for labour in the non-agricultural sector (Ranjan, 2006; Unni, 1994a,b).

Mellor (1976) has demonstrated that agriculture has the potential to stimulate new economic activities in the non-agricultural sector through consumption-expenditure, and backward and forward production linkages. The consumption linkages would arise out of increased incomes for both farmers and labourers, generating increases in demand for goods and services, and would be largely concentrated in rural areas since the goods and services demanded are typically produced by small scale, labour intensive enterprises. Thus, according to Mellor, the initial increase in
rural income through diversification into non-farm activities triggers a sequence of multiplier effects which can invigorate expanded employment towards other sectors of the economy which are likely to be labour-intensive. Therefore, the enhanced income due to higher shift to non-agricultural employment of lower-income households, who spend large portions of their increased income on food, stimulates the demand for additional foodgrains production. Higher income farmers also spend more on non-food products, but import a higher proportion of these products from large urban centres. This paves the way for the establishment of inter-sectoral linkages between farm and non-farm sectors in rural areas leading to simultaneous development of both the sectors. Hence, an accelerated rate of diversification from agriculture yields tremendous impact on both farm and non-farm employment and incomes.

(g) Production

In addition to the consumption linkages, production linkages between agriculture and non-agriculture are also important. Backward production linkages would result from farmers' increased demands for inputs from the non-agricultural sector. The inputs acquired for enhancing production in or in the vicinity of rural areas spawn rural industries. On the other hand, forward linkages result in a process of agro-based industrialization involving the establishment of a number of small-scale agro-industrial units. Accumulated commercial surpluses from agriculture give rise to a whole chain of industrial activities like wheat flour and rice milling, oil extraction, cotton pressing and ginning, sugarcane processing, and so on and so forth. The development experiences of Punjab, Haryana and Western Uttar Pradesh in India are a clear testimony to this (Bhalla, 1993; Chadha, 1997). In this process, some benefits accrue to rural areas as well, though gradually. This opens up fresh avenues for the availability of non-farm incomes and helps rural farm households to diversify into non-farm sector. However, steadfast expansion of farm employment can be facilitated by means of constant extension of irrigation facilities and expansion of cropped area, adoption of new labour-intensive crop combinations on a wider scale, greater per hectare use of labour with regard to existing crops and by increasing the level of cropping intensity etc. In the wake of augmented volume of agricultural output, different kinds of post-harvesting activities, especially those pertaining to trade and trade-related activities, within as well as outside the village develop and hence the prospects of providing non-farm
employment become fairly high. The sources of providing additional employment and earnings in case of occupational shift include, inter alia, construction, transport, trade and services.

The spilling-over of accumulated agricultural production surpluses in rural areas to urban industrial areas and commercial centres and the employment benefits implicit in their transportation, processing and marketing etc., imply closer linkages between the agricultural and non-agricultural sectors. However, the growth of agro-processing industry is, to a large extent, contingent upon the availability of considerable agricultural surpluses on the one hand, and the increasing demand for processed food and non-food products on the other. Furthermore, the level of supplementary requirements for rural products, together with external demands for rural products particularly handicrafts, and location, size and technology of activities harnessed to meet these demands also impact upon this linkage (Vaidyanathan, 1986).

(h) Wealth Index

Wealth index is made up of a family’s ownership of house, agricultural equipments, in-house assets and livestock. Peculiarly, while higher wealth index is the cause of occupational diversification because the members in the family show greater interest in generating non-farm sources of income (Papola, 1987, 1992; Chadha, 1999), a low wealth index also catalyses greater shift away from farm activities to mobilize more income from non-agricultural activities (Visaria and Basant, 1994; Unni, 1997). In a sense, a higher wealth index induces the family members to diversify, whereas, a low wealth index acts as a trigger to generate income from alternative sources other than agriculture.

A high wealth index is typically characterized by greater occupational diversification caused by growth-led factors as observed in the studies by Charakterystyka (2006) in Poland, Woldehanna et al. (2000) in Netherlands and Bezemer and Davis (2003b) in Georgia. On the other hand, a low wealth index is generally the cause of higher occupational shift on account of compulsive movement of labour workforce towards non-farm activities as evidenced by the research studies by Davis and Pearce (2000) in Czech Republic, Meindertsma (1997) in Indonesia and Ravallion and Datt (1999) in India.
(i) Crop Diversification

Crop diversification means the shift away from traditional use of land for cultivation of cereal crops towards the more attractive and remunerative cultivation of high valued cash crops (Shome, 2009). Since, cash crops are less labour intensive and more technology intensive, the labour force rendered surplus will look for other alternatives for subsistence. Therefore, a higher shift towards cash crop cultivation leads to higher occupational diversification. Several micro-level studies related to Asian countries showed that crop diversification from traditional to high value cash crops leads to occupational diversification towards non-farm sector (Kumar et al., 1998; Delgado and Siamwalla, 1999; Joshi et al., 2004; Babu and Djalalov, 2006). This phenomenon was specially observed in the countries like, Philippines, Malaysia, Thailand, China, Bangladesh and India since the early nineties.

According to Ahmad and Isvilanonda (2003), Thailand experienced a change in the cropping pattern with the increase in the demand for horticultural and floricultural cash crops both within and outside the country. This spurt in demand for cash crops induced the farmers towards cultivation of non-traditional crops and farmers rendered surplus in this process had to diversify towards non-farm employment. Similar experiences have also been brought out in the research studies done by Joshi et al. (2004) in India, Hoque (2000) in Bangladesh, Mengxiao (2000) in China and Yahya (2000) in Malaysia.

(j) Migration

Out bound migration or emigration is caused by non-availability of opportunities in a locality or village for agricultural work as well as lack of avenues for non-agricultural sources of income (Lewis, 1954; McGee, 1971). As a result, people are constrained to move away from agricultural activities within the locality to non-farm activities outside. However, this factor is the cause of workforce diversification mostly in developing economies and is clearly brought out in studies by many researchers. The studies reviewed (Lewis, 1954; McGee, 1971; Meng, 1990; Rozelle et al. 1999) suggest that widespread labour migration is explained more by structural factors, like, inequality in land ownership, poverty and agricultural backwardness than dealing
solely with motivations of maximizing the family's income and employment. Hence, rural-urban migration might help the rural poor to overcome their problem of survival, but may not lead to their real economic consolidation. According to Shylendra and Thomas (1995), seasonal migration of the poorer households to urban areas in search of unskilled or menial employment in the informal sector can be considered as a typical case of distress occupational diversification.

(k) Occupational Status

The current occupational status in agriculture sometimes acts as a factor causing occupational diversification. The poor condition in farm activity often influences a shift away from agricultural to non-agricultural sector. This is because labourers prefer to move towards more remunerative jobs as compared to the low paying labour work in agriculture. In fact, occupational status as a factor for shift from agriculture to non-agricultural sector is found in many studies (Hayami and Ruttan, 1985; Vaidyanathan, 1986; Ferreira and Lanjouw, 2001; Davis and Cristoiu, 2002; Bezemer and Davis, 2005).

