Chapter 1

Introduction

1.2. Motivation for the Study

The informal sector has been significant contributor to the employment and output of the developing economies in general, and the Indian economy, in particular. Economic performance of the informal sector can be attributed by its size and growth in country’s output and employment. In fact, economic performance of the informal sector in India is linked to the performances of the whole economy because the informal sector accounts for about 86 percent to the total employment generation in 2004-05 and about 60 percent to the Net Domestic Product in 2005-06. Moreover, output growth depends on the productivity and efficiency of the enterprises. In the context of a globally competitive market, efficiency and productivity of the enterprises uphold the ability to survive and maintain their market share. In general, economic performance of the informal sector can be measured overtime and as compared to the formal sector under specific policy regimes. For instance, one can broadly divide the policy regimes by pre and post liberalization periods, or by trade policy regimes. Informal sector’s economic performance during these policy regimes can be measured by a) post liberalization era b) comparative analysis between the pre and post liberalization period and c) comparative analysis across sub-sectors within the informal sector.

Economic liberalization covers both stabilization and structural adjustment measures. Further, it includes liberalization of both domestic and external sectors. Stabilization deals with controlling fiscal balance, balance of payments, external payment deficits and maintenance of a low rate of inflation, while structural adjustment aims at improving efficiency and productivity besides integrating the domestic economy with the world trade and capital movements. The structural adjustment programme brings in reforms in fiscal, industrial policy as well as policies concerning the public sector, the financial sector and external sector. External sector liberalization includes foreign trade, investment and exchange rate liberalization and depends upon various factors like the dependence of the economy on foreign trade, financial sector liberalization on
external account etc. It expects trade to act as an engine of growth. If a country’s dependency on foreign trade is limited, internal liberalization assumes greater importance in terms of influencing the growth of the economy. Trade liberalization is an important component of economic liberalization and includes the removal of trade barriers, such as tariffs and non-tariff barriers, as well as internal restrictions, such as directed credit and preferential purchasing. Further, it measures the extent of export promotion (i.e., shifting of resources from import substitution to export activities), increase in the degree of openness (increase share of exports and imports in national income) and marketisation (i.e., changing the structure of incentives and institutions such that the reliance of market).

In regard to the informal sector, both economy-wide and sector-specific policies have impact either through production side or through labour and employment. The direct impact is experienced by the informal enterprises in the form of changes in prices and availability of inputs, changes in the degree of competition within the specific activity grouping and changes in demand for the particular product or service produced (Mhone, 2010). These, in turn, affect the competitiveness of the informal enterprises. Liberalization exposes all the industrial units to the inherent risk of free market competition. As a consequence, they are bound to reduce their cost of production. In an effort to lower production costs, domestic producers seek informally produced inputs either fully or a part giving sub-contracting to the informal firms, which are cheaper since informal producers generally do not abide by labour or fiscal regulations (Fugazza and Fiess, 2010). Increased demand for informally produced inputs therefore leads the informal sector’s growth. From the perspective of employment, formal firms attempt to reduce labour costs by cutting worker benefits, replacing permanent workers by part-time labour, or by laying off workers from the production process. The retrenched workers from the formal sector get absorbed in the informal sector due to its easy entry. In view of the negative impact, trade liberalization reduces the trade cost which implies that only the most productive (formal) firms find it more profitable to export to international markets, while least productive informal firms are forced to exit the industry (Aleman-Castilla, 2006). Thus, the sign of the relationship between trade liberalization and size of the informal sector is an empirical question.
India initiated the process of integrating its domestic economy with the global economy from the early 1990s due to severe balance of payments crisis, high fiscal deficit and high inflation rate. The main goal of the liberalization had been making the economy more market oriented through increasing competitiveness and reducing government interventions. The establishment of World Trade Organization in 1995 has further intensified the degree of competition across domestic and global markets through removing of restrictions on foreign direct investment. Because of its wide coverage, liberalization, in general, has impacted the entire Indian economy, i.e., both the formal and informal sectors. Specifically, performance of both the formal and informal sectors in terms of their size and growth of income, employment, efficiency and productivity to whole economy have been changing between pre and post liberalization period. For instance, as per the results of the National Sample Survey conducted in 2004-05, about 7.62% of the total work force was formal in nature, while the remaining 92.38% or about 422.61 million workers were informally employed. Further, the compound annual growth rate of labour absorption in the informal sector in the post-liberalization period (from 1999-00 to 2004-05) was 2.76%, as compared to 1.38% in the pre-liberalization period (from 1983 to 1988).

