CHAPTER – I

INTRODUCTION AND REVIEW OF LITERATURE
1.1 Introduction

Rapid urbanisation has been an integral part of the developing economies during the past couple of decades. The rural to urban migration coupled with the natural increment of urban population, has caused a significant increase in urban work force. Despite industrial growth, the modern industrial sector has not been able to provide employment to all the surplus and marginal labour force in urban areas. Further, public sector employment in such economics has also considerably gone down because of measures of structural reforms and privatisation undertaken by the governments in these economies. Left to self, this surplus urban labour made a valiant effort to carve out a niche for its own living and subsistence, within the same urban economic system, by means of undertaking a variety of informal activities which is otherwise known as the “informal sector” (ILO, 1972), “unorganised sector” (Joshi & Joshi, 1976; Harriss, 1978; Bharadwaj, 1979), “bazaar-type economy” (Geertz, 1963), “traditional sector” (Reynolds, 1969), “sponge” (Lubell, 1991), “demand induced component” (Mitra, 1994 & 1998), “resilient” and “last resort sector” (Rani & Galab, 1998) and so on in the literature of development and urban economics. Development and promotion of the urban informal sector, therefore, has become the new operational strategy of the developmental policy in the 1990s and post 1990s in many of the developing countries.

In India urban informal sector includes in its ambit a number of activities like manufacturing, trade, transportation, services, etc. Milk production and its distribution happen to be one such productive activity widely undertaken by a section of under privileged urbanites (Gowalas). These small scale producers mostly carry on their
production activities either in the far end of the urban boundaries or open spaces available in the cities and towns. Their distribution activities cover the whole of the city or town or parts of it. These informal producers meet, to a considerable extend the need for raw milk in Indian cities and towns. In this way they take care of an important part of the food needs of the urban people.

Studies undertaken in various parts of the world suggest that these enterprises are basically labour intensive in nature (Omore et al., 2001; Roy, 2003; Roy, 2004; Sarma & Sarma, 2004; Sidhu & Bhullar, 2004). So far as the income and productivity is concerned, most of the studies show that labour productivity and average income from informal dairy enterprises are better than what small and marginal farmers get from crops cultivation (Alam et al., 1992; Dastagiri, 2003; Sidhu & Bhullar, 2004).

Marketing strategy adopted is basically in terms of direct sales to the consumers. These informal units also have backward as well as forward linkages in terms of input use, output sold, jobs created and credit availed (Taylor, 2001; Tuteja and Singh, 2004; Sarma, 2004). Judged from this angle, employment creation in the informal sector like the informal milk producing units (IMPUs) becomes one of the immediate ways of overcoming urban poverty, and unemployment.

1.2 Origin and Evolution of the Concept

In the literature of development economics, one hardly comes across a concept like “Informal Sector” which is so often mentioned and at the same time so much controversial and debatable ever since it was used in a study in Ghana by Hart (1973). Since it made to
include in its ambit every small scale activities of production, trade, services, etc. under the sun, a universal theoretical definition therefore seems next to impossible. However, for proper understanding of the concept and its importance in the developmental dynamics of developing countries, we need to have a systematic review of literature in this field.

The concept is based on some theory of urban dichotomy developed in the context of dualism.

1.2.1 Dualism

It was Boeke (1953) who first used the term Social dualism to divide the society into two segments – one traditional and the other westernised. Higgins (1966) enumerates technological dualism as an important characteristic of underdeveloped countries. His technological dualism in such countries consists of an industrial sector and a rural sector. However, it was the famous model of Lewis (1954) that perfected and popularised the concept of sectoral dualism prevailing in underdeveloped countries. Lewis divides the economies of such countries into two sectors – a capitalist sector and a subsistence sector. The capitalist sector continuously expands by employing more and more surplus labour from the subsistence sector at constant real wage at subsistence level. This process continues till the entire surplus labour is absorbed in the capitalist sector.

Lewis model was modified latter on by Fei and Ranis (1967). Fei and Ranis talk of the existence of a commercial industrial sector and a subsistence agricultural sector in a labour surplus underdeveloped economy. Their models have been developed drawing heavily from the historical experience of growth in USA and UK in the nineteenth century.
which exhibits considerable migration of rural people to urban industrial centres, enabling industrial capitalist to reap huge profits for reinvestment by keeping real wages below marginal productivity of labour.

However, sectoral dualistic models are not compatible with present economic structure of the economics of developing countries. These models are very simplistic in the sense that they failed to represent the dichotomy of urban economies of such countries.

1.2.2 Dichotomy Model of Urban Economy

It is in Todaro’s model (1969) dealing with migration that one finds the recognition of dichotomy in an urban economy. Todaro talks of rural-urban migration being a two stage phenomenon and to him such migration is conditioned by two principal factors: (i) the urban-rural real income differential, (ii) the possibility of getting an urban job.

Subsequently a number of scholars started explaining the structure of an urban economy in terms of “dichotomy”.

Reynolds (1969) explains the dichotomy character of an urban economy in terms of a “modern sector” and “traditional sector”. McGee (1975) explains such a dichotomy in urban economy in the framework of “farm type economy” and “bazaar type economy”. Santos (1979) presents an analysis of urban dichotomy using the terms “upper circuit” and “lower circuit”. In Santos’s treatment, technological advancement and monopoly power are the important organic elements of the “upper circuit”, whereas the “lower circuit” is the resort of the poor which includes small scale activities only.
1.2.3 Formal-Informal Dichotomy

1.2.3.1 Origin of the Concept

The term informal sector (IS) was first used by Hart (1973) in a study of urban Ghana. In the course of his field work among the urban workers in Ghana, he found a large self-employed sector which provided means of livelihood to the newly migrated labour force to the urban area, who were unable to find the employment in the formal sector (FS). Hart’s study classified that the workers engaged in the IS are self-employed whereas the workers employed in the FS are wage-earners. The new entrants to the urban labour force were forced to undertake informal income generating activities as they lacked the necessary skill and experience to find berth in the FS. One serious limitation of Hart’s study is that it assumes non-existence of wage-workers in the IS.

However, the concept gains much of its popularity to a large number of country and city studies carried out by ILO under the auspices of its World Employment Programme (WEP)\textsuperscript{iv}. The first official recognition of the term was made by the ILO-UNDP employment mission to Kenya (1972). This mission discussed the formal-informal dichotomy in an urban sector on the basis of characteristics of enterprises. It specified the main characteristics of IS as – (i) ease of entry, (ii) reliance on indigenous and locally available resources, (iii) family ownership of enterprises, (iv) small-scale operation, (v) labour intensive and adapted technology (vi) skills acquired outside the formal school system and (vii) unregulated and competitive markets.

The greatest contribution of various country missions and city studies of ILO was that they brought the objective of employment generation to the centre-stage replacing the
traditional strategy of economic growth which assumed employment generation as a residual. Further the ILO report classifies the “enterprise” and not the “individual” into two sectors.

In spite of the valued contribution of ILO’s city and country studies on popularising the concept of IS, it also invited a number of criticisms. Most of the criticisms were with regard to (i) the relevance and universal applicability of these ILO depicted characteristics, (ii) comparability and compatibility of these different criteria.