2.2.3. State Policy Linkages

Economic transitions in countries are generally driven by the policies formulated by the states which are oriented towards improving the standard of living of the rural workforce. Development is typically characterized by the effective implementation of these policies that seek to industrialize economy and move away from excessive dependence on the primary sector. The impact of such policy implementation on workforce diversification can be best brought out by reviewing the related literature in this area.

(a) Development Linkages

Various state initiatives to bring about infrastructure development or industrial development at the micro-level, namely, districts, blocks and villages, will also greater influence labour movement from farm to non-farm activities. Such initiatives acts as a boost for occupational diversification for the villagers as it results in more permanent sources of income compared to
seasonal income in the agricultural sector or the lack of it caused by monsoon failures and the consequent crop failures.

According to Dirven (2004), the improved transport network which leads to quick accessibility to urban areas and greater accessibility to public assets like, rural electrification and telecommunication, has motivated the rural inhabitants to move towards non-farm activities. Similarly, a study of North-Eastern Brazil by Ferreira and Lanjouw (2001) finds that rural areas near urban municipalities account for a much larger share of non-farm employment than isolated areas. This evidence is consistent with the importance of access to markets and infrastructure for the expansion of rural non-farm enterprises (Barros, 1995). Bryden and Bollman (2000) found that in many OECD countries the fall in agricultural labour has been compensated for by increased employment in services, particularly, in tourism and recreation and, in some cases, manufacturing. There is also an increase in opportunities due to improved digital communications. Changes in the rural labour market are related to changes in the urban labour market, such as the shift to part-time and casual work (Christensen and Lacroix, 1997). However, evidence from OECD countries suggests that labour market measures that involve counseling and job search assistance are generally effective for most groups in society, whereas, the effects of training programmes are less certain (OECD, 1996, 1998, 1999).

Regional development also plays an important role in the occupational diversification. This proposition was substantiated by the studies initiated by Zvyagintsev et al. (2007) in rural Russia and Isgut (2004) in Honduras to find out the factors that influence occupational diversification.

In India, it was observed that infrastructure development within and outside the villages in nearby towns and cities also plays an important role in contributing to occupational shift (Visaria, 1995; Unni, 1998a; Chadha, 1999). Infrastructure widens the size and choice of markets as well as sources of raw materials for rural enterprises and encourages sub-contracting.

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2 OECD refers to Organisation for Economic Co-operation and Development. There are 33 member countries of OECD till November 2010. The mission of OECD is to help its member countries to achieve sustainable economic growth and employment and to raise the standard of living in member countries while maintaining financial stability (Source: www.oecd.org).

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arrangements with urban enterprises (Dev, 1994; Visaria and Basant, 1994; Lanjouw and Shariff, 2001; Jha, 2008).

(b) Government Policies

With the advent of globalization, the governments across the world are framing proactive policies to bring about rapid development in their countries. This may take the form of rapid industrialization, greater emphasis on health care, education and infrastructure and updating modern methods of cultivation replacing men with machines. This leads to a greater opportunities for the over employed rural workforce to diversify into new avenues in non-farm sector. This not only minimizes disguised unemployment in agriculture, but also generates higher regular income to the rural workers.

In Uganda, the access to and the quality of formal education has expanded under the Government’s introduction of Universal Primary Education (UPE) in 1997. It leads the rural young generation to shift towards better opportunities in non-farm sector outside the village (Newman and Canagarajah, 1999). Again, policy development (under the auspices of the Poverty Eradication Action Plan) in support of non-farm growth has come through direct investment in public services, including physical infrastructure, education and health, and through the gradual establishment of frameworks to encourage private sector development and investment in other urban and rural areas. This has also augmented the scope of rural workers with better prospects in the rural non-farm sector (Smith and Zwick, 2001).

According to the study by Resource and Rural Economics Division of The United States Department of Agriculture (USDA) (2006), the availability of more opportunities in the rural manufacturing sector has encouraged the farm households to shift towards non-farm sector. Some studies (Simbi and Aliber, 2000; Machethe, 2004) related to South Africa’s agricultural sector explained that factors, such as, better access to agricultural credit, comprehensive farmer support services by the government and improved infrastructural facilities, are responsible for occupational shift.
Studies based on rural areas of Poland have identified some of the factors that are responsible for this occupational shift (Frenkel, 2006; Charakterystyka, 2006). They are: (a) different Rural Development Programmes initiated by the Polish Government, such as, Special Accession Programme for Agriculture and Rural Development (SAPARD), Sectoral Operational Programme (SOP) and Rural Activation Programme (RAP), helped farm households to diversify from agriculture and near-to-agriculture activity to ensure diversity or alternative source of income; (b) European Union (EU) membership, including adoption of *acquis communautaire*³, participation in the single market and technological changes have accelerated the pace of production structures, which represented an important factor for many households to diversify their income or leave the sector; (c) the continued increase of the rural population’s level of education has contributed to the growing rural entrepreneurship. Moreover, the EU’s rural development programmes contain measures that increase farmers’ knowledge, know-how and skills; (d) Farmers’ accessibility to EU funds, especially measures supporting structural changes on farms, resulted in an increase of new farm technologies. This, in turn, resulted in an on-farm workforce surplus and forced rural families to look for other sources of income.

According to Davis and Pearce (2001), the state support agriculture and rural development programmes in Czech Republic encouraged the farmers to diversify into the non-farm sector. Protection from external competitions, financial assistance and providing training to the rural people by Integrated Programme for Rural Development (IPRD) initiated by the Government motivated a significant proportion of the subsistence level farmers to start up their own business (Jehle, 1998). Opportunities within the rural areas in non-farm activity, such as, small workshops, shops, public houses and boarding houses have also allowed some in the rural population to work in their own locality (Turnock, 1998).

There are several studies undertaken in Japan to realize the dynamics of occupational shift both at the macro and micro-level (Yoshida, 1990; Fujimoto, 2000; Kurihara and Yasuo, 2002). The general conclusion from all the studies is that the Japanese Agricultural Policy which has been developed to increase the agricultural productivity plays a significant role for shift.

³ The *acquis communautaire*, sometimes called the EU *acquis*, is the accumulated legislation, legal acts, court decisions which constitute the body of European Union law. The term is French: *acquis* meaning ‘that which has been acquired’, and *communautaire* meaning ‘of the community’.

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Similarly, the substantial structural change in Vietnam from agriculture towards industry and services was associated with the decollectivization wave and land reform in the early 1990s (Fforde and Huan, 2001), promoting private sector (including household businesses) in rural areas and removing other barriers to trade and production in agriculture (Pham, 2007). It directly benefited the majority of Vietnam’s population whose livelihoods were closely dependent on small-scale subsistence agriculture in the rural sector (Benjamin and Brandt, 2004). Again, continued industrialization in China attracted the surplus rural workers into non-agricultural production activities and, consequently, provided them with an opportunity to increase their off-farm income (Yang and Li, 2000; Zhao, 1999).