Thus, the rapid growth of the informal sector in India raises the question regarding the relevance, applicability and impact of liberalization measures particularly in the context of the informal sector. Specifically, it is important to know how the economic performance of the informal sector can be explained during the liberalization period. In this regards, various research questions arise, such as, the following.

1) What are the changing definitions of the informal sector at the national and international levels over a period of time?
2) What are the changing contributions of the informal sector during pre and post liberalization periods in terms of income, employment, productivity and efficiency?
3) How can such contributions be theoretically explained and predicted, and empirically estimated or tested?
4) What are the relevance, applicability and impact of economic liberalization on economic performance of the informal sector in India?
5) What are the economic linkages between the formal and informal sectors, and how do they impact on economic growth?

1.2. Review of Literature
The review of literature is focused on the aforementioned issues by theoretical studies and empirical studies. Empirical studies are subdivided into Indian and global studies. The review of literature is presented below for the purpose of identifying researchable issues.

1.2.1. Theoretical Studies
1.2.1.1. Liberalization and informal sector
A set of theoretical studies have focused on the issue of the impact of trade reform on the wage of the informal workers in a small open economy by using general equilibrium framework. Marjit and Kar (2003) argued that the role of capital mobility between the formal and informal sector becomes crucial for such analysis. Chaudhuri and Banerjee (2007) counter argued that proposition and they found that different liberalized policies produce diverse effects on the informal wage and these results are independent of the nature of capital mobility between the informal and the formal sectors. In another study Marjit and Kar (2007) argued that, with limited degree of capital mobility, trade reform reduces the informal wage.

Trade liberalization is a wide concept and includes the impact of some specific liberalization policies, such as, foreign capital inflow, tariff reduction etc. Chaudhuri et al. (2006) made an attempt to analyse the effects of liberalized trade and investment policies on welfare and open unemployment in a developing economy based on three sector Harris-Todaro type general equilibrium model. It is assumed that there is wage rigidity in urban sectors, which leads to the simultaneous existence of open unemployment and an urban informal sector in the migration equilibrium. The results are in contrast with those generated by the standard Harris-Todaro model.

Removal the restrictions of foreign direct investment due to liberalization attracts inflow of foreign capital in the developing economy. A set of studies have focused on the issue of effects of the inflow of foreign capital in the developing economy with
reference to the informal sector activities. Following the concept of Bhagwati’s (1968) immiserizing growth, Brecher and Alejandro (1977) argued that an inflow of foreign capital with full repatriation of its earnings is necessarily immiserizing if the import-competing sector is capital-intensive and is protected by a tariff. Grinols (1991) examined this traditional argument in the context of a segmented economy in which the urban unemployed subsist in the informal sector activities. Chandra and Khan (1993) extended Grinols’s analysis and placed it in a broader context, permitting richer conceptions of informal-sector activities. Beladi and Yabuuchi (2001) extended the Harris-Todaro model to include an urban informal sector where the product of the informal sector is used as an industrial input in the urban formal sector.

In addition, the analysis of the effects of economic liberalization on informal sector is policy relevant because the scope for market interventions by governments in terms of various subsidy policies has decreased significantly. Hariss-Todaro (1970) states that the key solution to urban unemployment problem lies in the rural sector of the economy. If rural sector is developed through different subsidy policies, there would be a decrease in rural-urban migration, which would be able to alleviate the unemployment problem. Wage subsidy policy to urban informal sector reduces the level of open unemployment in urban sector, but a price or wage subsidy policy to rural sector accentuates the problem (Gupta, 1993). A wage or a price subsidy policy to rural sector or a demand management policy like an export promotional scheme in manufacturing sector, reduces urban unemployment level (Chaudhuri, 2000). This conclusion is quite similar with proposition made by Harris-Todaro. Bandopadhyay (2006) examined the impact of output subsidy given to informal sector on urban unemployment. He concluded that output subsidy given to the urban informal sector lowers urban unemployment and raises domestic factor income, provided that the rural sector is sufficiently labour intensive. However, its effects on informal sector’s employment remain ambiguous.