1.2.3.ii Refinement of the Concept

These criticisms also encouraged subsequent authors to redefine the concept of the IS. These definitions are based on any of the below listed factors or a combination of them – (i) characteristics of the enterprise, (ii) exchange relationship with the state and the rest of the urban economy, (iii) employment situation.

1.2.3.iii Employment Situation

Emmerji (1974) identifies IS by small scale labour intensive techniques, supply according to demand oriented market of low income people and exclusion from the official statistical enumeration. Emmerji thinks the IS to be transitory in nature.

Mazumdar (1975, 1977) makes a distinction between formal and informal sectors on the basis of the size of the employment, security of job and unionisation of factory labour force.
Weeks (1975) departs from the traditional conceptualisation of the IS in terms of low income generation, labour intensive techniques, indigenous ownership, etc. and makes a distinction between the formal and informal sectors on the basis of the organisational characteristics of exchange relationship and position of exchange activities vis-à-vis the State. Weeks is the advocate of the “structural disadvantage” argument which implies that the very nature of smallness of the informal units is itself a factor which debars it from getting access to various state benefits and favours that the FS derives often statutorily. These benefits among others include tariffs and quotas protection for import substitution industries, tax rebates, holding low interest rates, credit benefits etc.

Joshi and Joshi (1976) make a distinction between the formal and informal sectors (they used the word organised and unorganised sectors) on the basis of three major factors – market structure, technology and relationship with Government. To them, the informal activities take place outside the scope of official regulations governing such matters as the setting up of shops or workshops, employers-employees relations, taxation, control of technical skills and product quality.

Sethuraman (1976) defines the IS on the basis of employment of “urban poor”. “One of the most convenient way of identifying the informal sector is to define it in terms of the source of employment of the urban poor” (Sethuraman, 1976 b, p. 75). However, Sethuraman modified his definition latter on and his modified definition runs as follows:

“Informal sector consists of small scale units engaged in the production and distribution of goods and services with the primary objective of generating employment and incomes to their participants not withstanding the
constraints on capital, both physical and human and know-how” (Sethuraman, 1981, p. 17).

This definition of Sethuraman based on “enterprise” replaces his earlier definition based on “individual”. Sethuraman also distinguishes both the sectors with reference to mode of production, organisation and scale of activities:

“For formal sector consisting of activities using modern mode of production and organisation comparable to developed world and hence larger in scale of operation as compared to those of the informal sector” (Sethuraman, 1981, p. 12).

Breman (1976) classifies the labour market in an urban economy into four categories, viz., labour aristocracy, lumpen proletariat, petit bourgeoisie and sub-proletariat, and then goes on to remark:

“For the contrast made between the formal and informal sectors parallels that between labour aristocracy and lumpen proletariat” (Breman, 1976, p. 1940).

Schaefer and Spindel (1976) identify the IS in terms of discontinuities or disparities in the levels of income, size of enterprise and technology.
Yap (1976) makes a division between formal and informal sectors along industry lines on the basis of the concentration of small scale labour intensive and low wage activities in the industry.

Davies (1979) distinguishes the two sectors exclusively on the basis of mode of production and opines that in the FS, the mode of production determines the superstructure, whereas the reverse is true for the IS. To Davies, highly developed division of labour characterises the FS whereas the IS exhibits scant division of labour or if there is at all any division of labour, it is only rudimentary and horizontal in nature.

In a study carried out in the city of Ahmedabad, Papola (1981) defines IS as:

“A segment of the economy having certain characteristics which led to unfavourable conditions for the growth of enterprises and activities in this segment” (Papola, 1981, p. 13).

Papola lists a number of often observed attributes of the IS but finally comes to a conclusion that various attributes are not always compatible with each other. Hence he settles down on “wage” as the basis of distinction between the two sectors.

A number of other scholars too have defined IS on the basis of mode of production (Gerry, 1979; Remy, 1982; Lipton, 1984).

Paul (1985) in a study finds risk as the most important attribute of IS. To him factors like official harassment, exclusion from subsidised capital markets, officially fixed wages and erratic nature of demand cause risks. It is this imperative to undertake risk that compels
IS to undertake activities which exhibit small scale of production, use of little capital, and unstable income generation.

The IS is generally characterised by a great deal of heterogeneity and low earnings. Studies have found that the labour market in India is segmented with the workers having better education and skills, taking up regular jobs while the illiterate and unskilled end up in contract and casual work (Quadeer and Roy, 1989; Deshpande, 1992).

McLaughlin (1990) from his study finds that IS is characterised by – the use of family and unpaid labour and reliance on manual labour rather than on sophisticated machinery and equipment, flexibility, allowing people to enter and exit economic activities in response to market demand; simple and sometimes precarious facilities; the ability to improvise products from scrap materials; a willingness to operate businesses at times and locations convenient to customers; and a tendency to locate smaller markets, out of the reach of the larger firms.

Tokman (1992) and Portes (1994) define IS on the basis of characteristics. According to them IS is the collection of marginal enterprises characterised by – low entry barriers in terms of skills, capital and organisation; family ownership enterprises; small scale of operation; labour intensive production with outdated technology; unregulated and competitive markets; low levels of productivity; and low levels of capacity for accumulation.

The United Nation’s System of National Accounts (1993) refers the IS as consisting of units engaged in the production of goods or services with the primary objectives of generating employment and income for the persons concerned. They form part of the
household sector as unincorporated enterprises owned by the households. System of National Accounts (SNAs) characterised the IS productive units by (a) low level of organisation, (b) little or no division of labour and capital, (c) labour relations based on casual employment and social relationship, as opposed to formal contracts.

Becker (1997) defines the IS by classifying the household production activities into the following five distinct categories:

1. Production of all goods or services that are supplied to units other than their producers:
   - IS market production,
   - Other market production (units which do not meet the criteria of the IS – registration criterion and/or employment size criterion);

2. Own account production of all goods that are retained by their producers for own final consumption such as:
   - Subsistence farmers and others engaged in the production of agricultural goods for own final consumption,
   - Production of other goods for own consumption,
   - Construction of own dwellings;

3. Domestic and personal services produced by employing paid domestic staff;

4. Own account production of housing services by owner occupiers; and

5. Hidden economy.
As a subset of the household sector, the IS is just the above household category 1.1. However for practical reasons one may consider a narrow scope and compile in the IS only non-agricultural activities. On the other hand, for a broader scope one may consider inclusion of the domestic and personal services, illegal services and may be part of the hidden economy in the IS.

Panda (1998) defines informal manufacturing sector (IMS) base on the following criteria:

“It includes all manufacturing and repairing units in the private sector owned and operated by a single member of a household with the help of paid and unpaid family members with or without having any hired labourer. The total number of persons including the owner operator, hired labourers, family workers working for the enterprise should be less than 10”. This confirms more or less to the ILO definition with the later’s extra classification of IS into two sub-sectors – “own account enterprises” and “enterprises of employers”.

