Chapter 7
Closures and Openings

Flexibility is no longer merely a word. It has been transformed into a concept. While within industrial organisation literature it has a definite denotative function it is not exclusive to it. It shares a common milieu with concepts like fussiness, heterogeneity, multiplicity, de-centred subjectivity, and plurality, in other branches and disciplines of knowledge production. The preference thus is for non-deterministic models. It is within this conceptual grid that flexibility becomes a heralding concept.

This study sought to situate the relationship between capital accumulation and organisational structure in the context of a flexible product market. It attempted to do this by foregrounding the case of a specific industrial formation, the Tiruppur knitwear cluster. The study began on this premise: that available categories like industrial district/cluster/territorial production complex are useful descriptive categories, but, also, invariably limiting, for they produce their objects of knowledge as static and closed production systems. The study, taking its cue from recent research, has attempted to show that fluidity, flexibility, and becoming are more characteristic of these systems, operating at different levels -- across different agents, vertically as also horizontally, operational both locally and globally -- and not always on strictly 'economic principles'.

In this study we have preferred the term 'industrial formation', as it seemed to represent better the complexities of the processes we attempted to study. The category 'formation' delineates a process of different elements combining to form a recognisable pattern, a process of becoming. Tiruppur is a converging site for several flows and nodes involved in the particular form of commodity production that we have chosen, namely knitwear garment production. The knowledge of industrial formation in Tiruppur has also relevance to understanding dynamics of accumulation in similar peripheral formations of garment production, like China, Bangladesh, Thailand and others. Given the complexity of a spatially embedded industrial organization, enmeshed in multiple institutions, data collection was based on use of
multiple methods like specific segment studies, firm biographies, questionnaire survey, interviews and group discussions.

Analytical Summary

(a) Global market and Peripheral Production

The transformation of the knitwear node in Tiruppur over the last decade and a half owes mainly to its linkage with the global market. This study, therefore, began by mapping the major attributes of the world garment industry, of which the Tiruppur industrial formation is a sub-set. The globalising process in garment industry has a much longer, as also a high-paced history than in most other industries. This is partially explained by the low-wage pull factor, given high labour intensity, but there are other important determinants as well. The small-scale nature of the activity and the growth of product differentiation as a means to compete, render transaction costs as an important element. Geographical proximity to the final market, better communication and transport infrastructure, and easy access to raw materials continue to exert a strong influence.

These industry-level factors aside, protectionist policies of governments in the core capitalist economies influence the extent to which a peripheral country can participate in world trade. The high-income economies account for the bulk of the global garments imports and hence the impact of such protectionism is substantial. Quantitative restrictions since the 1970s place upper limits to the number of garments under each category that may be exported to a country. The quota restrictions have also set in motion a process by which firms operating in quota-imposed countries moved out to source from countries not subject to these restrictions. It has also pushed manufacturers in some regions to move into more value-added segments. The process has aided the movement of capital to new locations and, at another level, reinforced the process of product differentiation to sustain competitiveness. The outcome of all these has been a hierarchy of garment producers, the hierarchy being defined by the nature of competitive thrust. While those at the top compete primarily on quality, design and fashion creation, the producers at the bottom of the hierarchy accumulate

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\footnote{Since chapter-wise summary is provided at the end of each chapter, here, we concentrate on the delineation of findings in relation to the primary concerns of the study.}
primarily on account of their low cost advantage. Low costs, given the labour-intensive nature of the product, stems essentially from low wages. The latter segments are therefore open to threat of competition from regions with still lower wages. This phenomenon is observed throughout the history of world garment production. A sustained process of accumulation in the garment sector therefore requires a continuous ability to move up the hierarchy and to compete on the basis of innovation and design rather than on low cost.

(b) Shifting from Low Road to High Road?