1.2.1.2. Informal Sector and Informal Employment

argued that if either the distribution of endowments is sufficiently inegalitarian or the production of private substitutes for public services is sufficiently easy, then the state would extract a large enough amounts from producers in the formal sector that poorly endowed producers would choose to work in the informal sector. Rogers and Swinnerton (2004) showed that not only can the labor standards that give rise to this sector increase aggregate output: suppressing the informal sector, even if it could be done perfectly and at no cost, can lead to lower aggregate output and employment than allowing the informal sector to exist.

1.2.1.3. Formal and Informal Sectors’ Linkages
The nature of formal-informal sectors’ relationship, and its impact on both the sectors and as well as on the whole economy have been a subject of debate since couple of decades. According to first school, informal sector is an autonomous segment of the economy producing mainly for consumption within the sector. The second school believes that the informal sector has a dependent relationship with the formal sector and is exploited by the formal sector. According to the third school, the informal sector is integrated with the rest of the economy through complementary linkages (ILO, 1991). Ratner (2000) has argued with some examples that informal economy’s success is a function of having access to goods, services, markets, technologies etc. in the formal economy and skillfully adopting them for use in informal economic activity.

In fact, informal economy is a source of new business as well as a part of cost reduction strategy for modern businesses (Gerber, 1999). On the basis of the nature of output and production technique, informal sector can be divided into traditional household based informal sector and modern informal sector (Ranis and Stewart, 1999). Stepick (1989) divided this sector into isolated sector and integrated sector. Traditional / isolated informal sector is characterized as very small size, low capitalization, low labour productivity, static technology and household based production unit, whereas modern informal sector is characterized as larger in size, capital intensive and more dynamic in technology. According to Ranis and Stewart (1999), traditional informal sector produces consumer goods only, sold mainly to the low income consumer. Modern / integrated informal sector produces both consumer goods and capital goods, serves both low and middle income consumers. These goods
often compete with the goods produced by the formal sector. On the one hand, the consumer goods produced by the modern informal sector, generally consumed by the sector itself and the people engaged in the formal sector. On the other hand, the intermediate products and simple capital goods produced by the modern informal sector that partly used the sector’s own need and partly serve the demand of the formal sector. Thus, modern informal sector’s production is complementary to and as well as competitive with the formal sector.

1.2.2. Empirical Studies: Global studies

1.2.2.1. Definition of Informal Sector

The concept and definition of informal sector has been a subject of debate both at the national and international levels. The concept of informal sector was first introduced by Keith Hart (1970) who defined it as unregulated economic enterprises. Then ILO (1972) came with a clear cut official definition and defined informal sector on the basis of certain characteristics of the enterprises, such as, owned and operated by individuals either alone or in partnership with members of the same household, employ one or more employees on a continuous basis in addition to the unpaid family worker and/ or casual employee, operate on a small-scale with a low level of organization and little or no division between labour and capital, and engaged in the production and distribution of goods and services with the main objective of generating employment and a basic income to the persons concerned. ILO (1993) reframed their earlier definition and defined that informal sector incorporates a) micro-enterprises owned by informal employers who hire one or more employees on a continuing basis; and b) own-account operations owned by individuals who may employ contributing family workers and employees on an occasional basis. Again, ILO (2003) expanded their reframed definition by including informal employment outside informal enterprises. Kanbur (2009) suggested that informality and formality should be seen in direct relation to economic activity in the presence of specified regulation(s).

In economics literatures, four popular schools of thought have developed regarding the definition of informal sector: dualist school (1970s), structuralist school (late 1970s and 1980s), legalist school (1990s) and il-legalist school (2000 onwards)
According to dualist school (ILO, 1972; Sethuraman, 1976; Tokman, 1978), informal activities provide safety net to the poor and arising due to the unavailability of job opportunities in the formal sector, and it is distinct from the formal sector. In structuralist school (Moser, 1978; Castells and Portes, 1989), informal and formal sectors are interdependent. Legalist school (de Soto, 1989) believes that informality grows in order to avoid the costs, time and effort of formal regulation. According to il-legalist school (Maloney, 2004), informal entrepreneurs operate illegally with the intention of avoid taxation, commercial regulation, electricity and rental fees and other costs of operating formally. Both the legalist school and il-legalist school defined the informal sector in terms of evasion of regulation.