To Kulshreshtha (1998), “Informal sector refers to economic activities, i.e., production and distribution of goods and services by the operating units of the households which essentially differ from the formal sector in terms of technology, economics of scale, use of labour intensive process, and virtual absence of well maintained accounts. Informal sector has been identified as a sub-set of the household sector”.

Das (1998), Jhabvala (1998), Unni and Rani (2001), Kundu and Sarma (2001), Ambalavanan and Madheswaran (2001) define that IS is typically characterised by low productivity, low earnings, poor working environment, long hours of work and unproductive
handling of hazardous substances, without proper social recognition and effective social security provision.

Farrel (2000) defines the IS as one which consists of economic activities which are not recorded in the Gross Domestic Product (GDP) and or the national income accounts.

Chandra and Pratap (2001) define IS as the non-factory sector, which includes those employed in small establishments, the self-employed, the casual labour and home-workers. It is characterised by ill-defined employer-employee relationship, acute incidence of underemployment, scattered nature of work place and low wages.

Arimah (2001) opines that the IS does not appear to have a meaning independent of the FS, as it only derives its meaning when contrasted with the FS.

Viswanathan (2002) describes that the informal sectors of West Africa identifies IS as the smallest enterprises, typically those with ten or fewer employees, the vast majority of which are one-person businesses with few wage workers. The enterprises are home based and involve agro-processing or petty trade in the rural area, while urban enterprises engage in trade or services and the use of paid employees is rare. Apart from family members, apprentices who work for little account for the bulk of workers in the IS businesses. Due to ease of entry and consequent large number of participants and the small size of markets served by the IS enterprises, competition is fierce in most IS markets. Lack of specialised skills leads micro enterprises to become concentrated in smaller activities which hastens the market saturation.
Florez (2003) cites that the term IS covers a set of heterogeneous activities, from unpaid labour to any number of unregulated salaried jobs. Basically it refers to activities taking place outside established institutional rules.

Goldberg and Pavcnik (2003) define IS as the part of the economy that does not comply with labour laws and does not provide workers with the benefits mentioned above.

Barker (2003) defines IS as “unorganised, unregulated and mostly legal but unregistered economic activities that are individually or family owned and use simple, labour intensive technology”. This coincides with Statistics South Africa’s definition of IS employment, namely “… unregistered business, run from homes, street pavements or other informal arrangements” (Statistics South Africa, 2003).

Suharto (2003) highlights one of the important informal activities in urban areas is Street-vending. As street-based traders, they use space in the streets that are originally not intended for trading activities and it is also considered illegal. This illegality status makes the street vendors face harassment and threat from police and other government authorities.

Marjit (2003) argues that the IS has in fact two roles in a globalised economy: firstly, as a supplier of intermediary goods to the FS; and secondly, as producer of final goods. In his study, a theoretical model is proposed where the IS consists of both capital-intensive (producer or intermediary goods) and labour-intensive segments (producer of final goods).

The South African IS received more and more attention from researchers during the last two decades. Examples of this attention include the work of Rogerson and Beavon (1980), Krige (1988), Nattrass (2000), Barker (2003) as well as Muller (2003). The consensus in the South African literature is that employment in the IS offered a second best
alternative to FS employment. Individuals, Africans in the majority of cases, unable to secure employment in the FS were forced to resort to informal means of employment in order to lead an existence of survival in one of a range of low income marginal IS activities (Muller, 2003: 18).

Unni (2005) defines that the IS economy consists of heterogeneous group of workers (Unni and Rani, 2003). They form a continuum of relationship from the very independent to the most dependent categories (Unni, 2004), while workers in the informal economy constitute both wage and self-employed workers, within the self-employed also they constitute segments having varying levels of entrepreneurial capacities. Given this heterogeneous nature of informal workers, there are likely to be both voluntary and involuntary entry into this sector.

Ademu (2006) defines the IS as comprising those employment generating activities of some urban residents, undertaken for survival in the absence of formal employment. These activities are characterised by the lack of regulations by institutions of society in a social and legal environment in which similar activities are regulated. Common features of operators in the IS includes-

(i) Easier access to production factors which are derivable from social organisation of family and friends,

(ii) Involves entrepreneurs in virtually all branches of the economy ranging from productive activities, general services and specialised services,

(iii) Technology is determined more by the constraints of the social relations,
Motivation for production by the operators in the IS is becoming more profit
oriented (Ademu, 2006).

Upadhyay (2007) defines IS as that sector which consists of the Own Account
Enterprise (OAE) or an establishment where 9 or less number of workers work. The
enterprises operate at low level of organisation, with little or no division between labour and
capital as factors of production and on a small scale. Labour relations, where they exists, are
based mostly on casual employment, kinship or personal or social relations rather than
contractual arrangements with formal guarantees.

Andrei and Stancus (2008) define IS in the line of the European System of National
Accounts (ESNAs), that the IS includes only illicit work and fiscal evasion.

The above discussion suggests that the concept of IS has got different implications to
different scholars. To some, it is synonymous with urban poor, to some others it means
urban proletariat, to another group of researchers it is associated with low income
households and to a section of other researchers it refers to urban slum dwellers. To some
other scholars, it is the first resort of rural migrants to urban areas. It is also clear from the
above discussion that the concept is defined on the basis of a number of criteria:
specialisation of labour, technology type, degree of organisation, magnitude of income
generation, conformation to official rules and regulations, and size of the establishments and
prevailing of child labour. However, the most often used criterion is the size of
establishment criterion.
A sizable section of scholars (Souza and Tokman, 1976; Sethuraman, 1976; Bose, 1978; Harriss, 1978; Dhesi and Wadhwa, 1980; Guisinger and Irfan, 1980; ILO, 1980; Mazumdar, 1980; ORG, 1980; Papola, 1981; Sreeramamurty, 1986; Samal, 1990; SNA, 1993; Portes, 1994; Becker, 1997; Panda, 1998; Chandra and Pratap, 2001; Viswanathan, 2002; Muller, 2003; Upadhyay, 2007) have defined IS on the basis of size of the firm. Except a few cases, the most often used size criterion has been less than ten employees including casual labour, family labour, self-employed persons and part time workers.

1.2.4 Recent Definition of IS by ILO

The complexity and looseness of the concept of the IS made it difficult to have an international agreement on a definition covering the various analytical purposes adopted by data users. Hence, labour statisticians allowing for different operational definitions of IS to meet the need of users at the tabulation stage, have settled down on one single definition for the purpose of data collection. The 15th International Conference on Labour Statistics (1993) has adopted the ILO prepared operational definition of the IS which runs as follows:

“The informal sector may be broadly characterised as consisting of units engaged in production of goods or services with the primary objective of generating employment and income to the persons concerned. These units typically operate at a low level of organisation with little or no division between labour and capital as factors of production and on a small scale. Labour relation whether they exist are based mostly or casual employment, kinship or personal and social relations rather than contractual arrangements.
with formal guarantees. Production units of the informal sector have the
characteristic features of household enterprises. The fixed and other assets
used do not belong to production units as such but to their owners. The units
as such cannot engage in transaction or enter into contracts with other units,
nor incur liabilities on their own behalf. The owner have to raise the
necessary finance at their own risk and are personally liable without limit, for
any debts or obligations incurred in the production process. Expenditure for
production is often indistinguishable from household expenditure. Similarly
capital goods such as buildings or vehicles may be used indistinguishably for
business and household purposes. Activities performed by the production
units of the informal sector are not necessarily performed with the deliberate
intention of evading the payment of taxes or social security contribution or
infringing labour or other legislations or administrative provisions.
Accordingly, the concept of informal sector activities should be distinguished
from the concept of the hidden or underground economy” (ILO, 1993).