What has been the trajectory of development of the Tiruppur knitwear formation? In the initial phase of its exports, the formation catered to the basic segment, characterised by low quality, low-priced and mass-produced garments. Its advantages lay primarily in the use of cheap labour power, and proximity to cotton yarn supply. Since the 1990s however, there has been a gradual shift to production of relatively more fashion-intensive garments, requiring complicated designs, better quality processing and use of new kinds of fabric. At present, the latter segment accounts for more than 40 per cent of the total output of the Tiruppur knitwear formation. The ability to offer a wide range of output, with wide variations in quantity, designs and quality, has been Tiruppur’s important competitive forte. Flexibility in production is now critical to the formation’s ability to sustain accumulation. The ability of the formation to move into more value-added segment indicates a degree of innovative dynamism not frequently observed in such peripheral industrial clusters.

(c) Organisational Forms and their Histories

Organisational forms are crucially influenced by the nature of output markets and requirements of capital accumulation. Importantly, however, organisational forms are also an outcome of history and path dependence. A major lacuna of available empirical studies on industrial clusters is the neglect of this historical dimension. Rather than looking at the industrial formation as a system removed from space and time, we sought to understand the dynamics of the Tiruppur knitwear formation by situating it against, among others, the development of the urban space of Tiruppur across time. Clearly the development of urban space and development of the industrial formation mutually interacted. Tiruppur’s location in a semi-arid region with limited
prospects for agricultural employment has historically made non-farm activities critical to its survival. The region was a major centre for traditional handloom industry, and the town, primarily a cotton market. With the decline in traditional sectors, the people engaged in these migrated to the growing, yet small town. Initially they found seasonal work in ginning and pressing factories, and subsequently in the three spinning mills. With the development of knitwear production for the home market from 1930s, the knitwear industry became the dominant employer. What drew industrial capital to Tiruppur initially was supply of cheap labour, access to cotton yarn and water for good bleaching. From the mid-1980s, significantly from early 1990s, the shift to export production has increasingly attracted larger contingents of rural labour. The transformation of a trading centre into an urban industrial space has also meant recasting the countryside. In a way, the boundaries of the Tiruppur industrial formation are now somewhat indeterminate, with several activities taking place in the villages and rural labour involved in the industry in many ways even without migrating to town.

If one were to consider organisational form, Tiruppur formation has gone through four distinct phases. The first phase comprised the period from the industry's origins up to the late 1960s and is characterised by the dominant presence of relatively large, vertically integrated firms. The subsequent phase was marked by a greater role for traders. The traders were increasingly moving away from sourcing from Calcutta, on account of unsteady supplies, owing partly to labour militancy. These traders began to organise sourcing from Tiruppur through the putting-out system. This resulted in the rise of a highly decentralised system of production with the rise of numerous small firms marked by a lesser degree of vertical integration. The decentralisation process was also propelled by labour militancy within the Tiruppur knitwear industry apart from the need for firms to confine themselves to the 'small-scale' sector.

The process however did not completely undermine the vertically integrated firm, with a fair number of the latter type continuing to exist. The third phase coincided with the initial phase of exports, though the output market was initially confined to the cheap, low quality garments. The move from inner to outerwear, however, necessitated the need for more dyeing and printing, leading to the proliferation of these units on the outskirts of the town. The final phase -- existing to date -- marks
the cluster's movement to the relatively more fashion-sensitive segment, and dominance of women's and children's wear as opposed to the dominance of men's wear in the previous phase, the introduction of better processing techniques and wholly new processes. Investments in these processes involve much greater capital requirements than ever. The last two phases also witnessed the movement of a significant proportion of processing firms to the rural regions bordering the town.

(d) Changes in Sourcing Capital and Labour

There have been significant changes in both the sourcing of capital and labour in the Tiruppur industrial formation. While the initial phase saw the investment of capital accumulated in yarn trade by Chettiar merchants, the break-up of composite units enabled the entry of the relatively less capital-endowed but numerically dominant local Gounders, a land-holding caste, into the industry. Low investments that marked the industry at that point in time attracted dry land peasants who found it more profitable to sell their land and invest in Tiruppur than in agriculture. The large-scale entry of this peasant community brought in a work ethos and a sense of community that seems to have fostered a social milieu critical to the working of inter-firm networks.