1.2.2.2. Informal Sector and Informal Employment

There exists extensive literature on the measurement of informal employment both at the national and international levels. At the international level, Charmes (2000) provides an estimation of the informal sector’s share in non-agricultural employment, total employment and GDP in various developing countries. Charmes (2006) presents the methodology for compilation of data for 47 developing and transition countries. Further, Charmes (2009) argues that measuring informal employment still remains a challenge requiring the use of a variety of sources and methods, including the use of data for self-employment as a proxy indicator. Kucera and Xenigiani (2009) examine the factors behind the persistence of informal employment by exploring different hypotheses, such as, amount and pattern of growth, labour market institutions and regulations and broad institutions and cultural aspect. Gagnon (2009) discusses the forms of mobility and their implications for workers, while OECD (2004) examines different causes underlying informal employment.

Studies related to the determinants of informal employment suggest that ‘informal sector’ is motivated by social obligation as well as economic gain (Campbell, Spencer and Amonker, 1993). A number of studies find both economic and non-economic factors, such as, levels of education, location and gender for participation in informal activities. For instance, Marcelli, Pastor and Joassart (1999) find a positive correlation between more education and occupations in which a higher percentage of jobs are in the formal sector. Thus, with a high percentage of jobs with respect to various
occupations being available in the informal sector, these are more likely to be held by persons with less education. This result is consistent with Gallaway and Bernasek (2002) in that people with higher levels of education are more likely to absorb in the formal sector, while the lower educated people have the highest probability of working in the informal sector. As regards location, Jensen, Cornwell and Findeis (1995) and Toennis (1957) observe that the informal economy is important to rural residents. Regarding gender, studies (Hoyman, 1987) link female dominated occupations with informal work status. Moreover, Beneria and Floro (2006) argue that about sixty percent of female workers in the developing countries are employed in the informal sector. According to Chen (2001), the reasons behind women making up a majority of the informal sector are as follows. First, it could be attributed to the fact that employment in the informal sector is most readily available to women. Secondly, a vast majority of women are employed from their homes.

1.2.2.3. Liberalization and Informal Sector
Several studies tested the relationship between trade liberalization and informality of different countries. Goldberg and Pavcnik (2003) tested the hypothesis for the Brazilian and Colombian economy. In Brazil, they found no evidence of a relationship between trade policy and informality but in Colombia, they found evidence of such a relationship. But Aleman-Castilla (2006) tested the hypothesis in Mexico during the 1990s and argued that reductions in the Mexican import tariffs are found to be significant in reducing the likelihood of informality in the tradable sector. Marjit and Biswas (2005) argued that the decline in tariff and interest rates offsetting effects on the size of the informal production within an import-competing sector by using the data of Brazilian economy for the period 1987-98 and Colombian economy for the period 1984-98. Impact of trade liberalization on the relative growth of informal sector share of GDP of 18 CEE and FSU countries from 1990 to 1995 was examined by Ghosh and Paul (2008). They argued that the trade liberalization significantly increase the informal sector share of GDP.

The growth in informal sector has occurred in conjunction with increasing globalization and opening up of economies, which has provoked a debate on the impact of these processes on the informal sector (Verick, 2006). Empirical findings confirm that migration profile in Colombia has changed especially from 1992 to 2000,
towards a higher participation of rural flows and higher participation of men probably as a consequence of intensification of armed conflict (Florez, 2003). Results also indicate that migration condition has a large impact on the probability of being employed in the informal sector.