Thus, this operational definition of the IS defines IS as household enterprises. It
defines: “household enterprises” as follows:

“Production units engaged in the production of goods and services which are
not constituted as separate legal entities independently of the household or
household members that own them, and for which no complete sets of
accounts (including balance sheets of assets and liabilities) are available
which would permit a clear distinction of the production activities of the enterprises from the other activities of the owners and the identification of any flows of income and capital between the enterprises and the owners” (ILO, 1993).

Household enterprises so defined are divided into two categories – (i) own account enterprises and (ii) enterprises of employers.

1.2.4.i Own Account Enterprises

Own account enterprises are those enterprises which do not employ any paid employee/employees on a continuous basis. Depending on national circumstances either all “own account enterprises” or only those which are not registered under specific form of national legislation should be considered as informal. It is managed by the owner himself or with the contributing family members.

1.2.4.ii Enterprises of Informal Employers

Enterprises of informal employers are those which employ one or more paid employees on a continuous basis, and which comply with one or both of the following criteria:

(a) Size of the establishment below a specified level of employment (define on the basis of minimum size requirements embodied in relevant national legislation or
other empirical or statistical practices: the choice of the upper size limit taking account of the coverage of statistical enquiries in order to avoid overlap); and/or

(b) Non-registration of the enterprise or its employees.

The utility in importance of this definition lies under the fact that it leans on existing practices for estimating informal employment at a national or macro-economic level.

The International Labour Organisation (ILO, 1999) uses the term IS in the place of unorganised sector\(^v\). ILO’s definition of IS is not specific but descriptive of IS characterised by small scale of production, family ownership, reliance on indigenous resources, labour intensive and adoptive technology. Its definition is very much controversial since one will be in an embarrassed position to identify the industries by application of these criteria. The other problem with applying such multiple criteria is that all of these could be found in its pursuing different objectives.

1.3 Studies on Urban IS in India

In India a number of studies have been undertaken by individual researchers and research institutions at micro-level (i.e., city or town levels). At macro-level (i.e., country or state level) a handful of studies have been undertaken. These macro-level studies are mostly secondary data based and often pertain to rural and urban sectors combined. Below we present a review of some of the studies on urban IS in India.
Operations Research Group (1980) undertook a survey of two types of enterprises: (i) slum-based, (ii) bank assisted in the city of Madras. Ease of entry and limited access to capital were the essential features of the slum-based enterprises. Twenty-five percent of the respondents in this type of enterprise considered the present enterprise to be an occupation of last resort. Most of such enterprises were tiny, employing one person and started with non-institutional finances. The bank assisted units on an average were larger than slum enterprises and had a greater degree of linkage with the organised sector.

In a study in the city of Ahmedabad, Papola (1981) attempts to describe the IS in terms of its various segments. The study advocates that the smallness of the IS can be instrumental in generation of employment and income. So far as degree of exploitation of workers is concerned, it is more in case of IS than FS. However, Papola derives a paradoxical conclusion from this study – if the IS needs to serve as a source of income, employment and policy instrument of equity, it is to be made formal.

Harriss (1982) in his field research in the city of Coimbatore discusses the character of linkages between different forms of production. He makes a distinction between small capitalist units of production and petty commodity producer units and finds a high degree of subcontracting relationship between FS industries and IS units.

Sriramamurthy (1983) in a study of Visakhapatnam analyses the determinants of average earnings of various sub-sectors within IS itself.

Dhesi and Wadhwa (1984) based on a sample of 249 enterprises in the city of Nangal in Punjab reach the conclusion that ownership status, training and education were the most
effective influencing variables affecting productivity, earnings and employment potential in the IS.

Aziz (1984) in a study in the city of Bangalore on the waste recycle industry discusses the informality of this industry in terms of organisational and production characteristics. It explains the structure and organisation, income, employment, output, levels of living and earning differentials of the participants. Aziz concludes that, urban IS is a permanent organic element of the process of urban growth.

In a study of Visakhapatnam which includes in its purview samples of informal industries, trade and self-employed categories, Ramana and Krishna (1984) analyse the structure and functioning of unorganised sector vis-à-vis organised sector. It also explains the socio-economic conditions of worker households.

Buch and Pathak (1985) in a case study in India examines the nature, size, structure, growth dynamics and the role of the IS in context of the development of two intermediate cities of the country – Itarsi and Ratlam in Madhya Pradesh. The study also focuses on the formal-IS linkages and concludes that IS is an important source of employment in small and intermediate cities.

In an important study in the city of Calcutta, Shaw (1985) explains the presence of significant levels of linkages (both backward and forward) between the formal and informal sectors and this presence of linkages becomes instrumental in transferring substantially the value surplus of wage and non-wage goods produced in the IS to the FS.

In a survey based entirely on field data collected from seven IS clusters in different sub-regions of the national capital region, Lall (1987) among other things finds that (i) there
exists an inverse relationship between registration status and degree of industrialisation, (ii) there is also presence of little forward and backward linkages between the formal and informal sectors. The study analyses the role of IS units in employment generation and production, various constraints faced by these units and also the structure of sales and investments.

Kashyap and Singh (1987) based upon secondary material, opine that in the state of Gujarat the dichotomous character of the urban economy is a continuum.

National Institute of Urban Affairs (NIUA) (1987) in a study undertaken in four cities of India – Wardha, Ghaziabad, Allahabad and Jaipur on cross sector informal activities finds that: (i) the IS occupies a predominant position in the urban economics of all the case study cities and its size in terms of total number of enterprises is estimated at above 95 percent of all the economic establishments in the four cities, (ii) there exists heterogeneity in the cross sector informal activities in terms of structural attributes, nature of production, employment generation potential, technology and productivity patterns and levels of income, (iii) they are having small capital base and low employment per unit. On an average they possessed a capital base ranging between Rs. 5000 and Rs. 10000, (iv) despite low income levels, informal enterprises account for a substantial part of aggregate savings of the urban economy, (v) this sector faces constraints of finance and marketing, (vi) despite all these, the future of the urban IS is bright in India because of its very favourable capital output ratio and labour intensive nature.

Applied Manpower Research Institute (AMRI) (1988) in a survey of IS in four selected towns – Tumkur, Karnal, Katni and Derria in India, explains the nature,
composition, socio-economic and educational and training background of workforce. It also analyses the inter-sub-sectoral variations (within the IS itself) in employment intensities and labour productivities.

Vishwamitter (1988) in his research study on working of the urban economy in Punjab finds that urban IS provides substantial amount of employment to the urban labour force. Level of education and technical skill of the IS workers was far below the FS workers. Availability of credit is a great hindrance for majority of the enterprises.

