CHAPTER 2

INDUSTRIAL CLUSTERING AND INDUSTRIAL DISTRICTS:
A SURVEY OF LITERATURE

The question of the growth potential of small firms has occupied research on developing countries from the 1960s onwards and the constraints on small firm performance have been analysed from various perspectives. The literature on industrial clustering raised very different questions from those that had been traditionally considered when analysing small firm performance and generated a new arena of small firm research. This chapter attempts to review the issues, analytical as well as empirical, raised by the literature that looks at industrial clustering and its link with economic performance. While this is the central objective of the chapter, it also looks at the genesis of this literature, its theoretical underpinnings and the perspectives of precursors to the theory. This survey raises a large number of issues that have been investigated in this study.

2.1 Genesis of Industrial Clustering Literature.

From the beginning of the seventies, it was generally recognised that, despite high rates of economic growth, most developing economies had been unable to productively employ and adequately remunerate the available labour force. It was found that a considerable part of the urban population made its living in small scale activities about which very little was known. Large parts of the labour force in developing countries thus were located in an institutionally determined part of the labour market that resulted in low earnings and skewed income distribution. The concept of the informal sector came into existence to explain this phenomenon, as did the literature analysing growth constraints on small manufacturing in general.

2.1.1 The Informal Sector Concept.

The most influential publication that placed urban small producers at the centre of the development debate was a report of the International Labour Organisation’s Kenya Mission (ILO 1972). These small-scale activities characterised by “ease of entry,
reliance on indigenous resources, small scale of operations, labour-intensive and adapted technology, skills acquired outside the formal school system and unregulated and competitive markets”¹ were termed the informal sector and were considered to form a sector of thriving economic activity that “had the potential for dynamic, evolutionary growth”². The mission’s report recommended that governments stop discriminating against these activities and advised that they be supported by channelling more resources to the informal sector as well as forging more links between the formal and informal sectors. With the ILO’s endorsement of the informal sector concept, there was a worldwide upsurge in research on small scale activities. The conclusions reached on the growth potential of small scale activities and small enterprises following this upsurge varied greatly.

The informal sector concept underwent many transformations and was debated widely, providing in a large part the rationale for supporting small scale enterprises in developing countries. To put it briefly, discussions on the informal sector concept range from it being considered in order to understand earning differentials and income distribution on the one hand (in dual labour market analyses) (Mazumdar 1976), to distinguishing between the 'protected' formal and the 'unprotected' informal sectors (Harberger 1971), to designating formal activities as mainstream ones and informal activities as a residual (ILO 1972), to considering informal employment to be primarily self-employment, as against wage-employment in the formal sector (Hart 1973, Sanyal 1991). In the dual market analyses mentioned above, the presence of the informal sector is considered to provide an explanation to a large extent for highly skewed income distribution in countries/sectors where low earnings of workers are not just related to factor supplies and worker abilities but to 'structural' features. In both this and the analysis that distinguishes between the protected and unprotected sectors, it is argued that formal sector employment is protected by legislation and the wage levels and working conditions here are not available to workers in the informal or unregulated sector unless they cross the entry barrier. The informal sector concept in both the above

¹ ILO (1972), p 6.
² Schmitz (1982), p 429.
are in terms of conditions of employment whereas in the third kind of analysis (ILO 1972) informal sector enterprises are looked at in terms of the nature of enterprises, the levels of skills, technology, markets catered to, etc. Informal enterprises are believed to form a residual sector that anyone who did not enter the formal sector could enter.

It can be seen that defined in any of the above ways, the informal sector is identified closely with the unregulated sector. It may be argued, thus, as Mohapatra (2002) does, that all interpretations of the informal sector, ranging from the 'miserablist' (referring to analyses that denounce it as the miserable low income, last resort sector) to the 'evolutionist' (referring to analyses that see in the informal sector a great deal of dynamism and vigour) are similar to the extent of making the informal sector synonymous with the absence of state regulation. Policy interventions that are suggested for the informal sector range from providing supportive services and extending some regulation to the informal sector and thus providing 'decent work' conditions in it (ILO 1972), to 'formalising' the informal sector, i.e., helping enterprises within it to gradually get transformed in size, forms of production as well as regulation to larger, more formal enterprises.

In India, in keeping with the notion of the informal sector as a residual sector in terms of legal status and a lack of regulation, standard analyses of the informal sector look at it in terms of the sector that falls outside the regulatory framework, or the 'registered' sector. Enterprises that are enumerated as 'registered sector' ones are thus considered to belong to the formal sector and obviously, the 'unregistered sector' becomes synonymous with the informal sector.3

The notion of the informal sector has been used widely in this study because the sector covered consists of a large number of enterprises which would be considered under informal sector enterprises under any categorisation, as Chapters 5 and 7 will show. In addition, the process of cluster development in the leather industry has been

3 The various ways to make such 'residual' assessments of the informal sector have been reviewed in Kundu (2001).
characterised by a growth of the obvious informal sector as well as informal methods of production used in even formal segments in the industry.

This study traces the process of informalisation that has taken place in the leather industry in India along with a tremendous growth in the formal sector, with both processes being complementary to each other. I argue that at least in the Indian case, the notion of the informal sector needs to go beyond conventional definitions that merely look at the unregistered sector\(^4\), to encompass processes that take place in the formal sector too for many industries. The process of informalisation thus is found to take place within the ambit of the regulated sector as well. Without this wider understanding of informalisation, an important aspect of the nature of cluster development, particular in some export industries in India, will be neglected\(^5\). In this sense, this study substantiates an argument made by Breman (1976) that by interpreting the relationship between the formal and the informal sector in a 'dualistic' framework where they are mutually exclusive, the unity and totality of productive systems in a typical developing economy such as India might get lost. The implication of this is that the nature of policy interventions that may be suggested to deal with a large 'informal' component in any industry/sector would vary depending on the perspective adopted.

The above constituted the essential aspects of the literature on the informal sector that are relevant to this study. The following sub-section looks at other literature on the small scale sector that preceded that which emerged on industrial clusters.

2.1.2 Growth Constraints on Small Scale Manufacturing.

Over the same period, there was a lot of discussion on what constrained growth in small scale enterprises in developing enterprises outside the informal sector concept.

Schmitz (1982) in summarising the literature that looked at the growth constraints on small scale manufacturing in the seventies, identified two categories: those that

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\(^4\) This consists of enterprises that are not enumerated under the Factories Act and form part of the National Sample Survey's Surveys of Unorganised Manufacturing. More details on the actual enumeration patterns are provided in Chapter 5.

\(^5\) For example, this is true of the garment exporting cluster of Tiruppur, as studies by Neetha(2001), Swaminathan and Jeyaranjan(1999) and Cawthorne(1995) show.
emphasise constraints of an internal nature (entrepreneurship, management) and those that stress external constraints (access to resources, exploitation by larger enterprises). Referring to literature that regards a lack of entrepreneurial or managerial skills as the major growth constraint, he argues that they are relatively less important as constraints or, on the contrary, have actually been present amply in small enterprise growth in several instances. What constrains small enterprise growth even when entrepreneurship, management, etc are present is actually a whole set of external factors such as the presence of large firms exercising control over them and the former contributing actively to accumulation in the latter, and other factors such as severe lack of access to markets, raw material, technology, credit and so on.

In a large number of studies undertaken to analyse the constraints on small scale manufacturing from the informal sector point of view as well as otherwise, as well as in policy initiatives that tried to address the issue of these constraints, the individual enterprise was considered the unit of analysis from a broad development perspective. Later, when industrial clusters began to be analysed for the factors contributing to their growth, it was the group of enterprises that got emphasised, and external constraints that were considered important in retarding their potential. The focus thus shifted in the meantime from individual enterprises to groups of enterprises with strong linkages between them. This will be considered later.

Alongside the enquiry into the employment and income generating potential of small firms, developed the analysis of the efficiency aspects of small firms. The main question that was of concern in this essentially neoclassical enquiry into small firm performance was whether they are efficient or not.

2.1.3 Neoclassical Perspectives on Small Firm Performance.
The main consideration for a variety of studies that went into the efficiency of small firms was whether policy initiatives should encourage or discourage small firms. From the mid-seventies or so, it was actively acknowledged that the small scale sector is or could be almost as efficient as large industry and that it can remain competitive for
reasonably long periods of time, and should be encouraged and supported by public policy. This understanding came from the recognition of several priorities of developing countries, such as the concern with unemployment and the need for employment generation (given the large scale sector's inability over time to create employment), the advantages with using labour-intensive technology, etc. It was recognised that developing countries cannot wish away the presence of small firms given their potential and could justify their continued existence if they were efficient.

In such analyses, it is assumed (Little, Mazumdar and Page, 1984) that factor prices and factor proportions vary with firm size and thus small firms are more labour using and less capital using than large ones due to factor price distortions. Since labour is assumed to be relatively less expensive and capital more expensive, price differences in factors of production makes profit maximising firms adopt more labour intensive technology. It is further assumed that in general, improvements in quality are related to greater capital intensity, implying that smaller firms tend to go in less for quality enhancing techniques due to factor price distortions. In addition, it is also assumed that small firms generally possess technologies of earlier vintages.

Small firms and their contribution to economic performance have been examined in these traditional models from the perspective of standard efficiency using allocative efficiency criteria. In standard models of production where equilibrium is attained at points of tangency between unit isoquants and factor price lines, differences between small and large firms result in different points of equilibrium for the two kinds of enterprises. These differences could be i) different sets of market prices -- in industries where elasticities of substitution are high, major differences in factor proportions are

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6 This view was contrasted with two other views- first, one that held that the continued existence of small enterprises is the result of market imperfections and resources used are sub-optimally allocated, such that the removal of such imperfections would reduce the incidence of small scale activity; and second, that small scale producers use resources not required by the modern sector and their productivity is unlikely to increase over time, so public policy should not unnecessarily encourage them, eventually resulting in their disappearance.

7 There are several reasons why labour might be assumed to be cheaper in small enterprises (Little et al 1984). In family enterprises, the opportunity cost of family labour might be low if there is underemployment. Household or other small establishments might be better placed to use cheap family or child labour and may be subject to less legislation or union pressure and keep wage costs down.
possible with different factor prices. ii) even with same factor prices, different
technologies might yield different optimum input combinations. iii) the presence or
absence of homotheticity of the production function may determine optimum factor
proportions. In any of these contexts, therefore, small firm existence can be justified as
long as they are efficient. Support to small firms has been justified in terms of permitting
the removal of impediments to the attainment of efficiency. If small firms exist in a non-
efficient manner, the result is assumed to be sub-optimal in general and not warranting
support or protection. The literature that came up around this line of enquiry looked at
constraints to small firm manufacturing in allocative efficiency terms and formulated
policies in this context.

Along with allocative efficiency, income distribution and employment arguments were
also advanced to support the promotion of small scale industries in the developing
country context. However, there was the implicit assumption that the conditions under
which small firm existence can be justified would change (i.e., factor price distortions
would disappear, technology gaps would narrow, etc) and small firms would be enabled
to grow gradually into larger enterprises to take advantage of scale economies, etc. Thus
small firm existence was deemed justifiable in certain sectors if technical and allocative
efficiency could be achieved after supportive policies correcting for market failures are
enacted. A large number of studies conducted mostly under the auspices of the World
Bank on small firm performance essentially examined whether this kind of efficiency
was being achieved or not. In India too, research on small industry focussed mostly on
these issues.