### 1.2.2.4. Efficiency and Productivity of the Informal Sector

Studies on the measurement of the efficiency and productivity of the informal sector have concentrated mostly on the manufacturing sector. Moreover, studies on the micro, small and medium enterprises are not mutually exclusive with the studies on informal enterprises. Schooling and job training are the main determining factor of efficiency dispersions among micro-enterprises (Gokcekus, Anyane-Ntow and Richmond, 2001). Hence, education policy that would encourage operators of these enterprises in the country to undergo literacy and training programmes would lead to substantial increase in efficiency of production and hence in the volume of output at the current level of technology (Ajibefun and Daramola, 2010). Moreover, studies find that the technology and capital are other important variables for improving the efficiency and productivity of the micro-enterprises. For instance, Chapelle and Plane (2005) measure the technical efficiency of Ivorian manufacturing firms using the Data Envelopment Analysis production frontier methodology. They argue that not only formal activities prove to be more efficient in scaling their production but also, they greatly benefit from their modern technology. Using stochastic frontier production function on firm level data from Mexico’s National Survey of Microenterprises, Hernández-Trill, Pagán and Paxton (2002) estimate inefficiency effects related to the main sources of start-up capital. Li, Liu and Yun (2007) show technical progress is the main contributor to productivity growth and the scale of economy became important in recent years, but technical efficiency has edged downwards.

Moreover, there is an existing debate on whether or not the vertical linkages among the firms through sub-contracting improve efficiency of the enterprises. Yang and Chen (2009 and Le and Harvie (2010) show that sub-contracting is significantly related with efficiency of the small and medium enterprises in Taiwan’s electronics industry and Vietnam’s manufacturing sector, respectively.
1.2.3. Empirical Studies: Indian Studies

1.2.3.1. Definition of Informal Sector

In India, the first official definition of the unorganized sector was given by Central Statistical Organization (CSO). Though most of the earlier studies at the international level used the term “informal sector”, CSO introduced this sector as “unorganized sector” in the report on National Accounts Statistics. According to CSO (1980), the unorganized sector refers to those operating units whose activity is not regulated under any statutory Act or legal provision and/or which do not maintain any regular accounts. In 1999, National Sample Survey Organization (NSSO) distinguished between the unorganized and informal sector in following terms. Informal sector incorporates the unincorporated proprieties or partnership enterprises in Annual Survey of Industries. In the unorganized sector, in addition to the unincorporated proprieties or partnership enterprises, enterprises run by cooperative societies, trust, private and limited companies are also included. The informal sector can, therefore, be considered as a sub-set of the unorganized sector. In 2008, National Commission for Enterprises in the Unorganized Sector (NCEUS) came with clear cut definitions of informal sector and informal employment separately. According to them, informal sector consists of all unincorporated private enterprises owned by individuals and households engaged in the sale and production of goods and services operated on a proprietary or partnership basis and with less than ten total workers. Following the same line of conceptual framework of 17th International Conference of Labour Statistician (ICLS), NCEUS suggested that unorganized/ informal workers consist of those working in the informal sector or households, excluding regular workers with social security benefits provided by the employers and workers in the formal sector without any employment and social security benefits provided by the employers.

1.2.3.2. Informal Sector and Informal Employment

In the Indian economy, RBI (1993) reviewing the changing composition of net value added and relative growth rates in respect of the organized and unorganized sectors for the period 1980-81 to 1988-89 and argued for an increase in the weights of secondary and tertiary sectors as against the primary sector in terms of NDP. Kulshreshtha and Singh (1998) examine the contribution of the unorganized segment
of the Indian economy in terms of NDP and the share of different sub-sectors in NDP from the unorganized segment for the period 1980-81 to 1994-95. They find that though the contribution of the unorganized segment to the total NDP has been declining progressively over time, it accounts for a large share (over 60%) in the consumer goods industries. While an overview of the unorganized sector in terms of various key dimensions comparing with the organized sector from 1980-81 to 1998-99 is presented by Kabra (2003). He suggested that it is only through specific policies, programmes and the creation of conductive socio-economic framework the unorganized sector can overcome its rigidities and weaknesses and become a contributor to sustainable development. Satpathy (2004) also analyses the size, composition and characteristics of the informal sector for 1999-2000. Using the national level database, Narayana (2006) argues that Indian experiences are highly diversified in conceptualizing and defining of the formal and informal sectors and enterprises.

A number of studies have focused on the performance of the manufacturing sector. For instance, Subrahmanya (2002), dealing with the structure, growth and importance of the unorganized manufacturing sector in terms of its sub-sectors for the period 1978-79 to 1994-95 observes the growth of the unorganized manufacturing sector in the early 1980s, and a subsequent decline since mid 1980s. Mukherjee (2004) focuses on the growth dynamics of informal manufacturing sector in India over the period 1984 to 2000 with a special reference to the Structural Adjustment programme (SAP).