In India, the government-sponsored financial institutions or the non-governmental organizations (NGOs) often play a catalytic role in providing initial capital for rural non-farm enterprises which encourage the rural workforce to start-up their own business and come out of traditional farming (Drèze and Mukherjee, 1989).

In contrast to the above mentioned studies, Dirven (2004) noticed that the poor government policies can also often act as important factor for occupational shift. Minimum access to agricultural credit and also high rate of interest in informal credit made the rural workforce to move towards non-farm employment in some of the Latin American countries. Similar results were observed by Araujo (2004) in Mexico, where the low per-capita government expenditures in the agricultural sector induces the poor rural workforce to move towards non-farm employment.

The above review of literature reveals a global pattern of occupational shift which are driven by demographic, socio-economic and policy-level factors. These factors have a predominant role in influencing occupational shift not only in other parts of the world but also in Asia. So, it will be prudent to assume that the shift is caused by these factors irrespective of the geographic

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4 A Non-Government Organization (NGO) is a legally constituted organization created by natural or legal persons that operates independently from any government and a term usually used by governments to refer to entities that have no government status. In the cases in which NGOs are funded totally or partially by governments, the NGO maintains its non-governmental status by excluding government representatives from membership in the organization. The term is usually applied only to organizations that pursue some wider social aim that has political aspects, but that are not overtly political organizations such as political parties.
locations. Hence, it will be logical to review the available literature in this area to see if the same factors are also found to be dominant in influencing workforce diversification in the Indian subcontinent. Though this has been done briefly in the earlier section, it is important to do an elaborate review not only for India but also for the various states which indicate a high and low shift pattern of the last two decades. Therefore, the focus of this review in the next section will be to identify the factors and see if they are similar to the ones observed in the earlier section.

2.3. Factors Affecting Occupational Shift in India

India witnessed occupational diversification in rural areas towards non-farm sector from the early sixties. A moderate shift of rural workers from agriculture to non-agriculture was observed until the late eighties. Though there was a virtual stagnation in the early nineties, but it again started gaining momentum in the late nineties (Biradar and Bagalkoti, 2001). However, the important issue is the identification of factors that are responsible for this shift rather than the quantum of shift itself. Various studies (Vaidyanathan, 1986; Dev, 1990, 2002; Chandrasekhar, 1993; Visaria and Basant, 1994; Sen, 1997; Unni, 1997, 1998a; Chadha, 1999; Lanjouw and Shariff, 2001; Bhaumik, 2003; Radhakrishna, 2002, 2005; Jha, 2008; Mukhopadhyay, 2009) have identified several factors that are responsible for occupational diversification in rural India. This section is devoted to literature review for the factors that determine the occupational diversification in India. As it was done in the previous section, here also the factors are broadly classified as demographic factors, socio-economic factors and factors influenced by state policies.

2.3.1. Demographic Linkages

Research evidence from India suggest that occupational shift towards rural non-farm sector is largely determined by demographic factors, like, age, gender, marital status and social status. Therefore, a review of the existing literature will help to recognize the impact of various demographic factors on occupational diversification in rural India.
(a) Age

The age composition of the workers in a household often plays an important role in determining its extent of diversification (Bhaumik, 2007a,b). It is observed that in India aging families are not very keen in diversification because of age. Hence, the households having greater number of young working members are likely to shift more towards non-farm sector. A number of studies (Chandrasekhar, 1993; Ghosh, 2003; Bagchi and Das, 2005; Bhaumik, 2007a,b) based on West Bengal concludes that the age of family members is one of the major parameter that influences the household to diversify into non-agricultural sector. The association between age and rural occupational shift was also noted by several studies including those of Dev (1990), Fisher et al. (1997), Parthasarathy et al. (1998), Ferreira and Lanjouw (2001) at the all-India level and Basant (1994) in Gujarat; Jayaraj (1992, 1994) for Tamil Nadu and Eapen (1994, 1995) in Kerala.

(b) Gender

The post liberalization era brought out the importance of gender as a factor influencing occupational shift (Bhalla, 1993; Fisher et al., 1997). While the males had greater opportunity to shift from farm activities to non-farm activities, the females were also found to be engaging themselves in higher non-farm activities. In India, the shift of female workforce towards non-farm sector is low compared to those for men. Chadha (1997) reasoned out that women are culturally less mobile, and are thus disadvantaged in terms of rural non-farm employment because on-farm employment is available closer to their living abodes, and because they are not as well equipped (in terms of education and skills training) to compete for the limited, but remunerative, non-farm jobs as men are. It is particularly so in modern manufacturing activities which are skill selective.

Social norms restricting female mobility and ability to work outside the household were identified as an important constraint in many villages in Madhya Pradesh and Orissa, particularly among the upper castes (Rath et al: 2002; and Som et al: 2002). Singh and Kumar (1995) point out that numerous socio-economic factors, including familial responsibilities such as child care...
and food preparation, poor health, limited access to education, lack of skills constrain the ability of women to move towards non-farm activities. Vyas and Bhargava (1995) found that social disapproval and family pressures faced by many women discourage them from entering into economic activities outside the household.

Though the shift of male rural agricultural workers is witnessed throughout India at the cost of farm employment, however, there are some studies which talks about the increase in occupational shift among the female (Mitra, 1993; Visaria, 1995; Pal et al., 1995; Unni, 1998a; Sundaram and Tendulkar, 2004). Some studies observed that an increase in the movement of female workforce towards non-farm sector was also reflected in some of the major states, like Tamil Nadu (Jayaraj, 1992, Ramachandran et al., 2002), Madhya Pradesh (Gupta, 1995) and Gujarat (Unni, 1996, 1998b).

(c) Marital Status

The available studies related to occupational diversification in India points out that marital status of the family members often acts as an important cause for shift towards more remunerative jobs than agriculture. Studies by Papola (1992), Bhalla (1993), Visaria and Basant (1994), Eapen (1996), and (Davis and Pearce, 2000) noted that marriage apparently plays little role in affecting men’s diversification towards non-farm activities, but it significantly reduces a woman’s chance to participate in non-farm activities. Vyas and Bhargava (1995) found that family pressure faced by many married men pushes them into economic activities outside the household. However, the state-level studies (Mitra, 1993; Unni, 1998a; Parthasarathy et al., 1998; Sharma, 2001; Singh, 2003; Chanda and Sahu, 2004) finds that in most of the states, the tendency of shift from the category of agricultural workers towards non-agricultural employment is more pronounced in unmarried family members than that married ones.
The caste specific nature of occupational shift has been noticed by many scholars in India (Jayaraj 1992; Singh, 1994; Singh and Tripathi, 1995; Drèze and Gazdar, 1996; Harris-White, 2005; Rao and Gopal, 2006; Dev, 2007). The changing scenario in terms of the mindset of the people in India and their attitude towards such institutions is reflected in the results of some studies that seek to analysis workforce diversification vis-à-vis these institutions. Higher caste status, given the unequal distribution of power, privilege and assets in the local economy, often opens up the scope for diversifying into non-farm activities, through better access to education and information, whereas, lower caste households were encouraged into non-farm employment as a consequence of uncertainty of returns to agricultural cultivation.