Over time, however, particularly with the integration of the formation with the world-market, a new set of capitalists moved into the industry. These were the 'non-locals' from metropolitan regions with social capital attuned to contact foreign buyers, verify their reliability and negotiate contracts with them. They represented a category that could not be easily met by the earlier kind of entrepreneurs, who were mostly either ex-peasants or ex-industry workers, with low formal educational levels and lacking this form of social capital. The rise in investment requirements also led to reduction in the possibility of rise of worker-turned entrepreneurs.

The sourcing of labour has changed as well. During its early phase, the Tiruppur formation largely employed workers from the Gounder community. This played a part in creating conditions for that sort of worker-entrepreneur mobility we have referred to, during the second phase of the history of the Tiruppur formation. With the rapid expansion of the formation on account of the export boom, sources of labour supply diversified. This began with the drafting in of women and Dalit workers from the
immediate hinterlands. Soon labour was drawn from more distant parts, particularly the dry districts of Tamil Nadu and from Kerala. The distant labour comprised of families, with women and children too finding their way into the labour market of the knitwear industry. The Tiruppur labour market is now highly segmented, with divisions along the lines of region, age, gender and caste.

(e) Inter-firm Networking

A major contributing factor to flexibility in production in an industrial formation is inter-firm networking. It was found that the dominance of trading capital at the global level exerts a strong influence on networking. From the perspective of the peripheral agents of production and trade, obtaining orders is a critical issue. The orders are given by the oligopolist, retailer chains/buying agents located in the world-metropolis who therefore wield over them considerable power. While getting supplies is critical for the metropolitan buying agents, the world division of labour and the existence of many knitwear formations to choose from, obviously favour them. The buying agents thus come to dictate strictures on purchase prices, time of delivery, quality control. Co-operative relations, that may enable the producer to innovate, become minimal, and, on the contrary, relations turn mostly opportunistic. Instances of payment defaults by the import agents too become frequent, rendering the movement to direct exports a risky venture for producers, who do not have the resources to verify the authenticity of the buyers/buying agents. The interaction of agents in the input-supply network too is confined to extension of credit facilities and hardly extends to the production realm.

Another web of relationships traverses the innumerable producers within the Tiruppur knitwear cluster. We segregated horizontal networks from vertical ones. The former are found primarily among the finishing units and in most cases resemble the old kind of “capacity contracting” phenomenon, wherein firms subcontract to pass on fluctuations in demand to sub-contractors. The relationship is hierarchical and we find both co-operative and opportunistic relations among the networks. In case of sub-contractor firms who are bound by kinship to parent firms, we find less instances of opportunistic behaviour. Between other firms, similar to the direct-exporter-buying agent interaction, we find that lack of commitment to contracts, like payment delays,
rejection citing faults are common. Both these types of inter-firm relations resemble the classic sub contractual relation that is more hierarchical and less co-operative.

It is the vertical inter-firm networks that resemble the small firm networks idealised in industrial district literature. Relations are less inscribed within a logic of power and they impart a high degree of flexibility to the industrial formation. Finishing firms, both direct exporters and sub-contractors, undertake production of diverse kinds of orders, diversity defined in terms of numbers, quality, variety and types. This is made possible by reconfiguring the extent of networking with different staging firms. The movement into upper segments of the knitwear market has enabled a greater inter-firm division of labour, facilitating the rise of individual firms specialising in specific processes, new technology etc. By networking with multiple finishing firms, these firms reap scale economies. Simultaneously, this same process ensures scope economies for the finishing firms. Thus, while quantitative flexibility is assured primarily through horizontal sub-contracting, flexibility in use of techniques and diversity is obtained through vertical networking.