In addition, several studies have examined database issues concerning the unorganized sector in India. Tiwari (1993), while examining the database in respect of the non-financial unorganized sectors (secondary and tertiary) for the period 1951 to 1991, argues that there is an urgent need to undertake an intensive analysis of a large mass of data collection, through various agencies on the quality and reliability of data and the ways of improving them in future. Reviewing on the database of the unorganized sector, Rao (1993) suggests the development of an adequate database which could be helpful for the segmentation of the household sector by activities and socio economic groups. Rai (1993), while focusing on the database of the unorganized part of the service sector, argues that the surveys conducted by CSO are reliable as far as major states are concerned, but in case of the smaller states, either the data have not
been presented separately or if presented these are not reliable due to a smaller sample size. Hence, there is a need for enlarging the sample sizes with regard to smaller states. Moreover, a need for comprehensive database for the informal sector in India is argued by Mukhopadhyay (1993).

1.2.3.3. Liberalization and Informal Sector

Rani and Unni (2004) analyzed the impact of economic reforms on the organized and unorganized manufacturing sector from 1984-85 to 1999-00, and found (a) economic reform policies had a differential impact by industry groups, and (b) automobile industry and the infrastructure sector helped the growth of the unorganized manufacturing industry. Kar and Marjit (2001) and Marjit (2003) have analysed the impact of trade reforms on informal wage in terms of general equilibrium models. Marjit, Kar and Sarkar (2003) substantiate earlier theoretical claims with the National Sample Survey data on Informal Manufacturing in India between the periods 1984-85 and 1999-00. In these papers reform tends to expand size of the informal sector through a cut back in employment in the formal sector when formal and informal sectors are producing different goods and a tariff protects the formal sector. Singh and Sapra (2007) attempted to examine the impact of trade policy changes both on the formal and informal sectors and their employment by taking Garments sector as a case study. The field study of the garment sector was carried out in Triuppur and Delhi. The same issue was examined by Ghosh et al. (2007) by taking rice processing sector as a case study. The field study of rice processing sector was carried out in Punjab and West Bengal. Mitra (2007) examined the nature of relationship between industry and informal sector and argued that share of the informal sector is equally high in the states which are highly industrialized in comparison to the states which are industrially backward sub-contracting and other indirect processes seem to be generating employment in the informal sector in the industrialized states.

The study by Marjit and Kar (2007) has given detailed empirical evidence on the movements of real wage in the informal sector in India and how this affects poverty at the state level. The basic result on income mobility is corroborated by primary survey in the province of West Bengal, for which they offered the descriptive analysis on household income levels in the province’s informal manufacturing and service sectors.
1.2.3.4. Efficiency and Productivity of the Informal Sector

In the context of India, Unni, Lalitha and Rani (2001) provide a comparative analysis of all-India with one of the most industrially developed states (Gujarat) of the country in terms of growth and efficiency in the utilisation of resources in the Indian manufacturing industry before and after the introduction of economic reforms. They argue that Gujarat's strategy of physical infrastructure development, leading to industrialisation, has been the main reason for the growth and efficiency of the state's manufacturing sector. In a similar way, Sharma and Sharma (2010) find that the states are operating at decreasing returns to scale, which signifies the scope for investment and further employment generation. Technical efficiency and productivity performance of the unorganized manufacturing enterprises using National Sample Survey data are estimated and analyzed at the state level of disaggregate (Natarajan and Rajesh, 2007), at the national level (Rajesh and Duraisamy, 2007) and the analysis relates with economic reforms (Rajesh, 2007). Similarly, the total factor productivity growth in the unorganized manufacturing sector in India based on the several rounds of the large scale National Sample Survey state-level data for 15 major Indian states for the period 1978-79 to 2000-01 has been estimated by Rajesh and Duraisamy (2007). Using stochastic frontier approach, Dimitriu and Savu (2010) measure technical efficiency of the formal and informal manufacturing sector in India and argued that the results are against realities on ground-level from a socio-economic perspective. Kathuria, Raj and Sen (2011) argue that any inference on productivity growth in India since the economic reforms of 1991 is conditional on the method of measurement used, and that there is no unambiguous picture emerging on the direction of change in total factor productivity growth in post-reform India. Regarding the sustainability of growth of manufacturing sector, Trivedi, Lakshmanan, Jain and Gupta (2011) argue that intra-sectoral disparity between the organized and unorganized sector are getting more widening and that should be the major policy concern. All the studies referred above have focused only on unorganized/informal manufacturing sector. While on the basis of a comparative analysis, Bhaskaran (2011) concluded that the manufacturing enterprises has performed well in compared to service enterprises in micro, small and medium enterprises in one Indian state (Tamil Nadu).
Moreover, Natarajan and Rajesh (2007) find the coefficients of sub-contracting are significant only in wood industry group in the manufacturing sector in an Indian state (Kerala). Moreover, Majumdar and Subrahmanya (2009) argue that vertical integration is a major contributor to both technical efficiency change and technological progress and it is necessary to promote vertical integration through subcontracting small and medium enterprises with the large enterprises.