Drèze et al. (1998) noted that high-ranked Thakurs (previously landlords) in Palanpur had acquired a disproportionate share of non-agricultural employment through better contacts, status or by wealth. Unni (1997, 1998b) observed that social status in rural Gujarat, is an important factor that influence on access to high-productivity non-agricultural occupations. Field research by Som et al. (2002) in Madhya Pradesh, Ranjan (2009) and Singh and Tripathi (1995) in Uttar Pradesh and Rath et al. (2002) in Orissa had established that menial and manual activities, such as, bamboo work, shoe making, tailoring, carpentry, blacksmithy, hair cutting, pottery, weaving, sheep rearing, carpentry and plough making are undertaken by socially downtrodden classes with limited asset, particular lower castes and the tribes residing in the villages. On the other hand, they barely found members of the higher castes (especially the Brahmins and Kshatriyas) engaged in the above-mentioned activities. In addition to it, the lower caste people also appear to face barriers to employment in the attractive non-agricultural jobs. Lanjouw and Shariff (2001) based on the NCAER survey data also noted that individuals belonging either to a scheduled caste or a scheduled tribe were relatively less likely to be involved in either non-farm own enterprise activities or well paid non-farm salaried employment.

A striking feature of Andhra Pradesh is a sharp tilt in inter-caste economic balance in favour of the backward classes in rural areas (Rao and Gopal, 2006; Dev, 2007). There is occupational diversification across castes. Section of higher castes and more affluent groups have been
restoring to occupational and investment diversifications in the urban environment. The space vacated by them in the agrarian structure is getting filled in by sections of the other backward classes and at times even by the schedule castes. This was possible for them due to the surpluses they generate either in agriculture within the rural settings or non-agricultural incomes both within and outside the country, especially from the wage incomes in Gulf countries (Rao and Nair, 2003).

A number of studies (Chandrasekhar, 1993; Ghosh, 2003; Bagchi and Das, 2005; Bhaumik, 2007b) based on West Bengal and Tamil Nadu (Jayaraj, 1992; Ramachandran et al., 2002) also identifies caste as an important determinant of occupational shift. The Schedule Tribe status reduces the possibility of entering a non-farm occupation in Arunachal Pradesh (Mishra, 2007). However, Kumar (1993) observed that in Bihar may schedule caste workers have diversified into government services and other odd jobs in factories and shops.

2.3.2. Socio-economic Linkages

This section is a summary of reviewed research evidence regarding the importance of socio-economic factors which determines the causes of occupational shift in India. The socio-economic factors comprises of education, size and structure of households, land holding, productivity, income, consumption, production, wealth index, crop diversification, migration and occupational status.

(a) Education

The level of education is considered as a potent instrument in influencing the rural occupational pattern. Better educated individuals are likely to possess skills which facilitate successful involvement in non-farm activities, including the ability to manage a business, to process relevant information, to adapt to changing demand patterns, and to liaison with public and private service providers. They are also likely to have greater aspirations with regard to working outside agriculture. Education improves access to job in the non-farm sector (Ranjan, 2006).
Education is also linked with higher productivity in trading, construction, service and manufacturing activities (Islam, 1997). Secondary education stimulates entrepreneurial capacity whilst primary education enhances workforce productivity. Further, it has also been evidenced that the schooling of other family members, not directly employed in the enterprise, also affects incomes through advice, suggestions and hints, and self-employed rural family enterprises benefit greatly from education irrespective of the sector or location of the rural enterprise. This is consistent with considerable anecdotal evidence of the high priority attached to education by poor families, once threshold income and expenditure needs have been met. The positive association between literacy and rural employment diversification was noted by several studies including those of Chadha (1993), Fisher et al. (1997), Narayannmoorthy et al. (2002), Reddy (2002), Hari (2003) at the all-India level and Basant (1994) in Gujarat; Rajsekhar (1995) in Rajasthan; Kaur and Nanda (2009) in Punjab; Nayyar and Sharma (2005) in Himachal Pradesh; Jayaraj (1994) for Tamil Nadu, Eapen (1995) in Kerala; Venkateswarlu (2003, 2005a,b) in Andhra Pradesh; Bhaumik (2007a, 2009) in West Bengal and Samal (1997a,b) in Orissa. The study of Arunachal Pradesh by Mishra (2007) noted that the probability of a household entering into any non-farm occupation is influenced significantly by the education level of the head of the household. The education of the head of the household is positively related with participation in non-farm occupation.

However, the usefulness of formal education for successful participation in the non-farm activities is not always evident. The skills required to engage in many rural non-farm activities are either very simple or acquired outside the formal school system, through relatives and friends and on-the-job training (Ranjan, 2006). Hence, relatively high educational levels are by no means a guarantee of remunerative wage or self-employment in the non-farm economy.

(b) Size and Structure of the Household

According to the residual sector hypothesis of Vaidyanathan (1986) rural workers who are not absorbed fully in agriculture spill over into the non-agricultural activities, with the latter acting as a sponge for the excess labour. This assumption is plausible in a situation where the household have a large number of family members with no job avenues available for them. In this process,
the pressure starts building on those who are unable to find work in agriculture to explore other avenues of employment outside agriculture. Such workers generally join traditional low productivity non-farm activity, such as, rope or coir making, basket making etc., either as self-employed or hired workers. A majority of such workers hail from the lower rungs of the rural society, they have no alternative but to fall back upon whatever wages they are offered. Basant (1994) in Gujarat and Singh and Mohanty (1995) in Orissa revealed that the tendency of shift is more among the households with a large family size. However, Bagchi and Das (2005) in West Bengal noted that the average size of the household engaged in the non-farm activities was relatively higher as compared to those engaged in farm activities. A micro-level study in Ranchi district of Bihar by Thakur et al. (2000) concludes that joint families tend to show greater preference for occupational shift.