(f) Social Embeddedness of Networks

Inter-firm networks are embedded in a social milieu and the latter influences the extent and mode of inter-firm transactions. The detailed inter-firm division of labour necessitates numerous transactions between firms and it is argued that the social reduces transaction costs, by inhibiting opportunistic behaviour and promoting co-operative relations. The Tiruppur industrial formation too is influenced by the social milieu that articulates with the logic of capital accumulation. The dominance of Gounder capitalists has not only fostered a dry land peasant ethos of hard work, but also enabled formation of well-knit networks based on kinship. These networks continue to influence entrepreneurship formation in the cluster. Kin members are found to work in their relative's exporting firms for a period of six months to one year to train themselves to run firms on their own. Intra-caste weddings and the attendant dowry system too have contributed to capital formation in the industrial district. Further, such marriage-based alliances also reinforced the constitution of caste-based inter-firm networks.
In many cases, they are assured of a regular supply of orders from the direct exporter and in cases of close kin, buyers are introduced to them and orders placed directly with the new firm. Extension of credit, and support during periods of crisis are commonly found co-operative behaviour among close kin-based production networks. The latter, in turn, tend to be more willing to comply with the kin parent firm’s requirements. This reciprocity, while ensuring substantial reduction in transaction costs within the network is however exclusive, with firms outside these networks unable to tap these co-operative resources. Kin networks have also enabled diffusion of technical knowledge in the cluster with regard to use, repair and maintenance of machinery. In the absence of such kin networks, direct exporters report problems of co-ordinating a dense network of production. By virtue of their access to markets, they nevertheless manage to sustain production through relations that are far from co-operative. Firms at lower levels cannot exercise such market power and hence are forced into serving merely as ‘reservoirs of flexibility’ for the bigger firms. Periods of crises witness high mortality among this set of firms.

Distribution of social capital is therefore skewed, reinforcing hierarchies in the industrial formation. Inter-firm relations are characterised more by unequal exercise of power and intense competition rather than by co-operation. There are producers’ associations representing direct exporters, sub-contractors, job workers and for groups of various staging firms like fabrication, dyeing, bleaching and calendering. However, these associations by and large, are formed to negotiate and bargain with government for concessions rather than to encourage co-operation in the productive realm within and between firm types. This is especially true of the association of sub-contractors formed primarily to prevent price-cutting among them. It has been a complete failure, as sub-contractors desperate for orders continue to settle for lower prices hoping to get better bargains later.

**Flexibility of Labour**

Labour is a relatively less studied aspect in industrial district/cluster studies. Apart from inter-firm networks, it is argued that flexibility of labour use is an important factor in ensuring flexible production. Regarding labour, two types of flexibility are identified in literature. Functionally flexible labour is marked by its ability to move from one task to another, and handle multiple tasks with equal efficiency. Such
flexibility enriches the nature of work, and when used in tandem with flexible technologies, ensures firms compete on the basis of innovation. Multi-skilled workers, by virtue of their better comprehension of the production process, participate in innovative tasks. On the other hand, firms can also take recourse to employment flexibility, whereby quantities of labour inputs are adjusted according to levels of output. Use of temporary and casual labour, which can be laid off when demand slackens and absorbed when required, therefore provides another mode of securing flexibility.

The production labour in the Tiruppur formation exhibit features of both kinds of flexibility. Workers, especially in the finishing units, who constitute the majority, tend to enter into this segment as child helpers and then go on to learn additional tasks to become skilled adult workers. Given the relative lack of a detailed division of labour in the pre-1980s phase of the industry's growth, workers and the worker turned entrepreneurs tend to undertake multiple tasks in the production process. Over time, however, the growing intra-firm and inter-firm division of labour has led to a reduction in the functional flexibility of the workers. The rise in the number of tasks required per garment also greatly enhances the social division of labour. Specialist tailors for specific kinds of stitching machines have come up. The rise of gender-based occupations like checking reinforces the rigidity of division of labour. Very few workers report to undertake tasks beyond their specialisation. Hence the contribution of functional flexibility to the cluster's flexible accumulation process appears to be negligible.

Employment flexibility, on the other hand, plays a critical role in ensuring flexibility in production. There has been a growing casualisation of labour. Use of contract labour has increased. The seasonality of the export market has resulted in the creation of a labour force segment that alternates between work in this industry and agriculture. There is an increasing tendency towards recruitment of tailors through contractors. Most workers in this industry are employed for only eight months in a year. During off-season, considerable costs are borne by the workers in search for jobs. Though there was a movement to piece-rated work in the first phase of exports, the need for better quality control has led to the use of time rate. Work hours are highly flexible and during peak season, and workers, including child workers, are
found to work for twenty-four hours or more continuously. Periods of such intense work alternate with bouts of unemployment. This flexibility of employment tenure contributes to enhance the flexibility of the production structure. On the other hand, diversity of output has resulted in creation of specialised tasks and greater division of labour. This erosion of functional flexibility accompanies a growing employment flexibility that enables firms to reduce wage costs and possibly improves efficiency through specialisation. The labour force flexibility that we observe in Tiruppur is therefore a passive one, unlike active forms of functional flexibility that enriches work content, reinforcing possibilities of a ‘low road’ trajectory.