Raju (1989) in a study of Visakhapatnam makes an analysis of the profile, background and attitudes of the entrepreneurs in the unorganised sector. An analysis of the size, structure and financial situation of informal enterprises, and explanation of the composition and characteristics of workers in these enterprises too find a place.

Afzal’s study (1989) in the city of Hyderabad depicts that the IS is complementary to that of the FS and it renders immense service for the development of the urban economy of Hyderabad city. This study also explains that the IS has got greater potential to absorb not only migrant labour force but also the production of goods and services of the FS.

Samal (1990) in his field study in the class-I town of Sambalpur in Orissa throws considerable light on issues of structure and productivity, size and growth, migration, socio-economic profile and linkages in respect of the urban IS there. The main findings of his study are:

- Fixed capital requirements per job in the IS is around one-third of that in the FS.
- Value-added per worker in the IS is also around one-third of that in the FS.
The size of IS employment forms 82 percent of the total urban employment in 1984.

Most workers in IS of Sambalpur were migrants.

Backward linkages between the informal and formal sectors are substantial; the forward linkages between the two sectors are negligible.

Patel (1990) made a field study in Ahmedabad city about the question, whether IS employment necessarily mean low wages and high poverty? The study of the retrenched textile mill workers in Ahmedabad city showed that the living standard of the affected families had declined considerably, with women leaving the school and the family debt increasing. The women and other family members came out in the unorganised labour market to help in overcoming falling living standards.

Rao’s study (1991) in a labour centred area “Annavarappadu” in Ongole town focuses on the income and employment patterns, levels of living, remittances and fertility differentials of the IS workers.

Jhabvala (1995) in his field study undertaken in Ahmedabad city shows that by the closure of the textile mills, some of the unorganised sector workers, for examples, the women who were engaged in patch work activities were affected. For patch work, women procured the waste cloth from the textile mills. A co-operative of the patch workers, organised under SEWA (Self Employed Women Association), union reported that the supply of waste fell by 75 percent due to the closures. Hence, employment also fell. Due to
very high competition for employment and market for goods produced in the IS, the patch workers have been unable to find any alternative employment.

Mahadevia *et al.* (1996) in their study on steady and secure employment and sustainable income of workers in IS in Ahmedabad city find that in IS workers neither have steady employment nor secure and sustainable income and thus lack in economic and social security. They do not have access to housing partly due to lack of access to finance, without housing, access to basic services is also denied. As a result, unorganised labour tends to have lower social development than that of the organised workers.

Rani and Galab (1998) from their survey in the slums of Hyderabad city, in case of traditional activity like Sandal making, reveal that this IS can no more be considered as residual sector as certain sections of it, especially the manufacturing sector offers income comparable to FS wage. It is showed that there is also a lot of variation in the monthly income accruing to the sandal making households across the methods of production organisation. The United Production\textsuperscript{vii} Organisation provides a family income of Rs. 15678 per month which is more than ten times the income of a tied production\textsuperscript{viii} household (Rs. 1531). The income per person working in the family is Rs 2613 in case of united production units as against of Rs. 744 of tied production units. The united production households enjoyed highest incomes which may be attributed to their organisational and managerial capabilities. These households showed signs of economic well-being and prosperity. On the other hand, the tied production households received marginal income. It is only a survival activity for them and they continue in it as there is no better alternative employment available.
Panda (1998) studied about IMS in class-I town Cuttack in Orissa and throws considerable light on issues of structure and productivity, size and growth, socio-economic profile and linkages in respect of the urban IMS. The main findings of his study are:

(i) The fixed capital required to create a job in the IMS is 11 times less than that of the FS.

(ii) Gross value added per employee in the IMS is much lower than that of the formal manufacturing sector (FMS) but gross value added per rupee of fixed assets is 7 times higher in the IMS than that in the FMS.

(iii) Presence of child labour in the IMS.

(iv) Earning level of the entrepreneurs is positively governed by their education levels.

(v) Majority of the IMS firms are indebted.

(vi) Average size of employment in IMS is 3.43 persons.

(vii) Informal sources of finance dominated by money lenders play a significant part in providing credit to IMS units for meeting their working capital requirements.

(viii) Direct forward linkage of IMS units with the FS is very weak; the direct backward linkages between the two sectors are not very strong.

Das (2000) studies the informal manufacture of ceramic ware sub-sector in Gujarat covering three cities – Than, Naroda and Himatnagar. From the study, it is seen that the product profile and technology used by the FS units are generally larger in both size and turnover compared to the informal (unregistered) ones. 90 percent of surveyed formal
organised) units had per unit turnover between Rs. 5 lakh and Rs. 10 lakh and the surveyed informal units had per unit turnover of less than Rs. 5 lakh. The workers of this industry are predominantly from socially deprived communities. Surprisingly high proportions (50%) of employees of the industry are in informal units. Most of the informal manufacturing activities are done in household level and workers are the family members. The average number of workers per unit in informal units is 6.2 persons but in case of formal units it is 22.2 persons. Of course, the sex of the workers across the two categories of units seems familiar with about one-third of the workers being females. The piece-rate system of wages are widely prevalent among informal units. In general the average daily earnings are low (as compared to the daily minimum wages of Rs. 50 for female and Rs. 62 for male) across both for formal and informal categories of units.

Ambalavanan, and Madheswaran (2001) made a study in Erode district of Tamil Nadu about the social protection for urban IS workers. The study was made especially with the objectives of studying the sex and age composition of workers, health status and health security of workers and the willingness to participate in a contributory insurance scheme. The sex composition of the sample respondents of the urban IS reveals that the percentage of female workers in different units is much lower than that of male workers. In different sub-sectors of the IS, the percentage of female workers are 14.3 percent in tannery, 18.8 percent in bleaching, 22.7 percent in calendaring and 27.2 percent in dyeing. About age composition, more than four-fifth of workers belonged to the average age group 15-45 years in all the processes. When it comes to religion, there is also mixed group of population, with 98.6 percent Hindu, 1.2 percent Muslims, and 0.2 percent Christians respectively. In case of
education of the IS workers, 40 percent were illiterates, nearly 30 percent had primary levels of education and approximately one-fourth of them had secondary level of education. Only 2 percent had higher secondary level education. In respect of wages of the workers, it showed variation among these sub-sectors of the IS. On the other hand, in case of health aspects, more than 55 percent workers working in these urban informal sub-sectors were subjected to health hazards and they are suffering from various types of occupational diseases. Only in case of 5 percent sample workers, their employers are meeting the medical expanses of workers. In case of contributory insurance scheme, about 79 percent workers had expressed their willingness to partake in the scheme.