Small enterprise studies underwent a major change of emphasis with international
developments from the 1970s and with the focus now on SMEs in advanced countries.
Specific developments influenced the change in mode of analysis. First, there was
increasing evidence from advanced countries that small firms performed better in the
turbulence that started in the early 1970s, while large enterprises ran into economic

8 Little, Mazumdar and Page (1984)
9 Bhavani (1980), Goldar (1988) are two examples of the above-mentioned kind of work.
difficulties and shed employment. Small enterprises were found to be better as far as withstanding recession was concerned as well as in generating employment (OECD 1985, Loveman and Sengenberger 1989).10

Similarly, evidence from developing countries showed that clusters of small enterprises managed to overcome traditional constraints associated with small scale existence and break into national and international markets through intense inter-firm linkages and co-operation. With increasingly uncertain market conditions, industrial restructuring focussing on an important role of SMEs became a major topic of discussion11.

Second, in the context of increased globalisation and the increasing integration of developing country markets with international ones, the role of small firms in developing countries' trade and economies in general came under discussion as part of the discussion on the international division of labour and the role of developing countries in it12. This generated policy prescriptions and research on appropriate small sector policies in a globalising world.

Third, the nature of theorising around firms and how they behave began to be influenced by the New Institutional Economics, the development of Socioeconomics and the various theories of Industrial Organisation, which developed essentially using tools/concepts of mainstream neoclassical economics. Within these modified systems of enquiry, factors that were earlier ignored in economic enquiry such as the role of the family, social affinities and parameters such as inter-firm cooperation and trust came to be analysed when looking at what influences decisions by firms. Small firms, especially when they function in clusters, were found to function efficiently, with these factors being important.

10 In the late 1970s, David Birch demonstrated that small firms created the majority of jobs in the United States (Birch (1979), Loveman and Sengenberger (1989)). The OECD found in 1985 that in several of its member states there was a tendency towards the concentration of workers in small firms.
11 Piore and Sabel (1984), etc.
12 It was seen that small firms play a major role in the international trade of developing countries in areas where they had developed a competitive edge, typically in labour intensive sectors where low labour costs generated the advantage. A representative reference is Gereffi (1994).
The literature that grew around developments in small enterprise clusters in different parts of the world reflected all these developments as well as the newer theoretical insights.

The traditional neoclassical approach to SMEs has been described above. The following section will review the developments in industrial clustering and the various empirical experiences.

2.1.4 Industrial Clustering Literature.

In the last twenty-five years or so, there has been increasing evidence that groups of small firms, clustered together spatially and sectorally, managed to overcome traditional constraints associated with small-scale individual existence and break into large-scale national and international markets. It was found that firms in these clusters achieved high levels of efficiency through the development of complex relationships between themselves as well as the adoption of several forms of collective action. The case that attracted attention was that of Italy, specifically, the north-central and the north-eastern parts of Italy, which Italians called the Third Italy, where it was seen that clusters of small firms contributed significantly to growth as well as job creation. Those analysing Italy’s success termed these clusters "industrial districts", using a concept coined by Alfred Marshall in the early 20th century (Becattini 1979). The industrial districts of Italy generated a great deal of research and raised very pertinent questions in the area of small firm studies.13

These industrial districts are agglomerations of hundreds, sometimes thousands, of predominantly small and medium-sized firms oriented to the same sector, concentrated in a locally confined area. Typically, many stages of production and producer services are included within the district. The interest that got generated in these districts was primarily due to two reasons: first, because many of these districts demonstrated unusual

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13 In the Anglophone literature, the Italian case was brought into major focus with the publication of Piore and Sabel's book 'The Second Industrial Divide', although there had been discussions of the case before that. Whitford (2001) notes that Piore and Sabel's work constituted a 'big splash' in the Anglophone literature.
economic success on the Italian domestic market and also on the international market; second, compared to other forms of small firm organisation, they had the capability of providing good pay and satisfactory social conditions. Thus the Italian industrial district model held out the promise of a combination of economic vitality, characterised by productive efficiency, as well as strong flexibility of response to changing market conditions, and equally importantly, very high labour standards. A variety of studies (Pyke and Sengenberger (1992); Piore and Sabel (1984); to name two) were undertaken to analyse this phenomenon. What happened in the Italian case is presented here.

2.1.4.1 The Italian Case- Representing the Textbook Model.

Before a description of the Italian experience, some points need to be noted. This is the only case being considered in a fair amount of detail because first, it represented a so-called textbook case from which various parameters and characteristics of successful industrial clusters were drawn that were considered generalisable across contexts; and second, in my view, it was the Italian experience and debates that generated a large number of questions that go beyond standard ideas of efficiency and success to cover broader areas such as the role of the state in industrialisation and the importance of labour welfare in constituting a distinct aspect of success in small sector development.

It has been attempted here to present the Italian case covering as many diverse aspects as possible, encompassing empirically observed diversities as well as the major theoretical and practical debates that took place around the experiences. However, specific aspects that permit the examination of the possibilities of replication or the lessons to be learnt have been focussed on more.

Going by the definitions used in Italy, in a census conducted in 1971, 99.5% of the enterprises in Italian industry were found to be small (employing less than 100 workers), accounting for more than half of industrial employment, of which 23% of industrial workers were employed in concerns labelled artisan (being defined as concerns employing a maximum of ten or twenty workers) (Weiss 1988). This trend to smallness increased between 1971 and 1981, with massive increases in the numbers of craft
concerns and micro units. While this has generally been true of the country as a whole, it has been especially true of the prominent industrial districts. In 1991, a law was enacted to define and support industrial districts and thus formally moved them into national industrial policy. Italy’s successful industrial districts are concentrated mostly in three regions: Emilia-Romagna, Tuscany and Veneto. Even in the mid-1990s, they were characterised as being heavily populated by small and medium enterprises. Most of the districts have had and continued to maintain competitive capabilities on international markets. Worker earnings were reported to be at least equal to, and often above national levels. Employment creation was better than national averages and unemployment levels were generally below levels seen elsewhere in Italy. Thus, in general, the districts did very well in terms of employment, incomes and exports, while remaining dominated by small firms, although there were variations.

To put the Italian picture in perspective, Weiss (1988), comparing Italy’s case with that of other European countries notes that while in many, small capital dominated in the post-war years, it was only Italy that remained an economy organised primarily around small-scale production in the eighties. The questions that got raised were: How did this form of production organisation come into existence? What was it based on and did it in any way signify a new paradigm of development?

The large volume of research on the Italian experience has focussed on specific aspects of economic organisation in Italian industrial districts:

- the existence of networks of small, relatively autonomous decision making units, closely interdependent, each with equipment and skills to perform a limited range of tasks, using

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14 According to Cossentino et al., (1996), in Carpi which falls within Emilia-Romagna, 87% of clothing and knitwear workers are employed in firms with fewer than 50 employees, and 87% of all firms employ less than ten employees. A review of Veneto region in the same volume describes it as consisting of enterprises employing between 4 and 20 employees in eleven districts. (District here refers to industrial district).

15 In the same study, it is shown that in Veneto, 5 out of 11 districts were exporting 70% or more of the value of their production in 1991, and all were exporting at least 30%.

16 In Veneto, the spectacles district of Belluno increased jobs by 77% between 1981 and 1991, and the jewellery district by 92%.

17 Both Veneto and Emilia-Romagna had unemployment rates in 1994 of 6%, compared to 11% in Italy as a whole. In the majority of districts in Veneto, unemployment was reportedly only 4%, with industry facing a severe shortage of labour in many cases.
flexible technologies rather than single purpose machines to perform different parts of the production process.

- high levels of inter-firm co-operation as well as competition based on high degrees of trust between entrepreneurs; a set of forward, backward, and lateral linkages among economic agents, based on market and non-market exchanges of goods, information, etc., permitting the spreading of risks across the cluster and encouraging a collective response to shared problems.

- the ability of the production system to reduce manufacturing rigidities and enhance the capacity to respond flexibly and quickly to shifts in demand.

- the generation of endogenous technological capability that facilitates continuous innovation.

- the existence of specialised institutions (consortia, government or local bodies, specialised companies) to perform tasks such as marketing or R&D for which individual firms might be lacking in skills or size to undertake individually.

- a common social and cultural background linking the economic agents and creating explicit as well as implicit norms for behaviour.

- an active role of the Italian state in fostering the kinds of co-operation seen as well as in providing supporting institutions.

- high labour standards.

To elaborate on the above features, small Italian firms proliferated in all branches of industry and operated with equal ease in the consumption as well as the investment good sectors from the early 1970s. Weiss (1988) notes, “Overall, the dispersed economy encompasses an extraordinary variety of technical capacities and productive arrangements. In some areas, like Modena and Reggio Emilia, it involves dense conglomerations of high technology engineering firms specialising in the design and manufacture of prototypes. In other parts, like Prato, Florence and Macerata, it centres on the craft-based, multi-billion dollar export industries of footwear and textiles”.

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18 Whether producing shoes, textiles, domestic appliances, machine tools or agricultural equipment, small manufacturers offered an extraordinary variety of items and specialised in virtually every phase of the production process (Brusco 1982).

What is important to note is that these districts came up in sectors where it was possible to break up the production process into many component sub-processes that could be done by separate units, making decentralisation possible.

Decentralised production as a widespread, distinct organisational form came into existence in Italy as an immediate response, among other developments, to the crisis that large scale production organisation faced in the form of waves of strikes by labour in the 1960s, to which decentralisation was the response by Italian employers. The period from the early 1950s to the early 1960s in Italy was that of rapid industrialisation with a rate of growth of 5.4 % per year which was mostly based in the ‘Industrial Triangle’ regions of the north of the country. Many sectors were faced with severe labour shortages and the main industrial areas were overcrowded and suffering from severe external diseconomies of concentrated development. Trade union power in Italy was greatly enhanced in the late 1960s, and unions had acquired enough strength in the large firms “... to make redundancies almost impossible; to protect their shop-floor representatives and to force employees into plant-level bargaining; to exercise a certain degree of control over working conditions; and sometimes even impose changes in the organisation of work” 20. This also coincided with the growth of left-wing politics and an important role being played by the Italian Communist Party. There was an increase in wages as well as the generation of a new industrial climate as a result of trade union ascendency and this generated an organised response from industrialists to break the strength of the trade unions. Employers thus sought to offset the effect of unionism by shifting production towards the small firm sector.

Whole departments of production in large plants were shut down, and activities previously done in-house were handed over to small firms in the vicinity, which began to function as subcontractors. Another development that prompted the move towards decentralisation was the emergence from the mid-60s of a significant demand for more varied and customised goods, produced in short series, alongside that for standardised goods (Brusco 1982). With this, the advantages of mass production technology

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20 (Brusco 1982), p 171.
involving assembly line production using specialised machines in large factories were rendered relatively redundant and production in smaller units using more flexible machines became more viable. In addition, this deverticalisation of the production process took place in industrial sectors where it is possible to fragment the production process without recourse to inferior technology.

Before this, the small scale sector in Italy, though significant in terms of numbers and diffusion of small producers, was represented by what Brusco (1990) called the traditional artisanal model. This form of production organisation, typically characterising the 1950s and the early 1960s, consisted of firms using rudimentary and very labour-intensive techniques and paying very low wages, and the existence of imperfectly competitive relations between firms. Mainstream discussion analysing the phenomenon of large versus small firms and their role in Italian industrialisation argued that the North of the country, characterised as it was by the presence mostly of large, capital intensive, efficient, high wage-paying firms, should finance the transformation of the inefficient small firms in the South through a reduction in wages in the former and standardisation of the wage structure in the North and the South. Others argued that that larger firms should be made to produce in the South in order to develop the area by bringing in FDI, etc. Implicit in these analyses was the notion that large firms are more efficient than smaller ones. This notion was to undergo significant revision subsequently.

