A review of existing literature on informal sector indicates that writings on informal sector has proceeded in three directions –

(a) Theoretical studies,

(b) Macro level empirical studies using secondary data, and

(c) Micro level case studies.

Theoretical Studies

Substantial literature are existent on the definition, concept, scope, applicability and usefulness of the Informal Sector. These have already been discussed earlier. A few analytical model have been prepared which attempt to analyse different aspects of the informal sector.

Weeks (1975) tries to analyse the determinants of growth of output and employment in the informal sector of the less developed countries using an input-output framework. He segregates the economy into Agricultural, Informal, Private formal and Government sectors. He found that the crucial variables affecting output and employment in the informal sector are – Changes in aggregate demand; Changes in relative price levels (informal vis-à-vis formal), Technical Changes and Changes in consumer tastes. He infers that the Informal Sector is a dynamic, evolving, low wage sector, whose development would require the following:

(a) Development policy which redirects final demand towards the informal sector;

(b) Emphasis on agricultural development;
(c) Elimination of Special privileges to the formal sector;
(d) Encouragement and Coercion to formal units to extend sub-contracting to informal sector units.

Datta Chaudhuri (1989) tries to examine whether theoretical analysis supports the view that the informal sector lives or dies with the formal sector. He assumes a small open economy with three sectors – formal, informal and rural, where the informal sector produces only intermediate goods. Using fixed coefficients of production and full employment of resources he shows that the general equilibrium framework of the economy permits expansion of the informal sector along with shrinking of the formal sector employment and output. His results show that cheap credit to informal sector would force the formal to fan out its requirement of intermediate goods to the informal sector. Hence the informal sector can expand in the face of contracting formal sector. However once the formal sector completely specialises in the production of final goods with the informal sector supplying the total demand for intermediate goods, a regime will be reached where the informal sector will live or die with the formal sector.

Macro Level Studies

Empirical studies on informal sector are faced with a serious problem. Since most of the informal sector activities are not officially recognised by economic authorities, they are not enumerated and surveyed. Consequently secondary data regarding informal sector are inadequate. Moreover since different researchers, agencies and authorities define informal sector differently, data collected and compiled by them are not strictly comparable with each other. Data published even by national agencies are not always temporally comparable. This has crippled researchers trying to study the macro dimension of informal sector. Still various attempts have been made to study the characteristics of the informal sector in an entire economy.

Kundu (1994) presented an overview of macro dimension, socio-economic correlates and policy perspectives regarding urban informal sector in
India. He discussed in detail the problem of comparability of secondary data pertaining to unorganised activities in India. He then assesses the macro dimension of the urban informal sector at the national as well as state level using different sources of data. Despite limitations accepted by him, it is evident from his study that the Informal Sector in urban areas has grown at a faster rate than the organised industries or the rural unorganised industries during 1961-1985. The growth has been particularly impressive in many of the backward states and the developed states of West Bengal, Maharashtra and Gujarat. He concluded that the growth of informal sector in the developed areas are due to complementary relationship between formal and informal activities where the former subcontracts jobs to the latter. On the other hand the growth of informal sector in less developed areas is due to survival strategy adopted by poor residents taking up traditional and low productive activities.