(h) Labouring Conditions

Generally, wage rates are higher in knitwear sector as compared to many other sectors in Tiruppur, and continue to rise, but given the declining quantum of employment availability, wage incomes may not have increased all that much. In fact, even in terms of real wage rates, we observe a near stagnation since the beginning of the export phase. In the big direct export firms however, both nominal wage rates and work availability are high. Such relatively ‘high road’ conditions are available to only a minor share of the workforce, leaving the majority to labour under 'low road' conditions. Prior to the export phase and in the initial years of exports, when the output market was relatively stable and standardized, the labour market corresponded to the ideal industrial district model in many ways. Workers were found to be equipped with multiple skills and they possessed income security and enjoyed good prospects of vertical mobility. Many owners were earlier workers in this formation. This has even led to upholding the use of child labour in Tiruppur in certain quarters, on the argument that it offers children a sure route to security of employment and income that would not be possible if they were to pursue regular schooling.

With growing flexibility in the product market, the labour market has undergone greater segmentation with reduced scope for developing multiple skills and increased barriers to vertical mobility. The rising level of initial capital investment and exclusivity of caste networks have placed insurmountable barriers to mobility to a large section of the labour force. The high labour turnover and lack of long term relationship with employers deny them any kind of patronage that workers of the earlier period enjoyed. The growing incorporation of women and Dalit workers as
well as a large migrant workforce have also contributed to this process. *Dalit* workers do not enjoy access to kin networks or the social capital that may aid them to move into entrepreneurship. Women workers too, conditioned and constrained by patriarchal social mores, do not move into supervisory or managerial roles, not to speak of setting up independent firms. Capital in the staging firms reduces wage costs by employing migrant labour that, on many occasions, stays on the firms’ premises thereby reducing their reproduction costs. Finally, with the new requirements of cultural capital on account of exports, which privileges ‘professional, elite’ capital over the traditional worker-capitalists in the competition for the global market, the prospects of vertical mobility for labour in Tirupur has considerably eroded.

*(i) Reproducing Labour-power*

The sustainability of capital accumulation hinges crucially on the reproduction of labour-power. High migration, following the expansion of industrial formation, has substantially increased the demand for residential space in Tiruppur. A further complicating factor is that houses and factories compete for similar space. This has placed an increasing demand on urban space in Tiruppur. The decentralised nature of production organisation reduces the demand for vast space, as sought by Fordist factories, but increases industrial demand even for small patches of land fit for residential buildings. The burgeoning service sector, following investment of surplus accumulated through industry and new demand, places additional demand on urban space. Limited use of vertical space accentuates this problem. Rent increase has been therefore substantial and at present constitutes a major expense for worker households. Capital often takes advantage of this situation. The dyeing units, for instance, accommodate migrant, seasonal workers in the factory premises, ensuring thereby a captive workforce, long hours of work and wages implicitly reduced for rent. The high rent in town forces workers to move into the neighbouring villages where rents are relatively lower. This has been accompanied by the movement of firms too to these villages to take advantage not only of lower land costs, but also to benefit from governmental concessions given to firms established in backward areas. These firms draw upon the labour force residing in these areas and can afford to pay them wages lower than that prevailing in the town.
The employment of more than one member of a family enables capital to pay lower wages to individual members. Most worker households have more than one member including children employed in the knitwear node. Workers report that to sustain themselves they require at least two persons to be working at any point in time. The insecure employment tenure and the seasonality in work availability forces households to send at least two members to work in the industry so that they can be assured of at least one income source at any given time. Thus, though individual members may work in different firms or segments of the industry, the industry as a whole makes use of family labour, enabling it to pay lower wage rates to individual members.