Following the wave of decentralisation that took place in Italy in the late 1960s, the small scale units that came into existence essentially as subcontractors were classic sweatshops that "used rudimentary technologies, evaded taxes and payments to the social security system, ignored health and safety regulations, and when the market demanded it, insisted on brutally long working hours" (Piore and Sabel 1984). This has been referred to as the 'dependent subcontractor model' in Italian small sector development (Brusco 1990). While this characterisation of the small scale sector as essentially inefficient summarised the conclusion reached by bulk of the research at the time, it was also pointed out that small firms in certain cases were beginning to be
efficient in a production sense, though paying low wages (Brusco 1982). There was also the opinion that small firms were producing, during times of cyclical upturns in demand, what large firms could not produce due to a lack of capacity, whereas others felt that there was a decentralisation of stages of production, with the intermediate, more dirty stages being done by the small firms. Thus this stage of Italian small scale sector development seemed to exhibit features of such firms seen in developing countries today.

A different picture, however, emerged in a number of industries and towns that had become economically successful from the mid-1970s, which Brusco (1990) has called the Industrial District-Mark I model. Dependent subcontractors began to form federations and work collectively to devise innovative products and processes that would give them independent access to markets. A system of strong linkages between firms and a great deal of co-operation even while competing for the same market came into existence. From this period onwards, the notion that the unit of analysis should be not a single firm but a cluster of interconnected firms became prevalent and this kind of cluster was christened the Industrial District by an influential Italian economist (Becattini 1979).

In such a district, it was seen that there exist final good firms that sell in the final market, stage firms that are involved in one stage of production, and intermediate good producing firms that supply accessories and such to the stage firms or final good firms. The indivisibilities in administrative work, book keeping, acquiring raw materials, coordinating credit, etc that give larger firms an advantage over smaller ones were overcome by the creation of strong associations that provide these services and establishing on a co-operative basis the conditions for achieving economic scales of operation. In this period, therefore, the crystallisation in an extensive manner of norms of cooperation between firms for a joint advantage took place. Until this phase, it was

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21 Sebastiano Brusco, who has been one of the prominent commentators on the role of SMEs in Italian industrial development, distinguishes this position, which he put forward (Brusco 1982) from the previously stated one in emphasising that efficiency and wages were not linked and that possibly scholars researching the phenomenon assumed low-paying firms to be of low efficiency.
clear that there were advantages accruing due to the agglomeration of firms, generating the standard agglomeration economies, but from this phase, the role played by joint action, emphasised a lot in the literature, was significant. This, among other things, was facilitated by a history of cooperative behaviour, as Dei Ottati (1994) found in the case of Prato in 1950. The widespread cooperation among firms that was seen in this phase had a lot to do with political factors, as also social and cultural factors. It was explicitly recognised during this period that cultural factors, social affinities and an 'industrial atmosphere' play an important part in the Italian industrial districts.

Finally, in what Brusco (1990) calls the Industrial District- Mark II model from the beginning of the 1980s, there was very active intervention by the State in the development of the industrial districts. What distinguishes this phase from the previous one is the nature of technological development that became necessary and possible in order to cater to an international demand that was highly fragmented, while at the same time insistent on quality and the production of high value-added goods. It was recognised that there was inadequate provision of technological, marketing, advertising and financial services at competitive rates to individual firms and that small firms, while in a position to effectively undertake small batch production of high quality, lacked the size or the wherewithal to invest in these services individually. The setting up of Real Service Centres in industrial districts that provided these services through cooperative efforts and were funded through public-private partnerships was a major feature of this phase of development.

What emerges from the delineation of the phases of small firm development in Italy is that what could be considered a regression in the industrial division of labour (Piore and Sabel 1984) in the form of the compulsory subcontracting to circumvent unionisation was turned into an advance in a new direction through conscious State policy aimed at a certain kind of development for the areas concerned. Among other things, the role that the Italian State played in the creation of the industrial districts was crucial, as a large volume of research has pointed out. (Brusco (1982), Weiss (1988) to name two references). In most analyses, the role of the State has been discussed mostly only for
the phase in which real service centres were set up and were understood to be correcting
for market failures, essentially when small individual firms found it difficult to provide
for themselves scale intensive services such as technology, marketing and so on. Trigilia(1990) notes that the State provided collective goods, in the form of the real
service centres, infrastructure and social services, but a large part of State intervention
also was non-economic, in terms of brokering compromise and cooperation between the
various players in the economy.

A more active role played by the State in Italy in fostering cooperation, ensuring
rewards to labour, and directly enacting laws to encourage small scale business is an
aspect that has been discussed extensively in the literature that emanated out of Italy
especially in the earlier phases, but has been relatively understated in the large literature
on industrial districts in other parts of the world or industrial clusters in general,
particularly that which has come out in the 1990s. This will become clear in the
discussion on factors that have contributed to good or bad performance of industrial
districts in other parts of the world and industrial clusters in general, and is an aspect
that this study will seek to emphasise.

A distinctive characteristic of the Italian model that provokes interest and constitutes an
important aspect of the above mentioned ‘advance in the new direction’ is the nature of
industrial relations that developed, especially in the region of Emilia-Romagna, where
the Italian Communist Party had significant political presence. Given the history of
strong trade union movements in the area, a large segment of workers in the small scale
sector were unionised, including all enterprises with more than thirty employees,
covering more than half of the labour force in the 1970s (Brusco 1982). In this unionised
segment, trade union representatives were well recognised, labour laws respected, and
plant level bargaining which negotiated work organisation as well as job ladders within
the firm taking place. All this was possible due to a strong tradition of popular
mobilisation that could block factory closure by employers. At the same time, the unions
were given credit for greater flexibility by not bidding wages up too strongly, in
enforcing contractual regulations concerning safety, layoffs, etc. Thus, ‘... it is precisely
the strength of the union and its flexibility that guarantee at the same time that the negotiations will produce a satisfactory result without concessions and that the terms of the agreement will be enforced without subsequent flare-ups of localised conflict or idleness among the workers. Thus, even though the union exercises a real control over working conditions in the plant, the employer enjoys a secure climate which makes possible a greater degree of planning of the volume of production and investment.22

The rest of the sector consisted of the non-unionised, heterogeneous segment of the labour market, characterised by very high levels of wage dispersion, where redundancies were possible with firms hiring and firing according to demand.

The discussion above represented the general tendencies over the period mentioned above and did not in any sense mean that these tendencies were uniformly true across sectors, regions and time. First, while there is consensus that the Italian model did represent a unique model of small firm development, the dynamics of the situation has shown that several other developments also took place simultaneously. Second, there has been a tendency in a strand of the literature to present the Italian case as a certain kind of Utopia and constituting an altogether different form of economic organisation that is an alternative to existing ones. Any consideration of the reasons for the success of Italian industrial districts, lessons to be learnt or the possible replicability of the Italian model needs to look at the dynamic aspects over time, as well as to analyse the economic and political aspects that the developments implied.

Before going on to the aspects of change in Italian industrial districts and the new questions that they raised, the analytical issues that emerged with the Italian experience are summarised below.

Analytically, the industrial district paradigm set out the following issues: First, the unit of analysis changed from the single firm to a geographical area that includes many firms in a vertically integrated sector such that it resembles a giant firm. This implies that the

individual firm's objective is not the only one under consideration, but that of the 'system of firms' taken as a whole. Second, the products made in an industrial district are typically those whose manufacture can be separated into stages such that it can take place in a number of firms. Thus, firms in general are small and have flexible production methods such that each firm can offer a wide range of products using flexible technologies. These two aspects together imply that it is possible to reap economies of scale through the system of firms and thus individual firm size is not crucial to generating economies of scale. Third, the system generates agglomeration economies that accrue to any set of firms due to their clustering per se as well as economies due to what is referred to as 'cooperative competition'. It is not just that firms link up with each other because of production dependence, but because cooperation between different agents (between firms, between employers and workers, between firms and their suppliers of raw materials, between firms and their buyers) is seen as being non-hierarchical, this being crucial to productivity as a whole. This cooperation is not just in terms of having regular and systematic transactions in order to cater to the market effectively, but to also preserve the system of cooperation while being competitive, and to ensure labour standards as well. Fourth, it is considered necessary to 'foster cooperation' and thus the necessary institutional structures that ensure this, (in terms of state regulation, the provision of real services through various institutional arrangements, etc) are put into place. Thus, institutions to support small scale industrial districts are not merely in the nature of correcting for market failures but are considered necessary from the point of view of ensuring cooperation and labour standards. The maintenance of a combination of economic performance along with labour standards is thus dependent to a great extent on State regulation and involvement in the industrial

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23 Collectivism between enterprises takes a variety of forms, from consultation on technical matters, to sharing the costs of new innovations, to guaranteeing each other orders to disperse the risks of investments in sophisticated technologies. Within the firm, collaboration is seen between the skilled workers, technicians and owners within the same firm where the division of labour is fluid. And finally, consortia, co-operatives and associations of small producers organise marketing, bulk buying of raw materials, negotiate cheap loans for their members, etc.

24 Whitford (2001) notes that it was recognised early on in the districts as well as the literature analysing them that a non-hierarchical regional economy dominated by small firms faced certain structural difficulties, especially with the production of collective goods, and thus required the establishment of a formal institutional underpinning.
districts and is not merely related to firm behaviour. Fifth, cultural and social factors are considered to be crucial in providing the basis for the atmosphere of cooperation due to cultural affinities between different agents in the district. This is essentially through the generation of trust that is made easier through the institution of social relations. Finally, economic performance is ensured in the industrial districts because incremental technological innovation takes place continuously. This takes place on two counts: first, information and knowledge tend to flow freely between agents who have a common cultural background and who are located in close proximity to each other; second, the same closeness makes possible incremental innovations in industries where knowledge is very often acquired through direct experience and observation.  

From the analytical issues raised above, the questions that immediately arise in a wider context are: given that the Italian experience presented a model of viable small scale development, can this be replicated in other contexts, particularly in developing countries? What are the aspects of the Italian experience that are crucial for a viable alternative? Before attempting to answer these, the changes that took place in the districts in the nineties are briefly summarised below.

Changes in Italian industrial districts were generated as a result of pressures from the world economy in the eighties and nineties that forced them to restructure. At the same time, different districts experienced different evolutionary trajectories, provoking some analysts to argue that the focus should move back to individual firms. Others argued that with the new problems, the districts should strengthen institutions of cooperative competition, improving the capacities of the system of firms to cope with new changes, rather than focusing on individual firms.

25 Belussi (1999)
26 Whitford (2001) reviews the literature that appeared in Italian which presented this viewpoint. In summary, the position is that although a diffuse production system can be efficient and factors such as social affinities matter in reducing opportunism, a changing external environment requires strategic coordination, for which hierarchically organised production in an individual firm or in the leader firm-follower firm model may be more suitable.
27 Notable among them are Becattini who coined the term industrial district, Dei Ottati(1996) and Whitford(2001).
The external challenges faced by the districts were in the form of competition from low wage countries in lower ends of the market, quality upgradation by competitors at higher ends of the market, the discovery by large firms of 'lean' production, the need for scale in specific activities such as technology development and marketing and the difficulties faced by formal institutions such as industry associations and real service centres in solving problems of scale. The result of competition at lower and higher ends of the market was a shrinking of markets because faced with greater demand fragmentation and the seeking of new niches, districts tended to go in for higher value addition in products produced, and because higher end markets tend to be smaller. In addition, large firms tended to go in for a combination of productive decentralisation and single-roof restructuring where scale economies were needed. Activities such as R&D, in sectors where it was important, as well as brand promotion, were seen to be requiring scale, and increasingly, small firms were found to be turning to large distributors with connections outside the districts. Traditional institutions such as export consortia were also found to be insufficient because with firms competing on the basis of non-price quality differences, a common sales strategy was counter-productive. This implied that sales strategies might need to become more individual-unit based. The changes that occurred in the districts may thus be said to have struck at the very roots of 'cooperative competition'.