Shaw (1994) tries to look into the manufacturing activities in the informal sector in India — the growth of these activities between 1971-91 in the national level and the regional dimension of these activities at the state level. According to her findings the share of informal sector in total manufacturing employment declined from 82.5% in 1961 to 69.3% in 1981. But after that the informal sector showed a higher growth rate in employment than the formal sector. Specially the modern dynamic part of the informal sector steadily increased while the traditional home based industries sharply declined. Consequently the share of informal sector in manufacturing employment increased to 73.6% in 1991. She also found that Maharashtra, Tamil Nadu, Karnataka, Andhra Pradesh, Madhya Pradesh accounted for 58% of Net Value Added from the registered Small Scale Industries. The major contributor to Total Output was Maharashtra, Tamil Nadu, Uttar Pradesh, Andhra Pradesh, Gujarat, Punjab, West Bengal and Karnataka. In terms of employment, Tamil Nadu, Maharashtra, Uttar Pradesh, West Bengal and Gujarat accounted for 54% of the total. In terms of Fixed Assets the leading states were Maharashtra, Uttar Pradesh, Gujarat, and Karnataka. The main industries were Food products, Chemical & Chemical Products, Basic Metal Industry, Metal Products, Electrical Machinery & Parts, and Rubber & Plastic Products. There were significant negative correlation between NSDP per capita and Percentage of Casual labourers to Total Employees in a state. Net value added (NVA) per rupee of fixed investment was found to be positively correlated
with the development level of the state. The NVA to Fixed investment ratio and Fixed investment – employment ratio is more than national average in Haryana, Maharashtra and Karnataka which can be related to their dominance in VA, output, employment and their higher productivity. She concluded that more active government support, both in terms of encouraging investment and providing infrastructural facilities can develop the informal sector.

*Mitra (1994)* made an empirical study to estimate the nature of association between formal and informal sector employment for various urban centres in India using secondary data for 1971. He found that percentage of informal sector employment in total workforce varies from as low as 21.3 percent in Chandigarh and 39.4 percent in Howrah to as high as 96.8% in Shahjahanpur and 92 percent in Dumdum. This percentage was found to be significantly negatively correlated with City Size in terms of population. A significant negative relationship was found between Percentage of informal employment and Percentage of organised industrial employment. However, the relation between absolute employment in informal sector and that in other formal sectors was positive. He also found a significant overlapping between poor household and informal employees.

*Funkhouser (1996)* examined patterns of employment and structure of earnings in urban informal sector in five central American countries — Guatemala, El Salvador, Honduras, Nicaragua and Costa Rica. He found that the size of informal employment was between 60-75 percent of labour force in the first three countries, while in Costa Rica it was about 30-33 percent. In Nicaragua, the extent varied over time from 45 to 63 percent. There were substantial returns to human capital and experience in the informal sector in each country. The male-female differential in earning was found to be above 25 percent. Other major findings were significant negative relationship between level of education and informal sector employment, and higher probability for poor families to be employed in the informal sector.

*Kundu and Lalitha (1998)* underlines the decline in the share of informal sector in general, and urban informal sector in particular, in manufacturing sector employment, during late eighties and early nineties. Using NSSO data, and considering OAMEs and NDMEs as the two components of informal manufacturing sector, they have shown that growth profile in the
informal manufacturing sector has shown two opposite trends. While during 1978-84 period there was a significant rise in both employment and enterprise number, the period 1984-89 saw a reversal of the trend. It is argued that the growth of the units or employment does not show any correspondence with improvement in their performance. For most of the units, being in business is a survival strategy, as they have no other alternative. Only a small segment of this sector responds to market forces and is linked to the organised sector, and their growth is linked to their performance. Factors like access to land, credit, registration with public agencies, etc. are underlined as important factors affecting their performance.

Mitra (1998) estimates informal sector employment using alternative data sources. Both, Direct method using Economic Census data, and Residual approach using Census and DGET/EMI3 data for estimating informal sector employment were considered. The states were then ranked according to the relative size of informal sector expressed as a percentage of total employment in the non-agricultural sector, using those alternative measures. A close correspondence between the ranking of the states using these alternative sources is obtained. The association between incidence of informal employment and factors like urbanization and industrialization were found to be negative, while that with incidence of poverty was somewhat positive. This negative association between industrialisation and informal sector is interpreted as lack of strong linkages and absence of complementarities between the formal and informal sectors. Developing linkages between formal and informal sector, and integrating the informal sector with the mainstream of the economy, so that it can take advantage of globalisation, emerges as important policy implications.