(c) Land Holding

While the ownership of land holdings provides insights into the resource endowment position of the households, the size of operational holdings presents the de facto access of households to land for cultivation. Studies focusing on land usage (Sharma, 2001; Singh, 2006) and its effect on occupational diversification reveals that a large number of marginal farmers, owning very small plots do not cultivate their land. In case of other size groups, both the number of operational holdings and the area operated are higher than the number of ownership holdings and the owned area. This would have happened largely due to shift of a section of land of marginal size group to higher size groups of operational holdings through land leasing out arrangements from marginal ownership holdings, urban households and government and non-government institutions and also due to the otherwise possessed land. There seems to be a sharp decline in the number of operational holdings from 93.5 million in 1992 to 89.4 million in 2003, which indicates that about 4 million farmers have withdrawn from agriculture in search of an alternative occupation. In the case of individual states, the number of holdings declined sharply in Tamil Nadu, Kerala, West Bengal, Andhra Pradesh, Karnataka, Assam, Bihar, Maharashtra and Haryana (Singh, 2006).
There seems to be an inverse relation between occupational shift in non-agricultural work and the size of landholding possessed by the households (Visaria and Basant, 1994b). In other words, the size of operational holding is negatively related with shift. This proposition was established in the studies by Rajsekhar (1996, 2006) for Karnataka; Sharma (2009) in Himachal Pradesh; Ranjan (2009) for Uttar Pradesh; and Rao and Nair (2003) for Tamil Nadu. However, Jayaraj (1992) for Tamil Nadu and Reddy and Kumar (2006) for Andhra Pradesh observed that households with access to a considerable amount of land enjoy relatively better access to non-agricultural employment, i.e., larger size of landholding has a positive effect on occupational diversification.

Singh et al. (2009), in a micro-level study of 40 villages in 20 districts of Punjab, examines diversification among 920 households across various landholding groups. The result shows that households with marginal and small land had to diversify due to economic distress. However, the farmers who left farming in distress, face very low non-farm income and thus again get entrapped in distress. This happens mainly because the marginal and small farmers after shift from farming join mostly the labour class or low investment, low earning, self-employment ventures for which their technical training was almost nil or rather inadequate.

The rapid transformation of landholding structure due to the adoption of land reform measures in West Bengal, has led to increased marginalization, thereby causing an increase in the highly fragmented, dispersed and non-viable cultivable units (Ghosal, 2005). This seems to have led to a desperate movement of workforce to non-farm activities as a supplementary source of income. The changing pattern of employment structure in the state also noted a downswing of main workers and increase in marginal workers which indicates a casualisation of workers (Ghosh, 2003; Basak and Bhattacharyya, 2005; Bagchi and Das, 2005).

Besant and Joshi (1994) by studying six villages of Kheda district in Gujarat concludes that at the same time, both households with large landholdings and the landless diversify to the non-farm workforce in the region, i.e., diversification takes place at both ends of the spectrum; with landed households diversifying into productive non-agricultural activities, like, trade and agro-processing and the poor into less productive non-agricultural activities, like, casual wage
labour. However, size of operational holding is negatively associated with participation in the non-farm sector of Arunachal Pradesh. In other words, landlessness emerges as the strongest explanatory variable, influencing the decision of the household to enter the rural casual labour market in the non-farm economy (Mishra and Upadhyay, 2004).

(d) Productivity

The poor farm performance and declining agricultural productivity due to declining soil fertility and degrading natural environments often acts as an important factor to diversify towards non-farm sector. According to Chandrasekhar (1993), there is a complex non-linear relationship between agricultural productivity and shift towards rural non-agricultural employment. It increasing when villages manage to escape a stage of involution but have yet to enter a phase of sustained agricultural growth, and decreasing as they go through a phase of sustained irrigation-induced expansion in agricultural output, and increasing again in the mature green revolution phase when growth of land productivity tapers off and mechanization reduces the demand for agricultural labour. Radhakrishna (2002) is of the view that yields improvement and the growth of the rural non-farm sector contributed to diversify employment opportunities. However, the slow growth of the rural non-farm sector failed to create sufficient jobs for employing the large surplus agricultural labour. The rural workers shifted to non-agricultural sectors at a halting pace.

Some empirical studies (Dev, 1994; Unni and Rani, 2004) show that there exists a positive relation between agricultural development and the proportion of occupational shift. The relationship appears stronger when the change in shift of workers towards non-farm employment is regressed on per hectare agricultural productivity. This evidence supports the hypothesis of Vaidyanathan (1986), who shows a significant positive relationship of the share of rural non-farm workers with rural prosperity, by taking agricultural output per capita of agricultural population as an indicator.

A micro-level study of 400 families (Shukla et al., 2008) of arid zone of Rajasthan (Jodhpur, Jalore, Jaisalmer, Barmer and Pali) during 2003-04 reveals that the occupational shift has
occurred among all categories of farm households in general, and small and marginal farmers in particular. Due to low crop productivity and low purchasing power, small and marginal farmers find it difficult to meet their family expenditure from crop production, and as a result with no other alternatives, they have to diversify into non-farm activities in search of earnings. In some districts, where sufficient non-farm employment is also not available in the rural areas, they migrate to nearby cities, towns or other states for their livelihood (Rajsekhar, 1996). With the unfavourable agro-climatic condition, coupled with scarcity of irrigation water, the medium and large groups of farmers also try to supplement their household income from non-farm.

Though the primary sector is the mainstay of the people in the rural areas of Assam, but agriculture provides at most the bare minimum food for subsistence (Daimari and Mishra, 2005). A micro-level study of Darrang district reveals that low productivity, skewed land distribution, deficient use of inputs and low marginal productivity of labour has pushed the rural households to look for better opportunities in the non-farm sector.

(e) Income

It is often observed that due to low income from crop production, small and marginal farmers find it difficult to meet their family expenditure, and as a result with no other alternatives, they have to diversify into non-farm activities in search of more earnings. Similarly, with the unfavourable agro-climatic condition, coupled with scarcity of irrigation water, the medium and large groups of farmers also try to supplement their household income from non-farm (Shukla et al., 2008). Two micro-level studies in Gujarat by Unni (1996, 1998b) indicates that occupational shift towards non-agricultural activities have a positive impact on rural livelihoods in various ways. Besides enabling the agricultural households to survive year-to-year weather fluctuations, it also enhances the income of households in general. She observed that non-agricultural employment not only strengthens the base of rural livelihoods through increase in incomes, but also increases the degree of inequality in the distribution of rural income. Singh et al. (2009), in a micro-level study of 40 villages in Punjab shows that households with marginal and small land had to diversify to non-farm activities due to economic distress. However, the farmers who left farming in distress, also face a very low non-farm income and
thus again get entrapped in distress. This happens mainly because the marginal and small farmers after shift from farming join mostly the labour class or low investment, low earning, self-employment ventures for which their technical training was almost nil or rather inadequate.

In contrast, according to the study by Reddy and Kumar (2006), the agricultural prosperity acted as a pull phenomenon for the diversification in Andhra Pradesh. By using multivariate logit model they showed that higher income from the agricultural sector has a positive effect on occupational diversification. Similarly, Singh and Tripathi (1995) concluded that in Allahabad district of Uttar Pradesh, enhancement of per capita income from agricultural sources helped the upper caste and large farmers to diversify towards non-farm employment. However, small farmers are pushed into non-farm employment as a consequence of uncertainty of returns from agricultural cultivation. Basant (1994) and (Sharma, 2005a) noted that diversification by households to earn additional income involves their participation in different activities, and also involvement in multiple economic activities by a single worker.