There are other aspects of change apart from the above ones. Cossentino (1996), looking at the changes in Emilia-Romagna, argues that changes have occurred in the nature of the labour markets, in the nature of representative associations of producers and the structure of Centre-State relations. These have generated constraints on the ability of the local system to generate resources and to safeguard the balance between co-operation and competition that has been characteristic of its development. For one, changes in the size distribution of firms, with the growth of large firms being significant has contributed to a shift in this balance. Thus striking conflicts have emerged between those

28 The self-sufficiency of industrial districts and their 'regional' nature thus came into question.
organisations representing small and medium-sized industries and those representing large ones.

In the labour market, which was characterised by relative ethnic homogeneity, there has been a steady influx of labour from third world countries and from Eastern Europe in jobs that are not being filled by local labour, generating new social conflicts as well as dual labour markets with 'stable' insiders and 'unstable' outsiders, and also jeopardising the co-operation norms based on reciprocity that depended a great deal on cultural affinities. In effect, the challenges that are being posed question the so-called 'cooperative competition', based as it has been on a relatively strong and overriding presence of small and medium sized firms, and the family and social structures that are typically Italian. It is in the context of the changes and challenges faced by the Italian industrial districts that the questions posed earlier to do with the possibility of their replication in developing countries, or what aspects are important in formulating a model of small scale development need to be answered.

In the literature that has analysed the factors responsible for the success of the Italian model, one can broadly distinguish between those that talk about it being a specific case that came about due to historical and cultural specificities, thus ruling out any general applicability of the experience in other contexts, and those that discuss it as presenting more general aspects of development that can be tried elsewhere as long as certain conditions are satisfied.

Those who argue for the historical specificity of the Italian experience and its non-replicability (for example Piore and Sabel (1984)) refer to the nature of the Italian extended family, the historical background of artisan activity and the genesis of small firms development in smallholder agriculture, the links from mediaeval times of Italian provinces to distant markets, and the nature of Italian politics. Kinship ties as a founding

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29 For example, two associations of small and medium enterprises argue firmly for a continuation of policies to support the industrial districts, whereas the association of larger firms, CONFINDUSTRIA, argues for an end to these, reflecting a desire by large enterprises to assume clear leadership roles, in contrast to more egalitarian relationships emphasised by the former.
principle of economic organisation were always important because many of the firms that existed were family operated firms, with family members expected to put in long hours at low wages to meet deadlines, and self-exploitation legitimated by a sense of obligation to the family, facilitating a degree of primary accumulation at the level of the infant firm. This is an aspect that has provoked a lot of discussion on the possible replicability of the Italian model in terms of whether the kind of familialism in economic relations that is seen in Italy is what generates the kind of co-operation observed and is therefore specific to it. It is argued that this ability to co-operate with competitors that has been crucial to Italian micro capitalism's success has been because of these forms of community based co-operation being important in Italy historically.

However, subsequent research on industrial clustering has located the success of various clusters across the world to this phenomenon of 'co-operative competition' that takes place across diverse cultural and institutional contexts, but with specific conditions obtaining. One of these conditions is the role played by the state in actively fostering such co-operation, in promoting small scale industrialisation. It was argued (Weiss 1988), that while the strategy of flexible production with its ability to constantly redesign products and to quickly reshape and reorganise the production process makes small scale production feasible in itself, the state provided the infrastructure encouraging co-operative efforts with the express objective of creating an industrial structure with small size as its underpinning. Thus it may be concluded that the small firm sector works best when competition is restrained by co-operation, and this co-operation stems from organisational features such as the way the polity and the market are motivated in specific economies. In other words, it is in contexts where the polity compulsorily provides the co-operative infrastructure and regulates and shapes the economy in various ways that small firm success of the Italian variety can be found. This is something that this study emphasises, that successful industrial clusters need to be consciously shaped to serve the objectives of economic performance combined with high labour standards, and may not appear spontaneously.

\[30\] Literature on industrial organisation started to look at ways in which family ties, historical factors, and trust affected transactions between entities largely in response to the evidence from countries such as Italy.
In the light of the success of industrial districts in Italy, the phenomenon was also absorbed within the larger post-fordist industrial reorganisation literature as the small firm variant of the flexible specialisation model (Piore and Sabel 1984), and as an aspect of the ‘new competition’ (Best 1990). These are not being reviewed here and will be referred to later in the chapter. Outside of the post fordist discourse, the phenomenon has been viewed by some as constituting a case for ‘regional productive systems’, local industrial systems, and endogenous local industrialisation.

The obvious questions that arise in today’s context are:

- Is it necessarily desirable to have a small-firm based system of production from a broader point of view, given small firms can by clustering together and linking up with each other acquire some of the obvious advantages of large firm production? This, as has been seen, is by the production system as a whole approximating a giant firm, at the same time retaining the flexibility of the structure of small production. In other words, is the small firm based form of accumulation in any sense preferable to that based on large firms, i.e., is there a normative aspect to small firm production from an accumulation point of view?
- What are the features of small firm cluster based organisational structures that are likely in economies in which large firms dominate overwhelmingly?
- Given the experience with cluster development in different parts of the world, what are the likely paths of small firm development in clusters in the current international context?

Answers to these questions need to recognise concretely the changes in the Italian industrial districts that were summarised in an earlier part of this chapter. While it may be argued that the small-firm dominated traditional district might present a desirable form of development from the small scale sector point of view, changes in the size structure of small firm agglomerations in response to changing demand need to be assessed for their ability to generate performance for firms as well as rewards for labour. The crucial issues in this context are whether, when lead firms emerge, the relationships
that develop between them and supplier firms are hierarchical and based on unequal exchange, and whether, with such relations developing, there are major changes needed in the structures of co-operation, as well as in returns to labour.

This study argues that even in a system where there is sufficient size dispersion between firms, those that belong to a cluster such as the industrial district find the need for collective services sufficiently. The provisioning of these services needs to come with significant state support especially to ensure that the advantages that accrue do so to all agents in the sector, including labour. What the Italian experience shows is that irrespective of the changes that have occurred with changes in competitive contexts, the continuing vitality of the districts is dependent on sustaining formal institutions that can ensure co-ordination, overcome scale difficulties, and generate the results historically generated by Italian industrial districts in terms of economic vitality and labour standards.

Along with the literature on the Italian industrial districts, there appeared evidence of industrial clustering and the existence of similar forms of production organisation in other parts of Europe as well as in developing countries. A large volume of research published in the 1990s looked at the existence of industrial clusters in different parts of the world. Beginning with the question of whether they fitted with the prototype Italian model, these went on to looking more specifically at various kinds of inter-firm linkages, the links between institutional contexts and performance, and the trajectories of cluster performance. The prominent experiences and the salient conclusions are summarised below. The section below draws heavily from two surveys of the evidence that are available in Cadene and Holmstrom (1998) and Nadvi and Schmitz (1998).

The main clusters for which extensive research has been carried out are the Sinos Valley in Brazil, Leon and Guadalajara in Mexico, Agra, Tiruppur and Ludhiana in India, to name only a few.

31 In Italy, Cooke and Morgan (1998) argue that from the Emilian experience of the 1990s, even in districts where groups of lead firms formed to generate internal economies of scale, the districts required to be connected to distant universities and research institutions, requiring collective provisioning.
The questions that were considered are:

1) What is the extent of clustering in general and of that involving sectoral and spatial specialisation? In the case of the latter, are clusters ‘localised production systems’, in the sense of having a range of producer services and ancillary activities?

2) What is the specific size dimension to clustering activity, i.e., has clustering been associated with small firms in general, in both static as well as dynamic senses?

3) What is the degree of importance of inter-firm linkages, vertical and horizontal, as well as backward and forward and how is it determined by market conditions?

4) What is the nature of the labour process in industrial clusters? Does clustering provide the organisational structure to ensure high labour standards?

5) How have supportive institutions, if they exist, evolved in the clusters and what have been the major motivating factors in their development? What has been the interaction between the government institutions and private initiatives in sustaining the cluster or the industry that it caters to? More generally, what has been the role of the state in fostering cluster development?

6) How have social networks, relationships and the social milieu in general affected economic outcomes in the clusters? In general, can these as well as institutions such as the family be considered to have played a positive or retrogressive role in the growth trajectory of the clusters?

7) In an overall sense, is there an industrial district ‘model’ that exists across diverse institutional contexts and across time? If so, what are the salient features and the factors that influence the existence and growth of such a phenomenon? If not, what are the insights that can be gained from experiences of industrial clusters across the world?

The findings have been as the following sub-section describes.

2.1.4.2 Industrial clustering—the broad dimensions.

A. Size composition and origins.

Overall, it has been found that clustering as a phenomenon is of significance to the industrial organisation of small-scale manufacturing in developing countries. Industrial
clusters are present in large cities, such as Lima’s ‘Complejo Gamarra’, a garment cluster, Lima’s Tacora metallurgical industry cluster, etc., in intermediate cities, such as the Sinos Valley footwear cluster in Brazil, Trujillo(Peru), or the Agra footwear cluster, the Tiruppur readymade garment cluster, the Surat diamond polishing cluster and the Ludhiana metalworking and textile cluster (India), as well as in rural areas, such as the Tegalwangi rattan furniture industry in Indonesia. Some of these clusters also have a considerable amount of depth in terms of the presence of intermediate good producers, ancillary activities and of agencies/individuals with industry-specific skills as well as those offering support to the industry concerned. Most of the industrial clusters that have been researched consist of a large number of small scale firms, although with a great deal of heterogeneity. Thus in the Sinos Valley footwear cluster, there were about 500 footwear manufacturers in 1991, with hundreds of subcontractors to whom they farm out their operations, and within a radius of fifty kilometres of Novo Hamburgo, the economic centre of the valley, most inputs as well as machines that are involved in shoemaking are produced, with different kinds of specifications (Schmitz 1995). The cluster also had a wide variety of producer services, about seventy export agents to undertake marketing operations and institutions to cater to and provide various services.

It has also been found that clustering occurs very often in areas that have a long history of production in that particular sector, which in turn has been true because of specific advantages that the particular region enjoyed in terms of its location historically. Industrial clusters that are still vibrant are therefore to a large extent those that have traditionally existed as centres of production of the good concerned. The Sinos valley cluster at the end of the 1960s already had around 400 firms producing for the internal shoe market with some suppliers of inputs catering to their needs. The major growth in the sector came after it started producing for the international market, but this was something that was built up on a structure that already existed. In Guadalajara, a prominent shoe cluster in Mexico, there has been a tradition of shoemaking in small

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32 These are some of the clusters for which research has been done in recent years.
workshops since the 19th century and in the 1920s, the shoe industry was the most important industrial sector in Guadalajara. Similarly, Agra and Tiruppur in India have been traditionally associated with shoe and garment production respectively. Thus, clustering has very rarely been associated with the creation of such clusters as part of conscious development of specific areas as regions of small scale industrialisation in the periods in which their growth has been seen, but has built on existing structures of economic organisation. An important implication of this is that many of the aspects of economic organisation in the clusters have to do with the historical roots, lending a certain kind of path dependence to the development of the clusters. This is an aspect that is related to the social milieu in the clusters, which is a point that will be considered subsequently.