Shah (1998) undertook the study firstly to examine the growth linkages between small and large scale sectors and the pattern of small industries-cluster, and secondly, to derive implications of such linkages for productivity and employment in the various segments of the small scale sector. The study shows that the states with high incidence of factory also have high incidence of unorganized sector (comprising of three scale based categories namely

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3 Employment Market Information data collected and published by Director General of Employment and Training.
OAMEs\textsuperscript{4}, NDMEs\textsuperscript{5} and DMEs\textsuperscript{6}) which may be due to the size effect. The paper suggests that there is a clear pattern of upward shift within the scalar hierarchy. Employment share of OAMEs and NDMEs, the segments at the lower end, are reported to have declined, while for the segment at the upper end viz. the DMEs, SSI and the factory sector, the share has increased. This has been interpreted as upward shift within the scalar hierarchy, which has led to better integration between unorganised and organised industrial sector. The home-based production has been left out of this process of transformation resulting in a sharp decline. The growth of DMEs and the SSI at the cost of lower categories is considered as a welcome trend, since value added and emolument per employee increases as we move upward along the scale category. Positive correlation between Labour productivity for organised industries and that of the DMEs is obtained. Strong positive correlation between capital per enterprise, Labour productivity, emoluments, etc. (which are generally observed in the organised sector) are found in case of the DMEs also. Moreover, industries having high share in gross value added within the DMEs can be declared as modern sector in terms of nature of commodity produced. The DMEs are also having a larger number of industries catering to the demand of the higher income groups. Thus, the author has emphasized the modern character of the DMEs, and its emergence as a dynamic segment of the unorganized sector. Moreover, from the nature of SSI clusters it is inferred that 45\% of them have vertical linkages with large industries, while the rest have horizontal linkages with other small industries. She has also pointed out that the phenomenon of declining home-based production is not because of exploitative nature of linkages, but due to absence of linkages. Improving the Labour productivity by correcting the distortions in the capital market rather than Labour market, tapping employment potential of agricultural sector, specially by enhancing investment in the dry-land regions, are some important policy suggestions provided by the study.

Chadha (1999) examines the growth dynamics of different segments of informal manufacturing sector in India between 84-85 and 94-95 separately

\begin{itemize}
  \item \textsuperscript{4} OAME - Own Account Manufacturing Enterprise - manufacturing enterprise operating with no hired worker employed on a fairly regular basis;
  \item \textsuperscript{5} NDME - Non-Directory Manufacturing Establishments - unit employing less than 6 workers including household workers;
  \item \textsuperscript{6} DME - Directory Manufacturing Establishments - units employing 6 or more workers with at least 1 hired worker but not registered under the Factory Act.
\end{itemize}
for rural and urban areas. It is found that OAMEs in their dire need to economise with their available capital and take advantage of cheap labour, move towards a labour-intensive technology, and hence its capital labour ratio is declining. Labour productivity is higher in Urban manufacturing sector than that of its rural counterpart. In rural areas labour productivity of the agro-based industries are falling while that of non-agro based industries are rising. As we move from OAMEs to NDMEs and to DMEs the capital-labour ratio rises, on each product line. For a given amount of capital, OAMEs provide employment to a much larger population than DMEs. But productivity does not move in favour of OAMEs. They are established to meet local employment demands where people are self-employed. On the contrary it is well calculated economic choice to set up DMEs, which has linkage with external market and urban economy. This means that the units having high productivity are not the units that are growing. This goes against the logic of market based growth. However there is a reversal of trend during 1989-90 to 1994-95 period. In case of NDMEs in 1984-85 productivity does not have any bearing on input used (Working Capital, Fixed Capital, etc. per unit). High productive groups are not those who have registered high growth in employment or number of units. The pattern somewhat changed during 89-90 when the input show positive correlation with productivity. But productivity and growth of units and employment are negatively correlated. Groups with high proprietorship ownership or high non registered units report low productivity. The same pattern maintained during 1994-95 for the NDMEs. In case of DMEs, during 1984-85 and 1989-90, no significant correlation has been found between productivity and inputs (Outstanding Loan, Fixed Capital owned). But there is a reversal of trend in 1994-95 when a positive correlation has been found between productivity and inputs. Thus 1994-95 data show an overall reversal of trend and a move towards market oriented growth of the informal sector.