The use of family labour further aids capital to reproduce a cheap skill formation process. Children join the industry as unskilled workers and over time on the job, pick up stitching skills, the most important skill requirement in the industry. After working as helpers for a few years, they move onto other firms to work as full-fledged tailors. The prospects for such vertical mobility exist as a sort of further lure to the households to send the children to work in the industry. This culture of poverty deters even children from households that can afford to educate from pursuing formal education.

(j) Innovation

Besides flexibility, the ability of a node to move from passive to active modes of competition requires it to have the capacity to innovate and move along the value chain. Regions competing on the basis of low wages invariably witness erosion of their advantage to still-lower waged regions continuously emerging. This has been particularly visible in garment industry. It is therefore imperative for industrial formations to address the issue of innovation.

Individual small firms, especially in the peripheral region, operate normally in the informal sector. Access to innovative resources is therefore meagre. Industrial formations comprising small firms, on the other hand, may take advantage of provision of "real services", either through local institutions or through producer and labour institutions. Such provisioning benefits from scale economies as well since all firms in the formation use these resources. Design, marketing and fashion creation
contribute key areas of innovation. Firms in Tiruppur face severe constraints to innovate in this direction, access to market information being the most important. The mediation of several layers of merchants and the lack of co-operative relations between the producer and the trader, restrict the former from undertaking such innovations. Firms in Tiruppur, by and large, produce designs provided by the importers. Only a handful of firms undertake designing, which again accounts for only minor share of their output. Other sources of market information like fashion magazines, trade directories and travel abroad are confined to only a small section of the producers. The other major impediment is its location, away from its markets, with time economies constraining the extent to which producers can react to fashion changes and cater.

Another important innovation in the knitwear node concerns automation of key processes, leading to not only better quality, but also contribute to speedy processing and diversity in variety. The industrial formation in Tiruppur revealed a marked ability to upgrade. The last decade has witnessed the introduction of modern processing techniques. These have not however replaced existing techniques; the old techniques continue to be employed in the formation, if not in the original firm, enabling individual firms to switch techniques according to the requirements of a specific order. As a result, the formation produces orders under different segments, reducing the transaction costs of the buyers.

The installation of new techniques requires considerable capital investment. Provisioning of credit through institutional innovation is therefore viewed as an important element of an industrial district. The Tiruppur formation reveals intense inter-firm differentiation with regard to access to credit for both introduction of new techniques and for working capital. While the established direct exporter firms are assured of access to such credit, the sub-contractors face problems of access. Since the orders are received by direct exporters, banks provide loans only to these firms. Direct exporters however do not pass on these loan amounts to the sub-contractors, who need to rely on alternate sources. Reliance on the informal credit market is substantial among sub-contractors. The high interest rates that prevail in these markets drain their profit margins further.
Another important institution that directs the nature of innovation in an organisation is the strength of labour institutions. Labour in Tiruppur has a long history of struggle. Organised primarily by two trade unions, they have sustained a culture of militancy throughout the 1970s and 1980s, a period that also saw decentralisation of production as a reaction to such militancy. The integration with world-market, however, has led to a decline in the bargaining strength of the trade unions. The increased drawing of labour from non-traditional sources like migrants and female labour with the onset of integration, has been one important factor in this decline. Several entrepreneurs consciously prefer to employ such workers due to their apathy towards trade unions. The shift from regular year-long employment to merely (peak) seasonal employment, and increasing casualisation of labour, following the linkage with the export market has also contributed to the decline in the negotiating strength of trade unions, reinforcing the incentive for firms to compete on the basis of 'low road' conditions.

Trade unions still enter into periodical settlement with producer associations for wage increases and other secondary benefits. These agreements are, however, honoured only by a few firms. We find lesser compliance to welfare standards when we move away from the town to its outskirts and neighbouring villages, which are home to the numerous new units in the last decade. This process has further prevented the cluster from competing on a more active basis.