(f) Consumption

The studies related to consumption expenditure and its relation with the intensity of occupational diversification can be classified in two broad categories. There are some studies which talks about the huge consumption expenses leading to greater shift among the family members (Shukla, 1992; Visaria, 1995; Unni, 1998a), whereas, some studies shows that changing pattern of consumption demand also leads to occupational shift (Harris, 1987, 1991; Vaidyanathan, 1994; Chadha, 1997).

Shukla (1991, 1994) based on data from Maharashtra, argued that high consumption expenditure within the family often pushes the rural farm-based households towards the non-farm sector to supplement their additional household expenditure. However, a number of studies based on extensive research in Kerala suggest that changes in the taste of rural consumers and levels of rural and extra-local demand (Harris, 1987, 1991; Samal, 1997a,b; Vaidyanathan, 1994) have played important parts in significant occupation shift in the state, implying overall rural prosperity.
(g) Production

Characterized by heavy demographic pressure on land, small and fragmented holdings, iniquitous land distribution structures and fluctuations in weather conditions; it is often observed that agricultural production alone cannot meet the expenses of a family for the entire year. As a result with no other alternatives, they have to diversify into non-farm activities in search of more earnings (Chadha, 1993). Besides enhancing the income of households in general, they enable agricultural households to survive year-to-year weather fluctuations (Unni, 1996). Hence, emphasizing the seasonality aspect, studies (Visaria and Basant; Dev, 2002; Haque and Sharma, 2004) provided evidence to advocate that the involvement of labour in non-agricultural activities occurs counter-cyclically to the demands of agricultural calendar and results in labour flows between the rural agricultural and non-agricultural sectors. Similarly, with the unfavourable agro-climatic condition, coupled with scarcity of irrigation water, the medium and large groups of farmers also try to supplement their household income from non-farm.

Punjab, a state with remarkable agricultural growth after the green revolution, witnessed the highest occupational shift (21.1 per cent points) during the period 1991 and 2001. Studies based on rural Punjab suggests that agricultural production is showing signs of stagnation, and therefore, diversification of the rural economy and the rural labour market, through the development of rural industries is imperative to shift the surplus workforce from agriculture to non-agricultural activities (Kalkat et al., 2006; Ghuman, 2005). The studies noticed that low cropping intensity, undersized net area sown per agricultural worker and less net irrigated area per agricultural worker are the factors that influenced this diversification (Kaur and Nanda, 2009). A series of district-level studies of Karnataka (Rajsekhar, 1996, 2006; Gopalappa, 2004) identify that less cropped area and the non-availability of irrigation facilities are the major factors that reduces the agricultural production and therefore it pushes the farm households towards non-farm sector. However, agricultural prosperity acted as a pull phenomenon for the diversification in Andhra Pradesh. The share of gross irrigated area and the share of food crops in gross cropped area show significant positive relation with the occupational diversification (Rao, 2006; Rao and Gopal, 2006).
(h) **Wealth Index**

In India, it is observed that with healthy wealth index, large farmers have often shown greater interest to diversify into non-farm activities. For example, men in households of significant assets specialize in non-farm activity. Based on evidence collected in the market town of Arni in Tamil Nadu, Harris (1987, 1991) showed that concentration of wealth and power among businessmen and rich farmers had the tendency of pursuing non-farm activity.

However, it is also noted that a major section of the farmers belonging to the socially downtrodden classes with limited asset are also been driven to menial non-farm jobs (Singh, 1994; Drèze and Gazdar, 1996).

(i) **Crop Diversification**

There are few studies which examines the impact of crop diversification on occupational shift. Singh (2001) viewed crop diversification as a very important instrument for income growth, poverty alleviation and employment generation. However, the ability of a country to diversify will depend upon the opportunities for diversification and responsiveness of farmers to these opportunities. Micro-level study of the districts like Shimla, Kullu, Solan and Chamba of Himachal Pradesh showed that crop diversification from traditional to high value cash crops leads to occupational diversification towards non-farm sector (Sharma, 2005a, 2005b). Increase in area under high value horticultural, vegetable and floricultural cash crops implies fewer requirements of agricultural labourers which help farmers to move towards other non-farm activities to earn additional income (Sharma, 2005a). Two micro-level studies (Ashokan et al., 1991; Deb et al., 2002) of Mahbubnagar District in Andhra Pradesh shows that in order to cope with the loss of real income from cultivation, households have developed an increasingly broad repertoire of livelihood activities. There has been both a change in cropping patterns (increasingly towards commercial crops in the context of liberalization, infrastructure development and government food distribution policies) that represents diversification within agriculture, and diversification into non-farm activities, especially labour migration in the non-farm sector. Shylendra and Thomas (1995), based on a micro study of a semi-arid village in
Gujarat, find that increased demand for non-crop goods and services and agricultural modernization and commercialization has increased job opportunities in non-farm sector.

*(j) Migration*

Migration by rural workforce towards urban areas, especially to nearby towns and cities, in search of better employment is a common phenomenon in India. Seasonal migration to urban centres to undertake unskilled jobs is also very common across the states (Shylendra and Thomas, 1995). In fact, seasonal and circular migration of labour for employment has become one of the most durable components of the livelihood strategies of people living in rural areas. Migration is not just by the very poor during times of crisis for survival and coping but has increasingly become an accumulative option for the poor and non-poor alike. Based on a survey of 18 villages across three blocks of Keonjhar district in Orissa, Singh and Mohanty (1995) studied the employment pattern of tribal’s (Juang and Bhuinya) during the period 1993-1994. They concluded that due to limited local agricultural and non-farm employment within the village, there is a tendency among the tribal workers to migrate to nearby towns.

Migration is also increasingly opening up to women, particularly those from lower castes (Deshingkar and Start, 2003). However, non-farm work is often better paid, but conditions are poor. The work is hard, and is often taken up in the hot summer when agricultural labour markets are slack. Also, because the nature of the work is often transient, there is not the possibility to form longer-term links as with farmers.

Diversification from agriculture towards non-agricultural sector through migration, however, often helps the poor rural workforce to overcome their problem of survival. Deshingkar and Start (2003) finds that migrant sugarcane cutters, earth workers and agricultural labourers from remote and poor villages of Andhra Pradesh and Madhya Pradesh have improved their standard of living significantly and are investing their savings in agriculture and educating their children. Similarly, number of studies (Narayana, 1990; Devi, 2002; Chakraborty, 2005; Sumitha and Duraisamy, 2009) based on extensive research in Kerala noted that emigration to
the Gulf countries has become quite common, and levels of living of the population have improved significantly.

(k) Occupational Status

Changing employment patterns from farm to non-farm are well documented in the literature. Visaria (1995) recorded that non-farm employment in India has expanded among males at an annual rate of 4.7 per cent, whereas, farm employment has only expanded at a rate of 1 per cent. Corresponding rates of growth for female workers are 4.6 and 1.5 per cent respectively. A significant rise in the proportion of women to men workers since 1980 in the manufacturing sub-sector of the rural non-farm employment is also noted. Mitra (1993) argues, however, that this does not necessarily represent the displacement of male by female workers leading to increase in male unemployment, or the substitution of low-paid female workers for male workers. Also, it has been noted that non-agricultural wages are higher than that for agricultural workers in rural areas (Papola, 1992). Therefore, the agricultural workforce prefers to move towards more remunerative jobs as compared to the low paying labour work in farm sector (Bhaumik, 2003). The fact that on average non-agricultural workers are better-off than agricultural workers does weaken the case for the ‘residual sector’ hypothesis, matters are more complicated (Sen, 1997).