Sundari (2005) made a study in Tamil Nadu about the real earnings of migrant women engaged in urban IS’s activities. Overall, a comparison of the real earnings of migrant women and non-migrant women for 2002-03, reveals that the former earn more than the latter, which justifies the movement of women from rural areas to urban areas. Employment wise comparison of yearly real earnings of migrant and non-migrant women workers in the IS indicates that in all types of activity, the earnings of migrant women exceeds that of non-migrant women. In terms of money wages, the urban migrant women in the IS earn Rs. 6940 per annum or Rs. 578 per month, more than the non-migrant women (Rs. 3795). Women migrant to urban areas earn more than the non-migrant women because there is lack of alternative employment opportunities in the rural areas. Moreover, the scope for self-employment is limited in rural than urban areas. There is great demand for domestic and construction workers in the urban areas. The major advantage of employment in the urban informal labour market is that most migrant women could avail interest free loan from
their employers, which is woefully not available to their counterparts in their place of origin (rural area).

Madhavi (2006) made a field survey in Karimnagar and Nizamabad districts of North Telengana region of Andhra Pradesh about the informal beedi manufacturing activity. So far the employment of workers in informal beedi rolling activity is concerned, Andhra Pradesh employ around seven lakh workers, of which five lakhs are employed alone in the North Telengana region. The leader is Nizamabad district which employs around 2.5 lakh workers followed by Karimnagar district, which employs around 2 lakh workers. It is obvious that Nizamabad and Karimnagar districts have huge concentration of informal beedi producing households (enterprises). Over the decades, either because the handloom industry was closed down or shifted from handloom to powerloom, those who lost employment took up beedi rolling activity. As a result, beedi rolling gradually shifted from factories to the homes of the workers. In fact, now in that region, for an unmarried girl, knowing the skill of beedi rolling is a qualification for marriage. This informal household beedi rolling activity is generally undertaken by the women workers. The field survey threw light on the exploitation of the informal beedi rolling workers, depriving them from the actual wage by the employers and middlemen.

Upadhyay (2007) on the basis of her study made in Arunachal Pradesh shows that the share of informal enterprises is as high as 93 percent in the total spread of formal and informal enterprises and these account for around 50 percent of the total persons employed. The study also shows that there is little inter-district variation in the share of informal enterprises, which is lowest in West Siang (89.20) and the highest in Tawang (96.77). In
terms of size of employment, 32 percent of the enterprises operate with only one worker, 24 percent employed between 2 to 3 workers, 26.7 percent employed 4 to 7 workers and 17.3 percent employed 6 to 9 workers. Majority of entrepreneurs in the IS have studied up to primary school. Only 9.3 percent of entrepreneurs are illiterate, only 5.3 percent have studied up to class 12 and 1.3 percent have studied beyond that. The surveyed informal enterprises were clubbed into four broad categories, and it is found that retail trade, hotels and restaurants account for 32 percent of all, followed by, manufacturing and processing 30.7 percent, community, social and personal services 29.3 percent. Transport and communication services account for 8 percent of all enterprises. The enterprises operating without a premise was found to be 18 percent and mainly these enterprises are involved in transport, petty trading in vegetable and textiles. Institutional source of credit have virtually played no role in the urban IS so far as sources of start up capital is concerned. So far migrant is concerned, out of the total workers surveyed, migrants constitute 86.2 percent. These migrants also include the workers who have migrated from other parts of the state to the capital in search of work. But largely the migrant population consists of migrants from other states and countries like Bangladesh and Nepal.

Dev, et al. (2008) made a study about informal handloom weaving enterprise in Chittoor, Krishna, Karimnagar, Nalgonda, Vissakhapatnam, Guntur and Medak of Andhra Pradesh. The study showed that the individual weaver, working from home with his own loom continues to be the basic unit of production in informal handloom weaving sector. However, though there are a few independent weavers, production and marketing are generally organised under two institutional structures – co-operatives and master weavers. In
some areas, there are also a few middlemen who are generally promoted and controlled by
the master weaver. The informal handloom sector has maintained a steady 20 to 25 percent
share of total textile production of the state. The field level observations in the course of
study revealed that independent weaving is highly seasonal in nature. During peak seasons
such as festivals and marriages, the relatively better off weavers take up independent
weaving to enhance their income through optimum use of family labour. In respect of
monthly income of the household informal weaver, working under a co-operative ranges
from Rs. 585 in Karimnagar to Rs. 4121 in Nalgonda. For shed weavers, it ranges between
Rs. 448 in Medak and Rs. 2398 in Guntur. The incomes of informal household worker under
master weavers ranges from Rs. 856 in Medak to Rs. 3583 in Nalgonda, while among shed
weavers the figures ranges between Rs. 827 in Medak and Rs. 2017 in Guntur.

1.4 Studies on IMPUs in India

Most of these studies undertaken on IS throw considerable insight into the nature,
size, capital base, labour productivity, value added, employment generation, level of living,
intra and inter sectoral linkages in the IS. Some of them too explain the nature, and status of
employment, earnings and conditions of living of employees in the IS. A lot of these no
doubt discuss the problems and prospects of this sector and suggest policy measures to make
IS as an instrument of socio-economic development in days to come.

However, most of these above studies have been general in nature and have included
activities/segments of the urban economy such as manufacturing, trade, transportation, milk
production and its distribution etc. within the ambit of IS. To make the policy formulation
process more objective, relevant and pin-pointed, sector specific studies are required to be undertaken. Sector specific studies also compliment the information on general studies and surveys on the IS as a whole. Amongst all the activities of the IS in the urban economy, milk production and its distribution (dairy) occupies an important place for various reasons. Firstly, as has just been pointed out, sector specific study will be more relevant for micro level policy formulation. Secondly, it plays an important role in absorbing labour. Thirdly, it is capital saving in nature as: (i) it has got more potential for labour intensive enterprise than the formal dairy sector, (ii) it relies more on household savings, (iii) it is based on locally available resources, (iv) it does not require any complex machine and technology, (v) it acts as a training ground for skill formation and entrepreneurship development. Further, informal milk producing enterprises are believed to take care of an important part of the food needs of the urban people. Hence in our study in the city of Guwahati, we have concentrated on the informal milk producing (dairy) sub-sector of the IS.

In Indian context, few studies have been undertaken on this particular sector, i.e., IMPUs. A brief review of literature on this enterprise with respect to different aspects of its production and its producer is given below. For a systematic and better understanding, they have been grouped and discussed below:

1.4.1 IMPUs and Employment

Christy and Thirunavukkarasu (2002) explain in their study on “Socio-economic dimensions of female participation in livestock rearing: A case study in Tamil Nadu”, that women have a close association with livestock enterprise specially IMPUs in the state. So
far the employment of women in IMPUs is concerned, the results of their study reveals that on an average, firm women spent about 294.34 minutes (almost 5 hours) per day per household on ‘in-caring’ of the ruminants (milch animal).

Roy (2004) makes a study in Malda district of West Bengal, covering the period of 2000-2001 about the employment potentiality of IMPUs and sericulture units. It is found from the study that the family labour employment in IMPUs is 89.50 percent as compared to 87.18 percent in sericulture.

On women employment in informal dairy units, Ashok and Somasundaram (2004) make a study in Thirunelveli, Thoothukudi and Virudunagar towns in Tamil Nadu, covering the period 1993-2003. From the study, it is seen that in an IMPU, among the family labourers, males contribute 44 percent and female contribute 38 percent and the rest by the children.