State policy has a bearing on innovation. State-founded or supported institutions provide training of labour in certain administrative functions, and testing of yarn. An inland container depot speeds up the exporting procedures. Recently a fashion institute has also been set up. Few firms however use these services. The most important role that the government plays is in the allocation of quotas and dissemination of information on quota availability. This facility is made use of by all exporters. Further, the state government has a lending institution that extends credit for capacity expansion, which is used by a number of firms. This, however, hardly addresses the key problem that producers face, importantly, access to markets and information about buyers. To that extent, the role of government institutions has been limited.

With regard to Tiruppur's ability to innovate, we therefore find factors that enable and constrain. Despite increase in provision of services, firms in Tiruppur face constraints
to move up the value-chain. Their inability to create demand through design and fashion-based innovation is a major factor. The distance from markets, the dense layer of intermediaries and intense competition prove to be major obstacles to the formation.

Implications

(a) Study of Industrial Clusters

The trajectory of the Tiruppur cluster reveals similarities and contrasts with other such formations elsewhere. Unlike other clusters in the peripheral regions, Tiruppur demonstrates an ability to move up the value chain, albeit in a limited manner. Its product range has diversified, with a marginal increase in unit value addition. However, this does not indicate an uncomplicated 'high-road' trajectory. The formation faces severe constraints to further movement into the upmarket segment. Moreover, while few trends in the labour market reflect a 'high-road trajectory', extensive use of family labour, long work hours, insecure work, denial of social security benefits and undermining of labour organisations indicate typical 'low-road' conditions.

The movement away from static concerns to the dynamics of cluster evolution offers interesting insights. The most important suggestion in this regard is the growing differentiation of firms and a tendency towards functional integration, as opposed to regional integration prevalent in industrial districts. There is a dominance of large firms at present, and the industrial cluster in Tiruppur has moved farther away from the typical 'Third Italy' industrial district model. Increasingly, the organisational structure resembles the Japanese organisational form, orchestrated by big parent firms that transact with a multi-layered network of small sub-contractors. Prior to the export phase, inter-firm networking in Tiruppur was akin to the Italian small-firm variant with a fairly equal distribution of power. With expansion of the capital accumulation process, we observe tendencies that undermine the key elements of such a formation. This phenomenon, interestingly, is not unique to Tiruppur. Studies elsewhere too observe similar processes taking place in industrial districts, which suggests a more universalist logic to the trajectory of clusters. In many an industrial
cluster, studies point to the rise to dominance of a few big firms and their over-determining role in influencing the activity of other agents in the cluster.

This phenomenon appears to reflect the process of centralisation and concentration of capital, well recognised in Marxist analyses of capital accumulation. It would appear that competition in a capitalist economy tends to perpetuate this process irrespective of the organisational forms through which capital accumulation takes place. If this were to be true, it weakens the logic of promoting small-firm clusters to generate an industrialisation pattern that would distribute the benefits of growth more evenly. It seems that the small-firm craft labour-based industrial district does not perpetuate itself, but transforms according to the logic of capital accumulation.

We also find that the impulses transforming a peripheral cluster catering to the global market have exogenous origins. The nature of output markets tends to exert a major influence on the trajectory of the cluster. Though history shapes the organisational structure, the reinforcement of certain elements and erosion of certain others are conditioned to a great extent by output market conditions. This observation points to the need to provide greater space for industry-level factors in understanding the organisational dynamics of industrial clusters/districts.

(b) Labour Process

Labour in flexibly specialised organisations is argued to enjoy better work and employment conditions as compared to the deskilled labour in vertically integrated Fordist organisations catering to mass markets. In fact, industrial districts are said to compete on the basis of a multi-skilled workforce. Firms in these formations use craft labour with knowledge of various stages of the production process and capable of undertaking multiple tasks. This knowledge enables workers to participate in the innovative activity of firms. Given the highly permissive inter-firm boundaries in the formation, such innovations tend to diffuse rapidly in the cluster. Firms are therefore enabled to compete on the basis of 'active' flexibility of a multi-skilled workforce rather than a 'passive' one wrought by flexible employment practices.