1.3. Research Gaps and Researchable Issues

There is a definitional and conceptual distinction between the unorganized and informal sectors and also the databases for the measurement of economic performance of the unorganized and informal sectors are different. In this context, it can be of interest to know to what extent such databases are comparable or distinguishable from the viewpoint of measurement of a comparative economic performance of the informal and unorganized sectors.

Both the formal and informal sectors have had changing contribution to the country’s economic growth in terms of income and employment generation. Most of the studies reviewed above have focused on the contribution of the unorganized sector for a shorter period of time with less emphasis on the unorganized sector’s growth under economic policy regimes. To fill this gap, it is necessary to extend the above studies by analyzing growth, composition and contribution of the unorganized sector over a long period and focus on a comparative analysis of the organized and unorganized sectors under different economic policy regimes and also by sub-sectors (as classified by NAS).

Generally it is argued that the informal sector follows labour-intensive technologies. High labour intensity of production is the main reason for large employment generation in the informal sector. There is a need to expand the earlier studies for analyzing further the trends and patterns of informal sector’s employment and informal employment separately along with the factor income of both the formal and informal sectors for a long time period. Moreover, studies are limited that have measured the determinants of informal employment in India using the enterprise level data. Most importantly, the determinants also vary across underdeveloped and
developed regions within a country. In order to bridge these gaps, estimation of the determinants of informal sector’s employment by underdeveloped and developed regions is essential.

Considering its substantial contribution to the overall economic growth, it is important to measure the significance of the informal sector in terms of its efficiency performance. A number of studies have focused on the issue of performance measurement in terms of efficiency and productivity of the unorganized manufacturing sector and the impact of economic reforms on it. However, the unorganized sector is not limited only to manufacturing; it includes eight other sub-sectors. Studies are very limited that have explained and analyzed the efficiency performance of the non-agriculture informal sector in India. To bridge this gap, measurement and analysis of efficiency performance of the informal sector in India beyond the manufacturing sector is needed.

The factor intensity in the informal sector may vary between the pre and post liberalization period and also through the liberalization period. This dynamism needs to be explored both at the aggregate and disaggregate levels, especially to measure the impact of economic liberalization on it.

The formal and informal sectors are linked in several ways, such as, through technological linkages, consumption linkages, supply chains etc. It is important to measure the linkages and their impact on economic growth based on an appropriate theoretical framework. This is important to derive select policy implications for the promotion and growth of the informal sector in India.

1.4. Objectives

Main objectives of this study are as follows:

1) Estimation of the contribution of informal/unorganized sector to economic growth in comparison with formal/organized sector and by specific policy regimes at national level aggregate and sectoral level of disaggregation.
2) Measurements of size, patterns and growth of employment of the informal sector at the aggregate and disaggregate levels; and estimation of economic determinants of informal sector’s growth and employment.

3) Estimation of technical efficiency of the informal sector across enterprises and its determinants.

4) Study the relationship between economic liberalization and informal/unorganized sector in India; and explore the relationship between formal/organized and informal/unorganized sector in the pre and post liberalization periods.

5) Measurement of the total factor productivity growth and its components of the informal and non-informal unorganized manufacturing sector.

6) Derive policy implication for growth and promotion of informal/unorganized sector under economic liberalization policy.

1.5. Methodology and Database

Methodology of the study is related to techniques of estimation, study area, study period and databases. The methodology is presented by objectives of the study.