Sarma and Sarma (2004) in their research study show that in Rajasthan per worker employment from crop and informal dairy production units are 80 man-days and 123 man-days, respectively.

Sidhu and Bhullar (2004) make a study in Punjab and find that the demand for labour employment in crop sector has decreased by 23 percent between the periods from 1987-89 to 2000-2003 and in case of IMPUs, it has increased to 41 percent over the same period.

Tuteja and Singh (2004) in their study undertaken in Haryana State show that the milk processing units on an average generate employment of 8.40 persons in Gurgaon and 5.86 persons in Jind districts per day.
1.4.2 IMPUs and Income, Cost and Profitability

Rao et al. (2004) from their study in the district Kanpur (Dehat) of Uttar Pradesh show that the total maintenance cost of a milch animal (cow) per lactation has increased as the enterprise size increased. On an average the maintenance cost of a milch cow during a lactation period comes to Rs. 10278.63. Among all costs labour charges accounts for the highest share followed by fodder and concentrates. The gross income from milk production is higher on large producing units because of excess utilisation of concentrates by large producing units. On the cost and profitability of informal dairy units, it is the highest on small units with the ratio of 1:1.31.

Reddy, et al. (2004) in their study bring out that the net cost of maintenance of a crossbred dairy cow per day is Rs. 38.99, Rs. 49.36 and Rs. 48.88 in Andhra Pradesh, Tamil Nadu and Karnataka respectively. The cost per litre of milk works out to Rs. 5.48, Rs. 7.20 and Rs. 5.48 in the same order. Feed cost is the major component in gross cost which accounts for 63.88 percent in Andhra Pradesh, 72.14 percent in Tamil Nadu and 73.62 percent in Karnataka. The net profitability varies from 43 percent in Tamil Nadu, 70 percent in Andhra Pradesh and 83 percent in Karnataka.

Sidhu and Bhullar (2004) from their study show that the income from informal dairy producing unit on an average increases from Rs. 6216 during 1987-90 to Rs. 10547 during 2000-03 at constant prices at annual growth rate of 4.66 percent, while the farm business income from crops goes up from Rs. 26426 to Rs. 35027 respectively during this period at the growth rate of 2.08 percent per annum in Punjab.
1.4.3 IMPUs and Finance

Sidhu and Bhullar (2000; 2004) in their study show that the growth of informal dairy (milk) producing units in the state of Punjab has been facilitated and accelerated by the easy availability of institutional credit to the producers.

Srikant (2004) in his paper, “Dairy development in Maharashtra: An economic analysis”, shows that the state government of Maharashtra is giving institutional and organisational support in terms of credit delivery and insurance, to boost the informal dairy sector.

Purohit and Jambagi (2004) in their study, “Economic impact of new breeding technology on dairy farming: A case study of Bagalkot district in Karnataka”, reveal that there is not any effective credit/loan facility to the IMPS from the nationalised banks.


Kondal, et al. (2004) study, in Western Himalaya, the prospects of IMPUs. Their study reveals that there is lack of bank loan to the informal milk producers for purchasing improved cows at lower interest rates.

Verma (2007) shows from his study undertaken in Indore district of Madhya Pradesh that non-availability of credit is the main constraint of the IMPUs. The FS financial
institutions do not provide credit facility to the IMPUs, as a result, the entrepreneurs of the IMPUs are facing the problem in improving and extension of their enterprises.

1.4.4 IMPUs and Linkages

So far the linkage effects of the IMPUs are concerned, Sidhu and Sidhu (1990) in their study made in Sangrur district of Punjab, show that IMPUs are earning good income from their enterprise. The Informal Milk Producers have formed the Milk Producers’ Co-operative Societies where the societies take the risk of marketing of producers’ milk. The IMPUs are selling their finished product to the societies. So, there is direct forward linkage effect of the IMPUs with the FS (societies) and this has ended the monopoly of the milk vendors as well as the exploitation of the IMPUs by them.

Bal (1996) from his study undertaken in the state of Punjab shows that as a result of constitution of Milk Producers’ Co-operative Societies by the MPUs, the direct forward linkage between IMPUs and Milk Producers’ Cooperatives has been maximised. This has also ended the exploitation of the IMPUs by the middlemen.

Singh and Joshi (2007) in their study undertaken in Moradabad district of Western Uttar Pradesh explain that the IMPUs sell their whole produced milk to the co-operative society. As a result, the direct forward linkage effect of IMPUs with the FS (co-operative society) is very strong in terms of marketing of milk and the direct forward linkage of IMPUs with the IS is nil.
Verma (2007) throws light on the linkage effects in his study made in Indore district of Madhya Pradesh on economics of production, marketing and constraints of buffalo milk. The study shows that there is lack of market for produced milk. The IMPUs are selling their product to middlemen or Guwalas. The producers are being deprived from the actual price of their product and thus exploited. The IMPUs have no any organised form of co-operative society. So the direct forward linkage of the IMPUs with the IS (middlemen and Gowalas) is very strong and with the FS is nil.

1.4.5 IMPUs and Marketing

Marketing of milk produced by the informal milk producers is a risk taking game, as it is a perishable commodity. Sidhu and Sidhu (1990) have undertaken a study in Sangrur district of Punjab. The IMPUs of the district have constituted two Co-operative Societies – one is Jahangir Primary Milk Producer’s Co-operative Society and other is Bunga Primary Milk Producer’s Co-operative Society. These societies are providing assured market for the milk and dairy inputs. This helps to break the monopoly of private milk vendors and getting the fair price for the milk to the producers.

Bal (1996) has also highlighted the role of Cooperatives in marketing the milk produced by the IMPUs.

Sujatha, et al. (2004) have undertaken a study on market structure, price spread, marketing cost and marketing efficiency for milk in the co-operative and informal sectors of Andhra Pradesh. A total of 120 milk sellers were selected randomly from four districts, viz., Guntur, Krishna, Nellore and Prakasam of coastal Andhra region and four milk plants-two
milk plants each from co-operative and private sectors were selected. The market structure analysed using Hirschman-Herfindahl index. To estimate seller’s concentration, Bain’s classification was used according to which farmers are said to constitute a “atomistically competitive” market. Four marketing channels were identified for milk marketing in coastal Andhra region. From the study it was observed that in all channels price paid to the informal milk producers were high in the private sector compared to co-operative sector. The major constraints identified in milk marketing were high feed cost, inadequate price for milk, poor credit-facilities, disease outbreak, etc. Because of delay in the payment of fee for the milk sold to the co-operative society, the farmers approached the private firms. For enhancing the marketing efficiency of milk, infrastructure facilities like chilling plant, Pasteurisation and dairy products processing plants have to be developed.

Duhan, et al. (2004) have done a study on the nature of markets and role of co-operatives in marketing of milk in Rewari district of Haryana. A total of 120 informal milk producers were selected randomly from two blocks of Rewari district. Their study shows that seasonal fluctuations in prices of milk can be controlled through the intervention of milk co-operative societies. The establishment of milk processing units by the co-operative sector and provision of refrigerated vans and storage facilities can overcome the major constraints faced by the producers in marketing of their milk. Thus, co-operatives have a big role to play in marketing of milk and milk products.