Pal et al. (1995) argue that between 1981 and 1991 the share of male workers in the non-farm sector has increased throughout India at the cost of farm employment. However, an increase in the share of female workers has only occurred in four states, namely, Kerala, West Bengal, Tripura and Tamil Nadu. The tertiary sector has increased everywhere for both sexes, although again greater for males, whilst the secondary sector share has largely declined except in Kerala, West Bengal and Punjab. Deshpande and Deshpande (1998), based on NSS data, well summarise patterns (between 1987-88 and 1993-94) in the labour market, attributed to the impact of liberalisation. They conclude that the demand for labour has increased in the non-farm sector with liberalisation, but has not been shared evenly by rural and urban regions, by men and women, and by regular and casual workers.
2.3.3. State Policy Linkages

At the society's level, the factors stimulating diversification are mainly the same as those that stimulate economic growth, which implies that diversification can be considered from the viewpoint of (endogenous) growth theory (Breitschopf and Schreider, 1999). The relevant factors that are mainly considered for discussion are: development issues and government policies with respect to India.

(a) Development Linkages

There is a considerable amount of literature investigating linkages between rural development and occupational diversification. Various studies have highlighted the role of rural infrastructure in development of non-farm sector. Hazell and Haggblade (1991) pointed out the significance of rural infrastructure in augmenting the size of the income multipliers of agricultural growth to the non-farm sector in India. Jayaraj (1994) emphasized the importance of the development of transport infrastructure for rural non-farm employment opportunities in Tamil Nadu. Singh (1994) mentioned significance of rural electrification in the state of Uttar Pradesh. Rao and Nair (2003) revealed that infrastructural facilities, particularly, transport and communications, have recorded significant expansion in the rural areas in Kerala. Narayanamoorthy et al. (2002) tested for the factors influencing the variation in rural non-farm employment in India for the years 1971, 1981 and 1991. Regarding infrastructure, he used pucca road facility as its proxy and found a significant association between this variable and rural occupational diversification. A district-level study of Haryana also showed that good infrastructure can stimulate occupational diversification (Tuteja, 2007).

Proximity to a market base also promotes all kinds of economic activities, be they agricultural or non-farm. Market access is determined by factors such as distance to markets, access to transport infrastructure and telecommunications, access to market information, the quality of goods and services produced, volumes produced, etc. It can be argued that better roads and improved infrastructure in general can increase shift.
Dynamics of the Shift in Occupational Structure in the Process of Agrarian Development in India

The process of urbanization also affects the shift and sometimes wields a positive influence on non-farm employment (Kundu, 1991). Visaria and Basant (1994) detail the following ways in which urbanisation can influence the occupational diversification. Urbanisation expands the market for rural enterprises, and also encourages non-agricultural activities in secondary and tertiary sectors in neighbouring rural areas to meet non-local demand (Shrivastava et al., 1995). Rural enterprises may therefore benefit from economies of scale, resulting in decreased costs and increase in efficiency. Moreover, decreased transport costs open up rural resources and markets to exploitation, and facilitate movement to a more specialized productive rural economy. Such processes can be encouraged by policies of industrial relocation in backward areas. Additionally, improved transport facilities allow many rural households to shift to non-agricultural occupations without necessitating a change in residence, by commuting. Papola (1992) laid stress on the importance of the role of small towns in the rural hinterland in the employment of rural workers and in promoting non-farm employment in rural areas through backward and forward linkages facilitated by these towns. Similarly, Bhalla (1993) also contended that switch to consumer demand in favour of better quality products, in tandem with the shift to urban produced inputs, led to significant growth of the non-farm sector in districts of high agricultural productivity in India. Shukla (1991, 1994) found that benefits from agglomeration, i.e. regional industrialisation at large, had translated into broad localisation benefits for similar activities leading to livelihood diversification in Maharashtra.

The development of the rural non-agricultural sector with respect to occupational diversification can be viewed as one of the components of the overall socio-economic transformation, and analyzes spatial and temporal variations in the incidence of rural non-agricultural employment. The growth in income-infusing activities as that of agriculture, manufacturing and tourism encourages development-induced diversification provided suitable infrastructure is there, whereas, dearth of such activities accompanied by low level of resources per capita leads to distress-induced diversification in the country (Jha, 2008).
(b) Government Policies

The presence of the government in an economy and expansion of public administration and services is considered an important factor for the development of rural non-farm economic activity. The relative importance for the development of non-farm economic activity is likely to be greater in poor regions, which typically lack other significant sources of demand. For example, public investment in schools, training centres, health clinics, roads, irrigation systems, and other social and economic infrastructure can provide a major boost to local employment and related activities. Moreover, the development of public administration and services generates salary employment and income, often in areas where such opportunities are lacking, which will partly be spent locally. Some public services, for example in education, may also give rise to linkages with upstream non-farm activities.

The impact of government development programmes and public expenditure on rural non-farm employment was examined by a few studies. Sen (1997) argues that rapid diversification in employment growth during 1970s and 1980s was primarily on account of a very significant increase in public expenditure in rural areas. The case studies by Eapen (1994) in Kerala and Samal (1997a,b) in Orissa, confirm a positive role of administrative, development and social services in generating rural non-farm employment, both directly within such services, and indirectly as a consequence of their activities.

The wage employment programmes, such as, Rural Landless Employment Generating Programme (RLEGP) and National Rural Employment Guarantee Act (NREGA) are expected to provide relief to the unemployed poor and have an impact on aggregate unemployment as well as on the labour market (Goparaju and Shome, 2009). In Maharashtra, the Employment Guarantee Scheme is evident (Vyas and Bhargava, 1995; Saith, 1992). In fact, the successful implementation of the Maharashtra Employment Guarantee Scheme (MEGS) is also considered as a major factor of occupational shift towards non-farm sector in the state (Pagire et al., 2003; Moore and Jadhav, 2006; Shah and Mehta, 2008). Jain (1995) concludes that the wage employment stream of programmes has since gained ascendancy over the self-employment schemes. However, Basant (1994) argues that public assets created by wage labour generation
programmes did not create infrastructural assets in a systematic way to enhance the viability of economic activities in specific regions.

Singh and Mohanty (1995) showed that through different state development programmes in Orissa, additional non-farm employment was generated. Based on a study of Madhya Pradesh in 1993-94, Gupta (1995) found that construction, along with private and government services provided a good opportunity of employment for marginal farmers, whilst carpentry and government jobs were the main sources of employment for medium farmers. Findings also revealed gender discrimination in occupational shift. Shylendra and Thomas (1995), based on a micro study of a semi-arid village in Gujarat, find that occupational diversification takes place due to urbanization and welfare-oriented policy interventions which lead to increased job opportunities outside agriculture.