Another general conclusion that emerges from the literature is that many developing country clusters have seen the major periods of their growth in response to a growth in exports. Thus, the outstanding growth of the Italian footwear industry, clustered mostly in Marche and Emilia Romagna, was export-led. (Rabellotti 1995).

B. Inter-firm linkages—the different kinds.

Coming to inter-firm linkages, there is a wide variety in the different clusters that have been studied and also changes over time in response to changing market conditions. This, in turn, has influenced whether the firms have remained essentially small firm dominated or not. This is because depending on the kinds of vertical links between firms and how stable these relations are, firms might choose to maintain relationships with suppliers or vertically integrate, resulting in larger size than before.

Inter-firm linkages can be considered under various heads: vertical links between small firms and between small and large firms in the production sphere, i.e., vertical relations between producers and suppliers at various levels in the production process; vertical relations between producers and buyers of final output, direct or through agents, trading

33 The Tiruppur garment cluster in India and the Sinos Valley footwear cluster in Brazil are other examples for this.
houses, etc; and horizontal relations between firms producing similar products. Thus, relations between small firms in a vertical production chain can be independent, or dependent as in a standard subcontracting relationship. Those between large and small firms can also be independent, when a larger firm buys its inputs from a smaller, independent firm, or dependent when there are subcontracting relations of various kinds. Even in the case of dependent relations, it is possible to have relatively less hierarchical dependence when the burden of adjustment to adverse conditions does not necessarily fall on the lower levels. Further, the links between the firms, whether independent or dependent (in the case of small as well as large ones) can be in terms of performing separate processes, or producing different products.

The aspects that are important are what kinds of relations exist, as described above, how stable these relations are, what factors generate them, how they change over time and whether they can be characterised as co-operative relations or not. To be more precise, one needs to decipher the extent to which the division of labour and the degree of specialisation have contributed to growth in the clusters by looking at the extent of inter-firm linkages, whether such division of labour is orchestrated by larger firms and works always to their advantage, and kinds and degree of co-operation between firms. As far as relations between producers and traders are concerned, it is important to look at to what extent the conditions set in the final markets and mediated through traders affect the production process and its structure, i.e., relations of dependence and independence and their respective determinants. Finally, as far as horizontal relations between firms are concerned, the important question is what kinds of co-operative relations exist between them, if they do, how that is affected or prevented by competition between them, and the changes in these over time.

It is not the purpose here to merely document the kinds of relations that exist between firms but to focus on relations of dependence and independence to try and understand whether there are links between these and the kind of market catered to, or the nature of the sector, or state policy, or historical and social conditions, or a combination of these.
C. Vertical Relations.

Vertical division of labour through subcontracting, or independent relations between firms obtain in different degrees in different clusters.

Production relations between small firms.

In typical artisanal clusters\(^{34}\), there was hardly any specialisation observed among firms, with all firms performing all the different processes in production. However, due to their physical proximity to each other, the firms did co-operate in terms of exchanging tools and instruments, as well as ideas and designs. These artisanal clusters were also found to be fairly static in terms of growth profiles, in the sense that they have continued to serve specific market segments in the domestic market for very long periods of time with little diversification in product range.

In more technically sophisticated manufacturing processes, where the production process could be broken down to a finite number of identifiable processes, there was a division of labour between small firms. Typically, however, it has been found that it is subcontracting relations between these small jobworker firms and larger firms (that themselves might be small) that tend to dominate over independent relations between small process-specialised firms that ‘together would approximate a large vertically integrated firm\(^{35}\). In certain cases, however, in spite of the prevalence of subcontracting relations, these jobwork firms themselves interacted with each other a great deal to exchange technical information and provide/avail of centrally available services.\(^{36}\)

What needs to be noted is that in these vertical relations between small firms, no firm/s necessarily played a leading role in co-ordinating production in the cluster.

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\(^{34}\) Aeroe’s (1992) study of a woodworking cluster in Tanzania or those in Sudan, Kenya and Zimbabwe, as reported in Nadvi and Schmitz (1998) show this.

\(^{35}\) To quote a few examples, in both the Sinos Valley and in Agra (Schmitz 1995 and Knorringa 1996 respectively) process specialised firms produce parts of shoes and are subcontractors to larger firms. In Tiruppur’s knitwear cluster (Cawthorne 1995, Swaminathan and Jeyaranjan 1999), the small scale enterprises were involved in ‘interactive networks’ with specialist job firms that undertook cloth fabrication, bleaching and finishing, screen printing, etc. In Ludhiana’s light engineering sector (Tewari 1992) also, similarly, an array of specialised job shops work as subcontractors.

\(^{36}\) In Lima’s Gamarra garment cluster, 4000 or so small scale garment manufacturers set up export consortium and interacted widely to get technical information, orders and skilled workers.
Small firm-large firm production relations.
The literature generally shows that when large and small firms co-exist in a cluster, various kinds of linkages have been observed. In many clusters the relationship is one of mere coexistence with the advantages due to agglomeration accruing in different ways to both kinds of firms. In this case, the two segments operate autonomously of each other and produce distinct products for distinct market segments. With changing market conditions, specific kinds of linkages develop between firms while at the same time leading to differentiation into larger numbers of size segments as well as integration within firms. This was seen in the Sinos Valley shoe cluster, where for a long time, small and large shoe producers co-existed without any particular interlinkages, but with shoe markets becoming more exacting and quality conscious, many firms integrated backward, while at the same time entering into intense vertical relationships with smaller firms (Schmitz 1995, 1999a and b).

In the second type of large-firm-small-firm linkages seen in clusters, hierarchical networks of small firms or 'satellite firms' are found concentrated around leading firms. While the industrial conglomerates of the 'chaebol' type in South Korea or the Japanese subcontracting system would also fall within this broad category, they are not being referred to here, because the kind of clusters that are being talked about in this study are essentially small scale clusters where large firms, if they have come into existence and become prominent, have grown from small origins and due to clustering. In the kinds of clusters that are being referred to here, there are broadly two types, as Cho (1992) observes. 37 The first kind is where subcontracting arrangements are governed by relatively non-hierarchical relations marked by a sharing of technical knowledge between large and small firms. While the lead firm seeks reliable and timely delivery and quality, the subcontracting unit, in turn, gains financial and technical support and minimises the uncertainty in product and input markets. In the second kind, which is very common, subcontracting is driven by cost-reduction motives of larger enterprises as well as the need for flexibility to pass on the burden of adjustment on to the

37 Cho's observations are with respect to South Korea, but are relevant in the context being considered here also.
subcontracting firm. There is little direct assistance from the larger to the smaller units, either financial or technical, with the latter only being guaranteed a market when demand is relatively upbeat. This relationship is therefore strictly hierarchical and generates a great deal of uncertainty for the small firms. In all these cases, it is noted that larger firms are not very large per se and are large only in comparison to the average sized firm in the cluster.

The specific kinds of vertical interlinkages that obtain are dependent on changing circumstances. Studies from different clusters published in the late 1990s (articles by Knorringa, Tewari, Nadvi, Rabellotti and Schmitz in World Development (1999)) looked at the impact of liberalisation on the performance of clusters in different parts of the world. They found that vertical relations were intensified in responding to the requirements of producing for more demanding international markets in all the clusters. As a result, large firms entered into more stable, long-lasting relations with suppliers or subcontracting firms in order to ensure prompt delivery and quality and such clusters showed good export growth as well as firm performance.

The essential difference between the Sinos Valley kind of large-firm-small-firm linkages (where a relatively autonomous existence got transformed into a mix of independent and dependent subcontractor-type relations between some large firms that emerged from within the cluster and a large number of small firms) and the lead-firm-satellite-firm kind of linkages seen elsewhere lies really in the degree to which production gets organised formally to cater to specific markets. The first kind has emerged in response to changing market conditions, where small firms have had to resort to a mix of independent as well as dependent production, and large firms have had to maintain a mix of vertical integration as well as flexibility through subcontracting. The latter kind, on the other hand, has got organised in the first place to cater to a certain kind of market where a/some firm/s are expected to play a lead role, with the subcontractors going in for dependent production from the start. Over a period of time, both these structures

38 These studies are for Agra and Ludhiana in India, Sialkot in Pakistan, Guadalajara in Mexico and the Sinos Valley in Brazil respectively.
might look alike, with some large firms organising production around themselves and responding to fast changing market conditions through the flexibility that linking up with smaller firms provide.

To conclude, therefore, vertical relations between smaller and larger firms in most clusters tend to be more of the dependent type, with varying degrees of hierarchy and conscious organisation. In this arrangement, the smaller firms would tend to be dependent on orders from one or a small number of large firms. Within small firms, vertical relations are of both types, dependent and independent, except that even in the case of a small firm subcontracting for another small firm, it is usually not solely dependent on orders from the latter and would be doing job-work for a large number of firms. The questions that arise in this context are: can these relations be characterised as co-operative or not? Whenever hierarchical relations obtain between any two contracting parties, doesn’t the pressure of adjusting to adverse conditions always fall on the party with less power to manipulate the transaction? Does a cooperative relation merely mean the regularisation of transactions with information regarding production, delivery schedules, etc being passed between various levels effectively and no threat of opportunistic behaviour on the part of suppliers, guaranteeing timely supplies of output, production conforming with specifications, etc? Can a mere intensification of linkages where they did not exist in any systematic manner be interpreted as a genuinely cooperative relationship? These questions will be addressed in the empirical study of the two leather clusters presented in Chapter 7 and will be analysed in Chapter 8.

Producer-buyer relations.

Firms in clusters are involved, as mentioned earlier, not only in vertical relationships in the production sphere, but also in vertical relationships with buyers in product markets, traders and marketing agents. This is a set of relations that finds little mention in European industrial districts, as Schmitz and Nadvi (in Cadene and Holmstrom 1998) note, but have been researched for industrial clusters in several developing countries.

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39 Schmitz, in various studies on the Sinos Valley cluster characterises these dependent relationship as co-operative, denoting greater coordination to ensure more efficient delivery.
Analysis of such linkages essentially have found the following: first, clusters where traders linked up to distant markets performed better than those that concentrated on domestic markets. As evidence for this proposition, Weijland (1992) showed that this was true for rural Indonesia. Second, trader-producer linkages are characterised by cooperative relations and a genuine exchange of market information and product design that traders are assumed to possess and process knowledge possessed by firms, in the high quality segment of the market. The low quality, low price segment, in contrast, is characterised by relatively impersonal, hierarchical relations which do not involve much exchange of ideas or information between producers and traders. Trust and collaboration emerge as concrete elements of trader-producer relationships in higher segments of the international market. This is the argument put forward by Knorringa (1996) in his study of the Agra footwear cluster in India. This study, in fact goes forward to argue that in analysing production and economic organisation, producer-trader relations are paramount in determining production structures (being more primary than producer-producer relations). It is agents operating in final product markets that determine the 'boundary conditions' that dictate not only production conditions but employment too. A related point that emerges from Knorringa's work is the first point made above, that in general, linking up to export markets offers the possibility of more advanced production organisation. This is because in the ultimate analysis, export markets are more exacting and quality conscious than domestic markets and a dependence on export markets leaves no option for producers but to upgrade production. The analysis of the importance of cooperative links—between agents in the production and marketing chain thus receives more emphasis in the analysis of producer-trader relations.