An attempt has been made by Deokate, et al. (2007) to identify the channels involved in marketing, to estimate the marketing cost, market margins, price spread and producer’s share in consumer’s rupee in different marketing channels of milk in Amravati
district of Maharashtra. The primary data for the year 2002-2003 were collected by survey method from 80 IMPUs of the study district. Four breeds of milk animals, viz., local cow, crossbred cow, local buffalo and improved buffalo were considered for the study. The information was collected for a group of 20 IMPUs of each breed and the data were analysed using simple tabular analysis. For the investigation, five types of marketing channels were identified, viz.

Channel I-Producer → Consumer, channel II-Producer → Vendor → Consumer, channel III- Producer → Private milk collecting agency → Distributor → Consumer, channel IV- Producer → Hotel Owner → Consumer and channel V-Producer → Milk Co-operative Society → Government milk scheme Distributor → Consumer (only cow milk). The analysis indicated that among the various channels of milk marketing, Channel-1 (Producer → Consumer) has the highest producer’s share in consumer’s rupee for buffalo milk and cow milk being 97.26 per cent and 96.52 per cent, respectively. Thus channel-1 was found to be more profitable in regard to sale of milk directly to the consumer.

So far the marketing of produced milk of IMPUs are concerned, Sadeesh, et al., (2007) have conducted a study in the Puducherry region of Union Territory of Puducherry. Dairy firming is an important occupation in Puducherry, which is supporting a large number of resource poor families. The sampling unit consisted of small and large firm milk producers, together constituting a sample of 120 IMPUs. They discuss the marketing efficiency of milk in the various channels of marketing and constraints faced by the IMPUs in the production of milk and its marketing. Institutions like co-operative societies play a major role in procuring milk form the IMPUs in Puducherry region. The reasonable price
was the principal reason for marketing of milk by the producers. It was found that the marketing efficiency was highest in channel IV consisting of cycle milk vendors due to its short length and higher efficiency index. But the net price received by the IMPUs was found to be higher in channel III involved with private agency and commission agent with Rs. 10.50 per litre.

Verma (2007) analyse the price spread and marketing of buffalo milk produced by the IMPUs in Indore district of Madhya Pradesh. Of the four milk marketing channels studied besides direct channel (Producer → Consumer), the second channel, viz., producer milk → vendor → urban consumer not only had higher producer’s share in consumer’s rupee (80%) but the marketing efficiency as well. Remunerative price of milk is the top most marketing constraint followed by the delayed fractional payment for milk.

1.4.6 IMPUs and Its Determinants

With regard to determinants or causes of growth of IMPUs, Gandhi and Mani (1995) state that rapid increases in household income with urbanisation and changing lifestyle have combined a shift in consumption towards non-traditional cereals and value added products, including many derived from livestock and dairy.

Sarma (2004) states that urbanisation and per capita income are the stronger determinants causing the growth of IMPUs. He shows that the regression coefficient of urbanisation indicates that 1 percent increase in urbanisation result in about 0.84 percent increase in milk production and in case of price elasticity of demand, 1 percent increase in price of milk result in nearly 0.18 percent increase in milk production.
Gangwar, *et al.* (2004) show that the growth of population and urbanisation are an important determinant for development of IMPUs in urban and peri-urban areas.

Pathak and Jain (2004) study the cost and return estimates, and show that the benefit-cost ratio is an important determinant of bovine milk production in Raipur district of Chhattisgarh.

Choudhary (2007) shows in his study on economics, marketing and constraints of milk production in progressive dairy firms in Arang block of Raipur district of Chhattisgarh that input cost determines the net return of the IMPUs. His study is based on the data collected from 16 progressive IMPUs of the area for the period 2006-2007. The analysis of the IMPUs reveal that the average cost of milk production was Rs. 30,055.16 per milch animal per annum in large IMPUs, Rs. 20,243.14 and Rs. 26,224.85 for small and medium IMPUs respectively. On an average net return of milk production was worked out to Rs. 16,423.16 per milch animal per annum. The benefit-cost ratio in the production of milk varied from 1:1.60 to 1:1.91 in different categories of units. The average benefit-cost ratio is 1:1.60, which effects the growth and extension of IMPS.

In analysing the factors effecting the growth of IMPU, Gauraha (2007) shows in his study in Raipur district of Chhattisgarh that cost of milch cow rearing is a prime factor. He compares the cost of milch cow rearing between urban and rural areas. Per litre cost of milk production works out to be Rs. 5.15 and Rs. 6.32 for crossbred cow and improved buffalo respectively in urban areas, while it is observed to be Rs. 5.46 and Rs. 6.31 for crossbred cow and improved buffalo respectively in rural areas. The benefit-cost ratio was higher for
crossbred buffalo in urban areas as compared to rural areas. As a result the urban informal milk producers generally undertake crossbred milch cow dairy farming.

1.5 Our Study – Its Necessity

From the above review of literature on IS in general and IMPS in particular, it is evident that there is disagreement among scholars relating to the concept of IS, there is variation in the level and status of workers, productivity and socio-economic characteristics of workers and owners in IS. All the studies have examined the IS from different angles. Some have examined the linkages aspect, some have highlighted the productivity and income generation aspect, some have discussed the labour status and a lot have also discussed a combination of these issues and a few too have examined the problems of IMPS units in general. However, the necessity of the present study arises because of the following reasons:

Firstly, most of these studies have been undertaken in large cities. Recently the imperatives of environmental protection and promotion of balanced development have started emphasising spatial decentralisation of human settlements and industrial and commercial activities. Thus, smaller towns have become focal points of planning and development policies. This necessitates to examine closely the nature, growth and problems of IMPS in such towns both for testing the earlier theories developed in this respect and to deduce appropriate employment and development policies.
Secondly, most of the studies in India on urban IMPS have casually dealt with the problem of finance/credit aspect of the IMPS units. However, it is found from these studies that lack of finance happens to be one of the most important constraints in the growth of the IMPU. Hence, we feel the necessity to have an in-depth and detailed study on the financial/credit aspects of such units in our study.

Lastly, an exclusive study of IMPUs segment of IS would make intervention policies more meaningful.

It is in the context of all these issues that we undertake our present study on IMPUs in the city of Guwahati.

1.6 Our Definition of IS

In our present case study in the Class-I city of Guwahati, the concept of IMPUs is based on the following criteria:

It includes all those milk producing units in the private sector owned and operated by a single member of a household or with the help of paid and unpaid family members with or without having any hired labourer. The total number of persons including the owner operator, hired labourers, family workers working for the enterprise should be less than 10. This is in line with the recent definition of IS adopted by the International Labour
Organisation (ILO). We therefore exclude from the purview of IMPUs, the following enterprises:

(i) Enterprises working with 10 or more than 10 persons with or without hired labourers

(ii) All public sector units, Co-operative organisations, trusts working in the milk producing sector irrespective of the number of persons working there.

CHAPTER – II

DATA AND METHODOLOGY