An elaborate and detailed review of literature in this sphere has revealed some gaps in research which is explained in the next section. This is not only to distinguish the current research from the earlier once, but also to highlight the potential for further research in this area.

2.4. Research Gap and Distinctiveness of the Study

The studies reviewed suggest that the phenomenon of occupational diversification towards non-farm sector can be seen operating at both ends of the spectrum. In other words, the changing occupational structure across the world is being influenced simultaneously by force of development and distress, i.e., both pull and push factors of occupational diversification are operational together. However, the extent of influence of these two forces is difficult to judge from the evidence provided by existing studies owing to their limitations. The studies, which focus on the macro-level or regional-level, rely only on secondary sources of data have failed to capture the micro-level dynamics of diversification. On the other hand, those studies with a micro-level or village-level focus, by confining themselves mostly to a specific area, are limited by their ability to relate the local labour processes to the broader context and change. It is here that the need is felt for studies that not only explain the phenomenon in terms of its local nature and dynamics but also provide a broader perspective, i.e. a derivative of political, social and
economic processes. This gap is sought to be bridged by the current study which integrates the macro-level and micro-level aspects as being responsible for the occupational shift. This is achieved through a detailed analysis of secondary data to capture the macro dimensions contributing to occupational shift and primary survey to capture the impact of the micro-level local phenomena which is peculiar to the location.

It is also interesting to note that among all the states of India, West Bengal is one of the states that showed clear indications of high occupational shift towards the rural non-farm sector, whereas, Andhra Pradesh showed a comparatively low shift. The paradox in this analysis is that the high shift in West Bengal is in spite of a strong thrust to agricultural sector by the State Government in the last 35 years and the low shift in Andhra Pradesh regardless of the increased focus of the State Government on rapid industrialization in the same period. Hence, these two states became a natural choice for comparative studies. In that perspective this study is distinct from other studies in analyzing the causes for the paradox. Therefore, the current study is different from the earlier studies in terms of the following two aspects:

1. It attempts to make a comparative study of the factors influencing occupational diversification between two states, namely, West Bengal and Andhra Pradesh.

2. It also tries to relate the findings of this comparative study with the general perception prevailing in the country today about the causes for such shifts.

2.5. Conclusion

The phenomenon of occupational diversification, given its potential for alleviating rural poverty and unemployment, has thus been examined in the literature quite extensively in terms of its nature and magnitude, causal factors and impact on the household across the globe with special emphasis on India and its states. The phenomenon at the macro-level worldwide is characterized by an increase in the share of non-agricultural workforce engaged mainly in the agricultural sector and having casual status. Theoretically, the changing occupational structure has come to be explained from two perspectives. First, from a developmental angle, the changing workforce composition is attributed to factors like, agricultural prosperity (improved agricultural
productivity, land reform, cropping pattern and agrarian technology), economic infrastructure (electricity, irrigation, extension of transport and communications), growth of non-farm employment within or close to the village, setting up of educational institution in the village, public expenditure and growing urbanization with their attendant positive linkages, enabling the workforce to diversify in order to tap new income and employment opportunities. Diversification under such conditions is more a growth or prosperity-induced one. The second perspective is of the distress kind where poverty, population growth and depleting resource base compel or pushes the workforce to diversify under duress, including resorting to seasonal migration to distant places. In other words, distress or push diversification occurs in an environment of risk, market imperfections and of open and/or hidden agricultural unemployment. Thus, when rural populations engage in economic activities that are less productive than agricultural production and are motivated by the need to avoid further income decreases, push factors are at work and as a consequence, people are taking up any job irrespective of their nature and periodicity.

Social institutions, such as, caste, gender and ethnicity often act as important determinant of occupational shift, both as facilitating and constraining factors. Higher caste status, given the unequal distribution of power, privilege and assets in the local economy, often opens up the scope for non-farm activities, through better access to education and information. The caste specific nature of occupations in India has been noticed by many scholars (Harriss-White, 2005). Jayaraj (2004) notes that rural non-farm sector is essentially heterogeneous and market forces by them do not determine access to non-farm activity; rather the growth of non-agricultural employment is affected by factors such as caste, gender and access to land. The role of informal networks of mutual support and insurance, in some contexts, may act as a facilitator for shift in specific non-farm occupations and activities. The gendered pattern of distribution of work and employment opportunities creates specific forms of participation in the rural non-farm employment, though there seems to be general relation between the two, which is valid in all countries and under all circumstances. Given the unequal distribution of education, skills and information among the sexes, participation of women into some of the better-paid rural non-farm activities seems to be restricted. On the other hand, the growing casualisation and feminization of
the workforce suggest that female have shifted into the low-end job market in the non-farm sector.

Research evidence from different continents also suggests that the occupational diversification from agricultural to non-agricultural sector is determined by factors, like, social capital. Social capital at the individual level, defined as the degree of interaction with others in the context of social networks (Fafchamps and Minten, 1998), can facilitate reduction in transaction costs and partially address access constraints arising from imperfect markets (Davis, 2003). Among the many advantages of social capital, are the access to relevant market information and buyers, wage employment and business opportunities, formal and informal loans, cash advances, inputs on credit, shared resources for production and marketing, and migration opportunities. However, the concentration of critical social capital in the hands of a privileged minority may act as a barrier to shift for a majority of the rural population. The influence of these factors works conjointly rather than individually.

At low levels of economic developments it is often found that instead of shifting to non-farm sectors permanently, households tend to diversify their sources of livelihood and minimize risk through engaging in multiple activities simultaneously. As regards rural-urban migration, the studies reviewed (McGee, 1971; Meng, 1990; Rozelle et al., 1999) suggest that widespread labour migration is explained more by structural factors, like, inequality in land ownership, poverty and agricultural backwardness than models dealing solely with motivations of maximizing the family’s income and employment. Hence, rural-urban migration might help the rural poor to overcome their problem of survival, but may not lead to their real economic consolidation.

The extensive literature review both from the global and national perspective has highlighted the research gaps and the distinctive features of this research study which have been explained in the previous section. In pursuance of the need to bridge the gap both in terms of macro- and micro-level integration and explain the paradoxical high occupational shift in West Bengal in spite of intensified efforts of the State Government to improve agricultural productivity, and low shift in Andhra Pradesh regardless of the stepped up efforts of the State Government to promote
rapid industrialization, the current study focuses on both these aspects. In order to ensure that the objectives and hypotheses of the study are well related and reflected in purported findings, care has been taken to design the methodology which would result in a careful observation of the secondary data and detailed analysis of the primary data with sophisticated statistical tools. The next chapter describes at length this methodology through a description of the research design, the sample and the tools used for analysis. This will ensure that the study is not only well founded through an elaborate literature review, but also has a sound framework through a well conceived methodology.