D. Horizontal relations between firms.

Research on industrial clusters in advanced and developing countries has shown that relations between similarly placed enterprises are most often fiercely competitive, but some forms of cooperation also obtain. Two kinds of horizontal cooperation or joint action are seen: the first of the bilateral kind (where individual enterprises cooperate with each other in sharing equipment, developing a new product, etc) and the second of

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40 Again, this is in the sense of ensuring stable transactions rather than a relatively equitable distribution of gains.
the multilateral kind where groups of firms form collective bodies like business associations, producer consortia, market consortia and the like. When firms share production orders or share the costs of infrastructure provision or training, it often reflects an organisational response to severe capital constraints and market uncertainty, which limit their ability to expand capacity. This kind of horizontal cooperation was seen extensively in several clusters and is documented in Schmitz and Nadvi (1998).

Institutionalised horizontal cooperation in the form of multilateral business associations was also seen with two kinds of effects. In the European industrial clusters, these associations were set up to improve the collective position of the clusters first, by lobbying with the state on behalf of the cluster and second, by providing services to improve the clusters' competitiveness. In many cases, these associations were developed in as part of cooperation between the cluster and local/provincial governments. In developing countries, sectoral associations were found to be important, but not all of them serve the collective interests of the cluster, very often being controlled exclusively by the more powerful elements in the cluster (Schmitz and Nadvi 1998). Even if these associations are successful in articulating the needs of the sector, their activities are highly influenced by existing power structures. In clusters that are highly differentiated, the collective benefits of sectoral associations were very often found to have been undermined by sectional interests. Thus the ability to form effective institutions of horizontal cooperation like the European real service centres which make possible collective technical upgradation and economic growth become limited.


The evidence with respect to the extent of the role of the state in shaping cluster development is mixed. Different clusters evolved different mechanisms to deal with the problem of access by small firms to resources/services that are inaccessible to individual small firms. Some clusters could do this with direct government intervention and others through self-help associations. Tewari (1998) found that the state (provincial) government played a central, though often indirect role in shaping accumulation and
growth in Ludhiana's metalworking and light engineering clusters. She notes, "Through its actions and policies, the state helped set some of the conditions which directly or indirectly fostered labour, skill and investment flows between Ludhiana's industrial and agrarian sectors". More specifically, with the assistance of the Central Government, the Punjab government established key institutions such as quality marking centres to provide free access to equipment for precision procedures, vocational schools to provide skilled manpower, a local productivity council and the like in the region, such that "these institutions...through their collaborative relationship with local firms that the state remains close to industry". Nadvi (1999) notes for Sialkot, however, that where improvement in collective services was made, the initiatives rarely came from government. In other cases where government intervention took place, it was invariably through self-help associations and not through direct intervention. While Schmitz argues (Schmitz 1999a) that joint private action has been more important than government in resolving market failure, the Italian case or the case of Ludhiana also show that state initiative was extremely important in fostering cooperation and nurturing cooperative institutions in some cases and this depended on the specific institutional context. What is important to note is that a cluster of small firms in a district or region will not in itself generate dynamic economic growth and needs an institutional structure that does the job of provisioning that very often needs the active intervention of the state, although the form of that intervention may itself vary. This is particularly true if what is aimed at is not merely resolving market failures in small firm development, but to ensure growth combined with high labour standards, where the latter is ensured by effective regulation as much as by cooperation between capital and labour.

F. Labour Process.

One of the primary characteristics of the industrial district model in Italy was its ability to guarantee high labour standards as well as economic performance for clusters of
sector-specialised small firms, as noted before in this chapter. In other European clusters as well, Pyke and Sengenberger (1992) found that high labour standards obtained, and this was referred to as the "high road to flexible specialisation".

In most developing country clusters, however, a "low road to flexible specialisation" has been resorted to, with very few substantial gains accruing to labour, even with high rates of growth of production. This low road has been characterised, in the aggregate, by low and slowly rising wages, long hours of intensive work, work segregated on the basis of skill and gender, dismal working conditions and so on. It has also been characterised by low/ineffective levels of unionisation and collective bargaining either by taking advantage of social hierarchies, the introduction of systems such as piece rate payments, outcontracting and incontracting, etc. In other words, low labour costs provide the key to accumulation in many developing country clusters.

The following issues arise with respect to these contrasting experiences: Labour flexibility is seen in different ways in these two strategies. Where labour is considered a 'resource' as in the European industrial districts, innovation through inter-firm linkages and the harnessing of the creativity of labour is used as the basis for enhancing competitiveness. There is a constant process of reskilling and training of manpower to fit into the demand for flexible production. In contrast, in the 'low road', or what Lauridsen (1995) calls 'flexible casualisation', labour is considered a 'cost' and competitiveness is achieved through a low wage, low technology and low quality strategy. It also invariably results in labour market informalisation and casualisation.

Which strategy would be adopted would depend both on the nature of markets as well as on the extent of excess labour supply. For catering to lower ends of the market, minimising labour costs would be the most rational strategy for most firms.

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44 As an example for this, it was seen earlier how several Italian industrial districts reacted to enhanced competition from low wage countries by tapping higher ends of the market through more variety and improved design capability and not by competitively lowering wages.
Further, there might not necessarily be a 'choice' between these two paths, and clusters might develop with characteristics of both. For example, it has been seen in the case of the knitted garment cluster in Tiruppur that in response to the need to produce for quality conscious international markets, while wage rates are exploitative, the intensity of work is inhuman and child labour is pervasive, labour in the industry has acquired certain characteristics that are internationally said to be typical of clusters: the accumulation of experience if the cluster is taken as a whole, a great deal of autonomy that labour (or a segment of the skilled and experienced workforce) has come to acquire which allows them to negotiate terms and conditions of employment, and the high degree of upward mobility that is possible for enterprising workers who can become entrepreneurs (Swaminathan and Jeyaranjan 1999). At the same time that a progressive 'disorganisation' of the labour process has taken place, the positive effects of clustering have generated mobility for a section of the labour force, enabling them to become entrepreneurs. This has taken place because of the nature of clustering and due to the kinds of change that were seen in the social relations in the industry that also saw changes in production organisation. Thus, within the 'low road' to flexible specialisation, clustering appears to have generated some gains for labour. It is argued by the above study that Tiruppur is an 'industrial district in the making'.

It could also be the case that in a situation where there is a huge excess supply of labour as seen in large numbers of developing countries, wages only reflect the social opportunity cost of labour and even at relatively higher ends of the market, it might be possible to maintain a combination of high economic performance through manipulation of inter-firm linkages and low labour standards. Thus, there might not be a contradiction between producing for higher ends of the markets and minimising labour costs upto an extent. Thus, as seen in the case of the Sinos Valley cluster, competitiveness and

45 Refer Neetha (2001)
46 Tiruppur came up with an interesting institutional arrangement called Kashtakoottu, whereby a skilled labourer is taken as a partner in a joint venture, where the other partners are not skilled, but pool their financial resources. The skilled partner is entitled a share in the profit that ranges from 10 to 25%. It has been argued (Swaminathan and Jeyaranjan (1999)) that this institution has over a period of time enabled in the simultaneous growth of entrepreneurship and the mobility of labour.
performance were greatly enhanced as a result of an intensification of ‘collective efficiency’, but this did not necessarily percolate down to labour. The contrast between the ‘high road’ and the ‘low road’ might not therefore necessarily be in terms of success on international markets, but in terms of the rewards to labour.

Finally, the nature of the labour force and the social relations between capital and labour might affect the way in which development takes place. Thus, the need for upgrading/maintaining low labour standards might arise due to the needs of the production process on the one hand and the social characteristics of the labour force, the degree and effectiveness of trade unions and collective bargaining, as well as social affinities or their absence between entrepreneurs and workers.

2.2 Industrial Clustering and the Industrial District Paradigm.

Where do the differences and similarities between the industrial district paradigm and the literature emerging out of industrial clustering in general lie? More specifically, can one delineate an industrial district paradigm that cuts across diverse clustering experiences?

In the analysis of the basis of success of industrial districts or clustering in general, there are distinct categories of explanation: they can be grouped into explanations centring around transactions costs and institutional economics, those focussing on economies due to agglomeration and the notion of collective efficiency, those emphasising flexible specialisation, those emphasising social embeddedness, and so on. These explanations focus on different aspects of the industrial clustering phenomenon, as given in the main questions posed in the section before this.

The following sub-section looks at the different kinds of analysis in order to answer the questions posed above. It begins with collective efficiency, which is one of the most widely used concepts in research on industrial clusters and is something that encompasses a wider range of aspects of clusters than some of the others, which focus
on specifics. Collective efficiency is related to economies of co-location, or of agglomeration, and hence they are both being considered together.

A. Agglomeration economies and collective efficiency.
Marshall, in his Principles, identified a number of sources of external economies that arise in an industrial district, that are independent of the internal structure of production of a firm, of which agglomeration economies was one, where the individual cost curve of producers shifts downwards and lowers barriers to entry. Agglomeration economies emphasize the mutual/shared benefits of location in the same area to firms/production units. These benefits include the access to a larger and more specialised pool of factors of production, such as labour resources, capital, energy, etc. By many producers sharing access to the common pools, the supply of these factors is enhanced, because capital and labour will migrate to the areas to take advantage of the larger market for their services. These pools are also, as Harrison (1992) notes, likely to achieve 'critical mass' to include a wide range of specialist services. Thus if clustering generates these pools of resources that become available to firms, it becomes possible for small firms to undertake production economically. The Marshallian concept however was not related to merely lowering of costs, but included the notion of industrial atmosphere, where skill and knowledge are present as part of the culture of the cluster and are therefore easily available to individual firms. Industrial atmosphere also generates a diffusion process of technology, which is like a public good and where continuous improvements in technique are possible.

Economies of agglomeration in the Marshallian industrial district, however, do not need any obvious linkages between firms, but can also obtain to a cluster of firms that behave as if they are atomistic units who merely benefit from co-location. Thus Marshall noted, "... the advantages of production on a large scale can in general as well be attained by the aggregation of a large number of small masters into one district as by the erection of a

47 Agglomeration economies later also came to include the effect of new investments made by a firm on the profitability or costs of other firms located in the same area, called pecuniary externalities identified by Scitovsky (1963). The first category is typically what applies to small firm industrial districts of the kind that Marshall referred to.
few large works... it is possible to divide the process of production into several stages, each of which can be performed with the maximum of economy in a small establishment...(thus yielding a district consisting of) a large number of such small establishments specialised for the performance of a particular stage of the process of production” (Marshall 1890.)

In elaborating the same concept, Krugman (1991) looks at the advantages of localising production, through the advantages due to labour market pooling, development of firms producing intermediate inputs, and technological spillovers. Here, sectoral and geographical concentration creates a pool of specialised skills benefiting both firms and workers, with the rapid diffusion of knowledge.

Explanations based on notions of economies due to agglomeration essentially focus on welfare gains, i.e., whether productive and allocative efficiency are achieved or not in particular contexts, with economies due to agglomeration and the associated lowering of unit costs constituting the starting point. The idea not only captures why firms might gain from locating together spatially and sectorally, but also shows how small firms might be competitive. In a sense, therefore, it takes the concerns of formal neoclassical modelling of small firms, based on factor proportions and so on further to cover external effects. In Italy, in the Industrial District Mark-I phase (Brusco 1990, mentioned earlier) it has been argued, the main source of efficiency gains were agglomeration economies.

Harrison (1992) notes that the notion of agglomeration only offers a coherent explanation for why legally independent small firms might cluster together in space, bound into extensive inter-firm linkages, in order to permit a ‘manipulation of cost curves’, and thus contribute to efficiency (Harrison 1992). This is a valid point, and other explanations for the reasons for success in industrial districts or clusters go beyond mere agglomeration economies.