Mitra and Goldar (1999) have made an attempt to measure the total factor productivity growth in informal manufacturing sector in India. Here the total factor productivity growth is taken as the difference between growth rate in value added and weighted sum of capital and labour growth rates.

$$\text{TFPG} = \left( \frac{\dot{Y}}{Y} \right) - \alpha \left( \frac{\dot{L}}{L} \right) - \left( 1 - \alpha \right) \left( \frac{\dot{K}}{K} \right)$$
Y = Value Added, K = Capital, L = Labour, \( \alpha \) & (1 - \( \alpha \)) are the shares of labour and capital in Value Added respectively.

Mahadevia (1999) discusses the declining importance of Ahmedabad city in the context of industrial development process of Gujarat. It also analyses the implications of informalisation of employment on urban poverty in the context of privatisation, liberalisation and increase in urban cost of living etc. Based on secondary data the scholar states that though the state economy was experiencing a slower growth than the country since early eighties, the industrial sector has done remarkably well. But the city or district of Ahmedabad lags behind in this respect, with the number of units and employment in the organised manufacturing sector declining since early eighties. According to the scholar, the industrial decline in Ahmedabad is not because of overall industrial deceleration in the state, but because of changing character and pattern of industrial development and nature of industries. Ahmedabad has lost out as its industrialisation was based on textile industry, which went into a decline in the state. There are clear signs of casualisation of employment and growth of informal sector in the metropolis. It is also argued that the city of Ahmedabad is attracting a large number of migrants who are encouraged to be absorbed in the informal sector which are less polluting or are pushed to the peripheries. The decline in the growth rate of organised sector can also be explained by vested interests to make the metropolis a residential city for the elite.

Thus it is evident that the inadequacies of available data from secondary sources have forced researchers to constrain macro-level studies on informal sector. They have been persuaded to take certain simple criteria like employment size, registration with authorities, size of output, or fixed capital as the basis for identifying the informal sector. Consequently, working conditions, infrastructural availability, etc. could not be looked at in these studies. Understandably those who have tried to look into these factors had to gather primary data and restrict themselves to case studies on specific localities.
Micro Level Case Studies

Dhesi and Wadhwa (1980) attempt to analyse the characteristics of the participants and enterprises in the informal sector and their linkages with the formal sector, in Nangal (Punjab, India) in 1980. It was found that the average employment per enterprise was only 1.6; of them 93.8 percent were full time workers, mostly in the trade sector, followed by services, repairing, transport and manufacturing. 58 percent of the enterprises generated a value added of less than Rs 600/- per month. In the manufacturing sector 50 percent of the enterprises generated value added between Rs 1000 and Rs 3000. 47 percent of the sample enterprises had Fixed Asset of value less than Rs 600; 21 percent between Rs 600 and Rs 1000; and 31 percent above Rs 1000. Fixed assets, on an average, were highest in manufacturing industries followed by trade, repair service and transport. Most of the entrepreneurs started with little amount of initial investments, source of 93 percent of which was own savings or that of relatives or friends. Most of the enterprises were in trade sector, followed by service and transport.

Banerjee (1983) examines evidence from a sample survey during October 1975-April 1976 in Delhi to test whether informal sector employment is a temporary staying post for the new migrants. Empirical evidence found by him indicated that over 50 percent of informal sector entrants in Delhi had been attracted by opportunities in this sector itself and they moved to Delhi after pre-arranging their job. Actual mobility and potential mobility from the informal sector was low and education was an important determinant of such mobility. Earning was lower in the informal sector than in the formal, but returns to education and experience was same in both the sectors. Only 15 percent of the enterprises were equipped with both water and electricity and 22 percent had neither of them. 36 percent found lack of capital as their main problem. Since most of the establishments were in trade and services, very little forward linkage with formal enterprises was found. In contrast, backward linkages were fairly strong. A dominance of owner operated family enterprises was also found. He accepted that getting information about earnings and expenditure is always difficult, not only due to reluctance of the respondents but also due to their inability to provide accurate data. The average monthly earning was Rs 581 per month with a Gini concentration ratio of 0.3 – implying
fairly low inequality. Majority of the respondents wanted to expand their business but 75 percent found capital as limiting factor and answered that the authorities should help them by providing financial assistance on easy terms. 14 percent wanted government to take steps so that demand for their goods and services are increased. Majority of the participants were happy to be in this sector and felt that expansion of the units would be sufficient improvement for them.