The first objective is descriptive. It uses descriptive statistics, annual growth rates and compound annual growth rates (CAGR). The study period is 1970-71 to 2007-08 at the national level. Variables for these descriptions include annual Net Domestic Product (NDP), unorganized sector’s NDP, organized sector’s NDP, organized and unorganized sectors’ NDP by sub-sectors. Database for the measurement of these variables is annual National Accounts Statistics. The major limitation of NAS data is that it does not distinguish between informal and unorganized sector. Thus, in our analysis we have focused on this issue and made a distinction between informal and unorganized sector based on the available studies and NSSO unit level data.

Annual growth rates and compound annual growth rates (CAGR) are used for measuring the size, patterns and growth of employment in the informal sector both at the aggregate and disaggregate levels. The determinants of the informal sector’s employment are estimated using Probit regression analysis. Two states, one developed (Delhi) and one underdeveloped state (Orissa) have been chosen on the basis of the
nature of the informal sector (urban/ rural and modern/traditional), level of development (HDI index), population density, urban share in total population and gender empowerment measure to test the hypothesis on whether or not the determinants of informal sector’s employment in the underdeveloped and developed regions in India are same or different. Employment- unemployment data of 55th and 61st rounds of unit level data of NSSO (1999-2000 and 2004-05) are the basic databases for the second objective.

Third objective aims at estimating efficiency of informal enterprises by applying two stages Data Envelopment Analysis (DEA) technique. In the first stage, the technical efficiency scores of informal enterprises are computed, and in the second part, Tobit censored regression model is used for identifying the determinants of technical efficiency scores. The efficiency analysis is carried out for 1999-2000, because this is the only year for which a nationally representative sample survey for the whole non-agricultural informal sector was carried out by the NSSO.

Fourth objective is accomplished by estimation of the impact of trade liberalization by two measures of trade openness: (a) degree of openness to trade or value of total exports plus imports of goods and services as percent of GDP and (b) openness index constructed by using Principal Component Analysis (PCA) based on the foreign trade policies. This impact analysis has been carried out using a time series regression technique from 1970-71 to 2006-07 at the national level. National Accounts Statistics, World Investment Report and Handbook of Statistics of Indian Economy are the main data sources for this objective. In addition, the impact of the formal-informal sectors’ linkages on economic growth is estimated by extending the theoretical framework of Feder (1982).

To measure the total factor productivity growth and its components of the informal sector and non-informal unorganized manufacturing sectors, Malmquist total factor productivity index is used. The Malmquist TFP change index measures the TFP change between two data points by calculating the ratio of the distances of each data point relative to a common technology. NSSO (2001 and 2006) unit level databases on unorganized manufacturing sector of 2000-01 and 2005-06 are the databases for this objective.
1.6. Database

1.7. Organization of the Thesis
This thesis is organized to describe and analyze the economic performance (through contribution to output and employment generation) of the informal sector during the liberalization period. The impact of liberalization is captured in different chapter based on different performance indicators. It begins with a broad framework for analysis of output contribution and growth of the informal sector. Liberalization is measured by openness indices and inter-sectoral linkages. Impact of liberalization on growth contributions of informal sector is captured by openness indices and on technical efficiency and components of productivity of the informal enterprises by inter-sectoral linkages. In addition, the determinants of informal sector’s employment are estimated to derive implications on promotion of informal sector from the viewpoint of employment generation. Overall conclusions and implications of the study are obtained from within the descriptions and analyses of the entire thesis.

The above materials are presented by eight chapters. Chapter 1 presents introduction of the thesis with motivation for the study, review of literature, research gaps and researchable issues, objectives, methodology and database of the study. Chapter 2 provides a descriptive analysis of the contribution and growth of the formal and informal sectors in Net Domestic Product at the aggregate and disaggregate levels. Chapter 3 presents the determinants of informal sector’s contribution to Net Domestic Product with special emphasize on the impact of liberalization. Formal-informal sectors’ linkages and economic growth is discussed in Chapter 4. Chapter 5 discusses
the efficiency performance of the informal sector and its determinants, while total factor productivity growth and its components of the informal and non-informal unorganized manufacturing sector are described in Chapter 6. Employment in India’s informal sector and its determinants are discussed in Chapter 7. Chapter 8 concludes with policy implications.