Schmitz’s collective efficiency concept (Schmitz 1999) attempts to capture a wider range of effects of industrial clustering. Formally defined as the competitive advantage
derived from local external economies as well as joint action, it attempts to look at two major attributes of typical clusters apart from that of agglomeration economies, i.e. inter-firm linkages and horizontal co-operation between firms, or joint action for the achievement of common objectives. Schmitz argues that Krugman's analysis, while attempting to make mainstream economics understand and explain clustering, remains essentially Marshallian and depicts what are necessary, but not sufficient conditions to explain clustering and its success. The analysis remains concentrated at the level of the individual firm.

Collective efficiency, in contrast, uses the cluster as a whole as the unit of analysis and seeks to capture how specific economies accrue to the cluster as a whole as a result of particular forms of inter-firm interaction. In the Industrial District Mark-II phase in Italy, it is argued, the development of new technologies and new competition for the production of higher value-added products resulted in the provision of real services by specialised centres that were established as a result of networking by public and private bodies. This resulted in small firms gaining access to collective external economies of scale that are internal to the network of firms but are external to each firm. As mentioned earlier, this notion has constituted the point of departure for a large volume of empirical research in the last few years and various forms of inter-firm relations are examined. Thus horizontal linkages are analytically distinguished from vertical linkages, with sharing equipment and ideas and the formation of production and trade consortia, or associations of various types, forming the first kind and all kinds of vertical relations (such as subcontracting relations or independent relations, and exchange of information and technology between producers and users at different stages) constituting the second. These relationships are all examined from the point of view of whether they involve joint action for achieving objectives that are mutually beneficial or not. Thus, differences between clusters, within clusters over different segments and over time are sought to be explained on the basis of the extent of co-operative relations between firms.

An example from Schmitz's own research on Brazil's shoe cluster shows that multilateral horizontal co-operation through holding trade fairs was critical in the cluster's ability to capture distant markets, but whose importance declined over time once market channels were established. In the more recent context,
While it is true that what distinguishes industrial clusters of the small-firm-dominated kind are not mere agglomeration, as seen in the review of empirical evidence, but intense inter-firm linkages that develop as a result of a variety of reasons ranging from historical experience, community and family linkages, the nature of markets, etc, the collective efficiency concept is also partial in its analysis as its essential concern remains one of demonstrating that efficiency can be achieved in clusters. The traditional arguments against the possibility of small firms being efficient because they cannot achieve scale is thus countered by stating that scale continues to be an important element in determining success, with scale being considered at the level of the cluster as a whole.\textsuperscript{49} Schmitz argues that while a major finding that emerges from the literature is that small scale industries have been found to be successful in international markets due to the phenomenon of clustering, countering previous export pessimism regarding small scale enterprises, it is scale and product differentiation that has helped small firms working as a whole achieve success in international markets.

While the change of focus away from the individual firm to groups of firms or the cluster taken as a whole provides important insights into how the traditionally assumed constraints on small scale manufacturing may be removed, an excessive focus on joint benefits takes attention away from the differential effects of success on different elements of the cluster.

First, that power may constitute a means by which the benefits from success may not accrue to smaller firms in vertical relationships with larger firms, or may accrue highly unequally, is something that gets ignored in the excessive concern with what constitutes success in the cluster as a whole. Thus, a traditional concern with the effects of large-firm presence on small firm performance, with the latter's existence contributing to and

\begin{footnotesize}
\textsuperscript{49} Scale, according to Schmitz (1999) has been ignored in debates on industrial clusters because research on new technology showed that the previously assumed trade-off between scale and efficiency was considerably reduced, as well as from the literature on flexible specialisation which showed that mass markets were breaking up rapidly, making small scale and small batch production viable in itself.
\end{footnotesize}
being crucial for accumulation in the former, gets obfuscated under the umbrella of the ‘cluster as a whole’ 50.

Second, one aspect that gets ignored largely in recent research on industrial clusters is the effects of the concentration on global markets on labour. The fact that a large amount of joint action among producers in clusters may be to jointly keep wages down as much as possible, in order to enhance ‘collective efficiency’ of firms is not analysed for its impact. In fact, international markets have probably as much to do with quality as with keeping labour costs low 51.

Third, a major question that gets raised is that of government intervention and its importance. In fact, the major difference between the paradigmatic Italian industrial district and the different industrial clusters that have been analysed, especially in developing countries, apart from the benefits that accrued to labour and the relatively equal relationships between firms, is the role of the state in fostering the kinds of co-operation that were seen in Italy. Thus, the difference between the Mark-I and Mark-II phases lies not merely in the fact that the latter phase saw the provision of real services, whereas the former saw the advantages due to agglomeration being reaped, but in the fact that in the first phase itself, the Government consciously fostered particular kinds of co-operation such that small scale was not allowed to be a disadvantage. This has not taken place in the industrial clusters particularly in developing countries, but needs to be considered carefully in the context, particularly, of the imbalances that are mentioned above, namely differential benefits based on size and class 52.

50 This, incidentally, was a point that was raised as something of concern and importance by the same author in the early Eighties, in a paper mentioned earlier. (Schmitz 1982) Subsequently, the power of the large-firm and its role in the accumulation process has been ignored.
51 This is an aspect that is dealt with in detail in Chapter 6.
52 Schmitz does look at the issue of whether it is government intervention or private-self help that has been important in contributing to success in industrial clusters, but does so from a different point of view. He argues that contrary to what mainstream economics might assume, externalities caused by collective economies of various kinds might not lead to market failure, where benefits accrue to many parties. Even when market failure occurs, it is not government intervention that has helped, but private self-help schemes. This is based on empirical evidence that has been observed in the developing country clusters.
This study brings out some of these aspects, while not negating the contribution made by analysis that focuses on collective efficiency. This point is also raised in some way by the literature on flexible specialisation that will be analysed below. Before going on to that, however, the work on industrial districts and industrial clusters by the New Institutionalist school and the Socioeconomics school will also be examined. The former looks at the micro-theoretic foundations of co-operation and interlinkages between firms, whereas the latter explicitly brings the analysis of social factors into micro-theoretic as well as macro enquiries.

B. The New Institutionalist Perspective.

A New Institutionalist viewpoint looks at industrial clusters and the sources of their success or failure in terms of categories that modify or broaden the toolkit of neoclassical economics and express the main concern of the latter, i.e. with efficiency. Within this, there are several strands, each emphasising different aspects from within the broad perspective. One strand looks at industrial clusters as being economic organisational forms that minimise transactions costs. Theoretically developed to a large extent by Williamson (1975, 1985) and his school, the project has been to make hierarchically organised, concentrated economic power (or imperfect competition) consistent with the basic premises of neoclassical economic reasoning. How economic agents deal with bounded rationality and opportunism which continuously characterise transactions through the market, i.e. arms length transactions, and lead to different kinds of transactions costs, is the major concern of this strand. Thus, the varied composition of industrial clusters is analysed as consisting of efficient responses to

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53 It is often stated that the New Institutionalist critique of neoclassical economics is a positive one and tries to attend to the latter’s lack of attention to institutions by drawing attention to non-budgetary constraints that affect firm behaviour, or the fact that preferences can change depending on objective institutional factors and are thus not repetitive. It is emphasised that unlike older institutionalist critiques (Nabli and Nugent 1989) identify this lot with writers ranging from those in the Marxian tradition to Veblen and Commons, among others), who wanted an economics with institutions but without theory, the New institutionalists try to provide an economics with both theory and institutions.

54 The general hypothesis in transactions costs economics is that institutions are transactions cost-minimising arrangements which may change and evolve with changes in the nature and source of transaction costs and the means for minimising them.

55 Referring to the inability of individual economic actors to absorb or know all possible options for action.

56 Or the propensity of agents to take advantage of one another, by not keeping deadlines, by delivering substandard products, etc.
different kinds of transactions costs. The variation may be in terms of consisting primarily of small scale firms and continuing to be so, or as beginning with small scale domination and getting transformed into ones where large firms play an important role. It is argued that where costs of transacting through the market are high, hierarchies tend to get established, whereas when these are low, transactions tend to get mediated through the market. Transactions costs are associated, in small scale production, with the costs of production as well as of marketing. These costs arise not only as tangible costs of production and marketing (such as input costs in production and transportation and advertising costs in marketing) that are examined in any traditional analysis of costs, but also the costs of forging relationships between firms that specialise in different parts of the production processes (as in typical subcontracting arrangements), the fear of opportunistic behaviour by agents and the associated costs, or additional costs incurred by other agents to avoid being the target of opportunistic behaviour. Firms rely on subcontracting arrangements mediated through the market, or on arms length transactions between similarly placed firms that specialise in different parts of the production process, if such costs are low. When transactions costs are high, firms prefer to go in for vertical integration. As industries become more and more export oriented and markets thus become more demanding, larger numbers of firms seek to internalise activities that were done outhouse. At the same time, given the nature of international markets, these same firms, as well as large number of other firms also try to retain certain flexibility through continuing to contract out work to smaller firms. Whether clusters will consist primarily of small scale firms or consist of a mix of large and small scale firms thus depends on the way transactions costs differ and change between different situations.

Levy (1991) compares the footwear sector in Taiwan and Korea in terms of size and offers an explanation for differences in the relative size of exporting firms. He argues that the greater extent of subdivision of large orders, the prevalence of subcontracting and the greater roles played by export traders is due to the greater role played by small scale firms in Taiwan. In Korea, by contrast, the exporting sector in general and the footwear sector in particular are dominated by large scale firms. Both can be considered
rational and organisationally efficient in the face of divergent economic conditions at the onset of export oriented growth in both the countries. In Taiwan, given a history of subcontracting in several sectors, small scale firms proliferated with ease in the footwear sector too. When the number of potential transacting parties is high, as in the case of small scale firms, particularly in clusters, the cost of market transactions will be lower and the lower is the vulnerability of a market participant to opportunistic behaviour. Similarly, the larger the number of transacting parties, the larger is the extent of agglomeration economies that lower unit costs of production, and the lower are the costs of searching for potential partners. Further, producers operating in a cluster have the advantage of a history of trading that accrues to the cluster as a whole and makes them better negotiators. The larger the number of people with the ability to communicate across cultural and language barriers, the lower the costs of international trading. Given such advantages, a country such as Taiwan, with its large stock of literate people and large numbers of small firms that had a history of exporting could minimise the transactions costs of exporting by small scale enterprises. Where these advantages did not exist as in Korea, firms tended to vertically integrate and grow in size.

The second strand analyses industrial clusters from the point of view of collective action. As Nabli and Nugent (1989) note, the key issue in the collective action literature is to explain collective outcomes in terms of individual motivation, or to explain the likelihood of the failure or success of a given set of self-interested individuals in undertaking actions that benefit them collectively. Schmitz’s (1994, 1999a, 1999b) ‘collective efficiency’ concept that emphasise agglomeration economies, inter-firm linkages and joint action by producers draws heavily from the concepts of the collective action literature. While the theory of collective action was initially developed to explain the provision of physical public goods such as anti-pollution technology, highways, parks, and the like, it has increasingly come to analyse other ‘collective’

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57 Levy’s research does not look at clustering, but the argument is relevant for clustering, where the number of firms that have to engage in market transactions is high.
58 In Korea, Levy argues, the situation was the opposite, and concentration in production represented a more rational response that minimised transactions costs.
59 Schmitz (1999a) points out that he deliberately uses joint action instead of collective action because the latter concept does not take into account of bilateral co-operation. Conceptually, however, the two concepts are similar.
objectives such as negotiating wage rates, prices, lower tax rates, etc. Any action that comes under the various types of joint action identified in industrial clustering can, thus, be analysed within the collective action framework.