Romatet (1983) surveyed Calcutta’s informal sector to look into their characteristics. He focused mainly on the tailoring industry at Garden Reach and Tanneries in the eastern outskirts of Calcutta and also some of the plastic processing units. He found that the slums are not only the areas with extremely dense population but they are the areas which are characterised by intense informal economic activities. Most of his findings supported the general conception about informal sector activities — non-organised labour relations; predominance of family employment; seasonal business cycles; non-institutional credit system which are exploitative in nature; very low, sometimes negative, profit margin; low fixed capital; high labour intensity; highly competitive market; lack of financial resources; low wages and income were the salient features. According to him the immediate needs were bank credit at usual or low rates; redirecting government demand towards the units directly and removing the middlemen involved; supply of raw materials at reasonable rates, preferably from state units; and, prevention of exploitative relationship between the informal units and other organised economic agents.

House (1984) surveyed the informal sector enterprises in Nairobi in 1977 to test different characteristics of the informal sector. It was found that most of the proprietors in the informal sector were urban residents of long standing and not recent migrants. Initial capital requirements were low and most of the entrepreneurs indicated capital scarcity as their main problem. The technology employed was much greater labour intensive than the formal sector and same investment creating 5 new jobs in the formal sector creates 55 jobs in the informal sector. The average income compared reasonably well with the legal minimum wage. Relatively skill-intensive jobs like furniture and metal goods, restaurants, retail trade, vehicle repairing were particularly profitable. The determinant of informal sector income were found out to be availability of capital, efficient utilisation of it, loan received and sub-contracts received.
Shaw (1990) attempted to analyse the interaction and linkages between informal sector & large scale sectors in Thana-Belapur region based on field survey during September-December 1980. It was found that the large units have important forward linkage with informal sector units who recycle the waste products obtained from the former. However, the informal sector workers were not protected from health hazards originating from those wastes and most of the labourers were women.

Swarooparani and Galab (1998) based their study on primary survey of sandle making activity in the slums of Hyderabad City. The paper discusses the nature of different methods of organization of production, and its relationship with the economic performance of the enterprises. The sample units are divided into two categories. The first group comprises of those operating as untied units and carrying out independent production. The second group includes those who are operating as tied production units and carrying out contract-production. The contract could be against – (i) Cash Loan given to the enterprises, or, (ii) Supply of raw materials. Generally, the units which are in a better position in terms of larger amount of capital, higher number of employment, etc. prefer untied production. Operationally, these units are found to be more efficient with higher capital and labor productivity. Among the tied units, those who are entering into cash contract, have the freedom to choose the raw material and hence produce better quality product than their counterpart, who enter into raw material contract. For the tied producers, including many under cash contract, being in business is a matter of survival strategy. This paper thus breaks the common belief that assured market solves the problem of low productivity and low income of the informal sector.

Martin Patrick (1998) focuses on the saleswomen working in the registered shops and establishments by analyzing the aspects of discrimination, time allocation and migration. Using field data from Ernakulam district of Kerala, the author has shown that there is large-scale discrimination against saleswomen compared to salesmen in the labor market in terms of wages. Analysis based on time allocation theory showed that they were discriminated against in their household also. The women were paid low wages because it was a deliberate attempt on the part of the employers to underestimate the women's probable length of stay in employment. The
perception that women are temporary participants in the sales force was often cited as a rationale for paying low wage, though it was not the fact. Many employers tend to pay low wage to the women on the plea that they have low level of skill. The absence of trade union among saleswomen was pointed out to be the major reason for such wage discrimination. Effective implementation of Minimum Wage Act in shops and establishments, along with motivating women for gradual and sustained involvement in trade union activities, emerge as vital policy prescriptions.

Necessity of the Present Study

We have so far summarised various existing studies on different dimensions of informal sector. It is evident that empirical studies regarding informal sector suffer from the serious problem of inadequate data availability and comparability. Given that the sector is highly heterogeneous in nature and covers a considerable range of economic activities. So, it is difficult to enumerate and hence is often ignored by official census. There are severe limitations to the availability of data and whatever data are available are not temporally comparable. Moreover, data provided by different sources are also not strictly comparable. This has handicapped macro level study on informal sector. Informal sector also encompass a large numbers of criteria which together are able to bring out the essence or spirit of informal sector. But owing to the data limitations, the scholars have to stick to one or two criterion (size of employment, registration to some authority, amount of capital invested etc.) to carry on macro level study. Though it is accepted that it is difficult to define informal sector on the basis of one or two criteria, it has been found that these studies are able to bring out the broad trends in informal sector within a macro perspective.

The researchers who intend to define informal sector on a more subjective basis, like - working condition, level of exploitation etc. had to restrict themselves to case studies. As a result large number of case studies based on different cities, localities etc. using different identification criteria have taken place. The problem regarding these studies is that they, being very
specific in nature, cannot be generalised to suggest macro level policies. Moreover, the results of these studies are not comparable, as they are based on different definitions of informal sector.

Thus, both macro and micro level studies have their own limitations. But if they can be combined, they can provide a more complete picture of the informal sector. The macro level study with the simple criterion based on one or two indicators provides insight into the broad trends exhibited by the informal sector, its interaction with other sectors and its role and potential in shaping the course of development of the economy. This will naturally be followed by prescribing policies for the informal sector specifically and the economy in general. But to have any effective policy prescription one must not only look at the sector from the top but must also view it from the standpoint of individual entrepreneurs - their problems and necessities. This can be done with a micro level study which uses the same criteria, to identify informal units, as used in the macro level study. This will bring out the nature of those units who are studied at macro level - their characteristics, working conditions, accessibility to infrastructural and institutional facilities and state incentives, marketing conditions, and the entrepreneur's views regarding their immediate requirements. Moreover, the case study will also help to enquire whether the results emerging from the macro level study are supported by the micro level study also. Thus, a blend of a macro level study based on secondary data and a micro case study can be undertaken to capture the essence of the informal sector and suggest policy measures.

This study aims to achieve that. It contains an extensive National and State level study of the Informal Manufacturing Sector in India, based on secondary data, to bring out the broad trends and provide a national perspective. It would be followed by a micro level case study to bring out the qualitative aspects of the informal sector and provide a grassroot perspective. It would also enquire whether the results obtained at the macro level match with those from the micro level or not. Finally, it would try to propose policy prescriptions for the development of the informal sector so that its potential can be utilised up to the fullest extent for the overall economic development of the nation. The study is carried out at a disaggregated level for different segments of the informal manufacturing sector, at national level and across
states, for manufacturing sector as a whole and across industry groups (2 digit level NIC) both for rural and urban areas.

The scheme of the study runs as follows. While the first section outlined the various theoretical issues regarding the definition of informal sector and its role in economic development, the present section reviewed the existing studies on informal sector and mentioned the necessity of the present study. The next section would briefly discuss the Plan, Objectives and Methodology of the study and also mention the Hypotheses initially formed and the Data Sources. The next section would outline the broad trends and pattern exhibited by the informal manufacturing sector in India. The three sections that follow would undertake detailed study of Growth, Productivity and Dynamism in the informal sector and their various correlates respectively. The Primary Survey Analysis would follow next. The last section would summarise the major findings and would also offer various policy suggestions that evolve from the present study.