There are similarities between the transaction costs framework and the collective action one. Both are analysed from the point of self-interest and bounded rationality. Also, both may be affected by the same factors. (Nabli and Nugent 1989). For example, ethnicity, family loyalty and such social factors may reduce transactions costs in economic organisation and collectively solving the free-rider problem through collective rules, or in certain cases may increase the transactions costs.

To quickly sum up what has been said until now, the Industrial District paradigm began with the idea that groups of small enterprises, strictly separated in terms of the functions that they perform, could function like large enterprises, as well as reap certain advantages that accrue to small scale production based on the craft paradigm, because of the way in which they link up with each other. Inter-firm relations that had been generally ignored in economics began to be analysed following this phenomenon. Industrial organisation categories were used to analyse various aspects of inter-firm behaviour. Primary among them was the question of how firms decide whether to go in for inter-firm transactions mediated through the market, or vertically integrate, i.e., generate intra-firm hierarchies. In this so-called juxtaposition of markets and hierarchies, Williamson argued that several factors would be important in determining whether hierarchical relations within the firm or market transactions between firms would dominate in a given context in a given industry. Within the dominant organisational form that would obtain, transactions costs, residual property rights, the costs and effects of contracts, etc would determine whether the arrangement chosen was optimal or not, and would also determine the movement from one organisational form to another. Small firm linkages based on intense inter-firm relations of the European Industrial District variety were considered a particular way of optimising transactions costs. (Levy (1991), Knorringa (1996)). It was then emphasised that small firm Industrial Districts are based not only on the optimisation of tangible economic factors, but also based on family,
community linkages that fall outside the purview of formal economic factors and that economic actions and decisions can get mediated through the ‘social embeddedness’ of transactions. The tools of institutional economics began to embrace these so called social phenomena and transactions costs and property rights literature, as well as that on collective action began to look into trust as a major determinant of transactions on the one hand and this trust being generated in very different ways in industrial clusters through institutions such as family, community, etc.

At the same time, another influential branch in the social sciences, Socioeconomics, began to go into these aspects and provide explanations for what accounts for the success of industrial clusters. (Granovetter 1985).

C. Socioeconomics-The Granovetterian Critique.

While institutionalists began to incorporate social relations of trust and the importance if cultural heritage into their analysis, an influential critique of their method of incorporating social factors into analysis emerged. (Granovetter 1985). In contrast to the institutionalists’ fundamental position that ‘social institutions are better viewed as efficient solutions to certain economic problems, where opportunism gets avoided by clever institutional arrangements that make it too costly for them to indulge in it’, Granovetter argues that personal relations and social structures play a major role in generating trust and discouraging malfeasance. While social relations are a necessary condition for trust and trustworthy behaviour, they are not sufficient to guarantee this and in certain circumstances, generate even more mistrust and malfeasance on the part of actors than if they did not exist. Thus, as both enormous trust and enormous malfeasance can be generated from social relations, economic actions thus get ‘embedded’ strongly in ongoing social relations. (Knorringa 1996). At any point of time, the details of social order will determine what kinds of economic arrangements are entered into. In looking from this perspective at the market versus hierarchy issue, he argues that transactions of all kinds, whether on the market (arms length transactions) or within a hierarchically organised firm, are full of social factors that influence business decisions.
In applying the embeddedness perspective to industrial districts or to clustering, Harrison (1992) argues, quoting the literature, that continuous contracting and recontracting between firms generates trust that is built up over time and this is strengthened by geographical proximity as well as by cultural affinity. Thus, as Sabel (1986) notes in his research on Italian, French and German industrial districts, entrepreneurs who normally compete with one another over market share also see each other regularly in clubs, churches and the like, and function with each other in government agencies, local cooperatives, etc. Thus the much-quoted mix of cooperation and competition between firms that is said to be characteristic of industrial districts can be seen to be a concrete example of embedding. Knorringa's work on the Agra footwear cluster brings out the other aspect of embedding, where social relations are used in order to create barriers to entry of certain castes into entrepreneurship in response to specific market conditions.

Granovetterian embeddedness goes beyond new institutionalist concerns with pure optimisation by individual actors to be able to include in its purview the logic for group behaviour which becomes particularly important in clusters and can be said to determine to a large extent how clusters evolve over time. This study will argue that in the course of evolution of clusters (this evolution being primarily in response to changing market conditions) groups of agents strive to achieve certain goals that play a major role that leads to particular kinds of differentiation within clusters that, while interpreted from the point of view of efficiency, may be progressive, but looked at from a more complete perspective including that of labour welfare, may be harmful for the development of the cluster. The actions that generate these outcomes are guided to a large extent by social relations, but have mainly to do with the evolution of markets for the cluster.

This brings me to the last strand that is being analysed here, the flexible specialisation paradigm. The literature that emerged following this approach looked at the nature of markets for internationally traded commodities and how differing organisational
structures generated different outcomes in terms of both economic performance as well as labour welfare.

D. Flexible Specialisation-representing a broader focus.
Flexible specialisation as a concept owes its origin to a pioneering contribution by Michael Piore and Charles Sabel (Piore and Sabel 1982) that put small industries at the heart of the debate on industrial strategy in the West. They suggested that with increasing saturation in demand and fragmentation as well as volatility in international markets, small and medium batch production in small enterprises and based on the craft paradigm presents an alternative to mass-production based strategies centring around large enterprises. With the development of new microelectronics based programmable technologies that are neutral to scale, competitive opportunities got opened up for firms that adopted this flexible technology. Hirst and Zeitlin (1991) and Sabel (1986) distinguish two variants of flexible specialisation. One is a small-scale variant, that consists of the typical industrial district or cluster kind of organisational form. In this variant, it is not so much the flexibility of the individual firm as that of the cluster of firms that is important. The second is the large firm variant, in which large firms decentralise production to relatively autonomous production units that act as specialised suppliers. This is said to have generated organisational innovations such as Just In Time (JIT) inventory management techniques. What is relevant to the discussion here, obviously, is the small firm variant.

In the original conception of the small firm variant, based on Italy’s industrial districts, flexible specialisation implies the revival of craft workers. A highly flexible and co-operative workforce that is disengaged from rigid job specifications and rigid control, with their active involvement in both conception and execution of work, is considered characteristic of the system. It is also a system that combines economic performance with high labour standards. Based on the actual experiences with small scale enterprise clusters, Pyke and Sengenberger (1992) distinguished between the ‘high road’ and the ‘low road’ to industrial restructuring based on small enterprises as seen earlier.
The strategy based on the ‘high road’ can be deemed to be superior in the following ways: by demonstrating that successful development need not necessarily be associated with a rising concentration of capital it allows the small-scale sector the space to develop on its own terms; it has more employment generation potential; alienation in the workplace may be reduced by a reduction in managerial hierarchies and by allowing the possibilities of workers’ participation in management and decision making; and often this structure makes possible the harnessing of the creativity of workers like in artisan production (Piore and Sabel 1982).

Given the variant of production organisation chosen, smallness of size and the flexibility imparted therein could be taken as an advantage in an atmosphere of clustering of firms and co-operation, all this being made possible by active state intervention to not only provide for ‘market failure’ but also to foster co-operative relations. The freedom to choose a kind of production organisation is, however, circumscribed strictly by the nature of the international market, the nature of the agents operating in input and output markets, and the social relations associated with them. The flexible specialisation paradigm, in its unromanticized version, covers a wider canvas of issues that permits a more complete analysis of industrial clustering possible.

Today, analyses of industrial clusters include all these various strands which, as seen above, use different tools of analysis and cover different aspects of the observed reality. The following section presents a brief summary of the main issues raised in this chapter.

2.3: Summarising the main issues that arise in the literature.
The literature on industrial districts and industrial clustering came up in the context of specific experiences of small firm development and performance from the early 1970s onwards. Small firms were seen to be viable, able to withstand international turbulences and perform well across a range of countries and contexts. Industrial districts which were agglomerations of small firms functioning with specific characteristics were seen to present a viable model of small scale development in a number of countries, with the paradigmatic case being that of Italy. Drawing on the Italian model, a large literature
came up around the phenomenon of industrial clustering, particularly looking at the cases observed in developing countries.

The important questions that arise are: what are the similarities and differences between the industrial districts and the industrial clusters that have talked about? Do small firms overcome their constraints and become less vulnerable as a result of 'successful' clustering? What are the parameters that determine whether clusters are successful or not- is success being benchmarked against the constraints on small scale manufacturing that were analysed in the context of the informal sector debate? Have those conditions been ameliorated and those constraints addressed effectively through successful clustering?

Both the paradigmatic industrial districts as well as the developing country clusters demonstrated that competitive advantages could accrue to groups of small firms by clustering together by overcoming traditional constraints relating to capital, entrepreneurship, markets, etc. It can be said that the paradigmatic industrial district was defined in terms of small firms. Thus while researchers do refer to large firms even in the early phases of Italian industrial districts (Piore and Sabel 1982, Pyke and Sengenberger 1992), the stress was on the overwhelming presence of small firms. The industrial district model thus came up as part of issues concerning small firms. It was firms that were predominantly small in size that linked up to each other through intense cooperation and created the conditions that generated economic success combined with substantial gains to labour. The industrial district story was as much a small scale story as a labour process one for a long period of time, after which some issues of size and the importance of large firms came up in response to changing competitive conditions. Assessing any cluster from the industrial district point of view has, thus, to keep in mind all these various aspects, as well as the active role of the state in consciously fostering the co-operation that was seen.

Developing country industrial clusters, on the other hand, have shown varying experiences as seen above. While most of them began as small-scale clusters, growth
was accompanied by a wide variety in terms of size differentiation and the growth did not necessarily generate any substantial gains to labour. Thus, clusters seem to combine networking and inter-firm co-operation of different sized firms on the one hand with low wages on the other. While both industrial districts and clusters that were not necessarily districts could be considered examples of the small-scale variant of flexible specialisation, the labour processes employed and their consequences could, thus, be vastly different. This, in turn, could be due to the nature of the market being served as well as the institutional structure that comes up in clusters, as well as the degree and nature of state intervention. The trajectory of development of different clusters has been the outcome of the interaction between firms and institutions in the cluster and the position that the cluster or the sector occupies in global commodity chains for export oriented clusters.

Thus, whether or not clusters can become industrial districts depend crucially on whether their growth occurs primarily due to small firms and the benefits of growth accrue as much to small firms as to larger ones, if size differentiation takes place, and whether the co-operation between different elements that is essential for success in industrial districts is actively fostered through the creation of institutions. It may be the case, as is most often seen, that if clusters undergo differentiation and obvious hierarchies emerge, what may be ensured is success in international markets with the advantages accruing unequally between small and large firms, without the growth and development of small firms 'on their terms' as the Industrial Districts of Italy demonstrated. The competitive advantage of the 'cluster as a whole' thus may be ensured without the benefits accruing to all sections. What can be argued is that the size-differentiated, typical export oriented cluster of the kinds that have been talked about as the successful ones might offer one development path for small scale firms where rewards to labour are dubious and probably getting eroded over time. A paradigm that seeks to foster greater co-operation among small firms or between large and small firms in such a way that gains to labour are not lost, or are actually enhanced, might be an alternative strategy. In other words, while size differentiation per se may cause problems that might affect the prospects of small firms and labour within clusters, what matters
even more in order for the gains to be distributed more equally is to remedy the progressive ‘casualisation’ or ‘informalisation’ of labour which seems to be a major element of the flexibility seen in many industrial clusters in developing countries.

Having gone over an entire range of literature that has analysed small firm performance, especially those in industrial clusters in developing countries, the remaining chapters consist of various aspects of the case being considered in detail in this study, that of industrial clusters in the leather and leather products industry in India.