We observe that the expansion of the cluster has led to a greater intra and inter-firm division of labour, thereby reducing the scope for enskilling observed earlier. This reduced scope once again creates barriers for clusters to compete on the basis of
'active' flexibility. We do not however conclude upon an overall tendency towards deskilling in capitalist labour processes. The suggestion here is less heroic. Craft labour, especially in peripheral regions, survive primarily in sectors that operate in the informal sector, in less technology-intensive or in sectors that do not operate at the technological frontier of the industry. Such forms of production may not always be reproduced in an expanded process of capital accumulation. Changes in product market conditions, in capital-labour relations and importantly, incorporation of new technologies may reduce the incentive for capital to compete on the continued basis of craft labour. In Tiruppur, we observe that the change in the technical basis of new machinery, from mechanical to electronic, has undermined the ability of traditionally skilled labour to contribute to innovative use of new machinery. Further, even if craft labour is used it may not be deployed in 'high-road' conditions. In other words, employment flexibility can co-exist with use of functional flexibility, suggesting a greater subordination of labour rather than autonomy and enriched work for labour.

c) Prospects of industrial upgrading/sustainability of Tiruppur knitwear formation:

On the one hand, the Tiruppur knitwear formation bases its competitiveness primarily on 'passive' flexibility of labour, and the ability to maintain a large number of firms as 'reservoirs' of flexibility forcing them to function under highly uncertain and insecure conditions of accumulation. The formation also saves costs by passing on the costs of waste disposal onto the neighbouring villages rendering the lands less amenable to agriculture. 'Low road' conditions in Tiruppur, therefore, appear to involve serious environmental implications as well. Further, Tiruppur faces the threat of its competitiveness being eroded by lower-wage economies in the wake of a quota-free regime in the near future. The state's role in this regard has hitherto been more by way of its absence and indirect involvement rather than by any proactive intervention.

On the other hand, Tiruppur faces serious constraints to movement to more value-added or design-intensive segments due to lack of access to markets and its location away from its output markets. Under such conditions, the prospects of the knitwear formation to sustain or upgrade its position in the global division of labour appear to be remote. Industrial upgrading requires a more active role for the state in accessing markets, enabling market penetration through marketing and advertising, etc. However, given the formation's structural location in the global division of labour,
even an active role by the state may not enable the cluster to sustain or upgrade itself through participation in global trade.

**d) Regional Development**

The next issue concerns the explicit incorporation of social milieu as an important factor in competitiveness. We recognise that though identities based on caste or ethnicity or religion do contribute to reduction in transaction costs, these identity-based networks also exclude those that do not belong to these networks. Such identities may ensure efficiency in the market, but an industrialisation process that reinforces such social divisions may only exaggerate existing inequalities. Hence, even an ideal industrial district that reduces class based inequalities by providing social mobility to the working class, when bases its competitiveness on such networks, may serve to reinforce other identity based inequalities. This observation is especially significant in the context of policy suggestions that recommend developmental strategies based on use of existing social capital.

On the other hand, we also find that an industrialisation process, based on low-caste labour from agriculture facilitates the reduction in caste-based barriers to mobility in the region. The movement of *Dalit* workers from agriculture to the knitwear industry has reduced their traditional economic dependence on *Gounder* landlords. It is true that the traditional caste-based inequalities do get reproduced in the knitwear industry to an extent. Nevertheless, the entry into a relatively 'modern' industrial labour force undermines, to an extent, the basis of reproduction of traditional relations of power. The impact of such a modernisation process on caste-mediated power however calls for a more detailed study.

Tiruppur is a typical case of a peripheral region incorporated into the world economy in a period when accumulation is increasingly taking place on the parameters of 'flexibility'. The observations indicated here would obviously have implications for similar formations elsewhere. However, the extent that 'local' factors influence the mode of articulation with the 'global', would influence the extent to which these inferences can be generalised.
Towards a Sociology of Consumption

This study concentrated on flexibility and accumulation as facilitated by networking characteristic of industrial formation. It was seen that in the local segment of the formation, networking between economic agents was embedded in the social relations of family, caste, and gender. These socio-cultural variables influenced networking between agents in the periphery and others in the metropolis. We emphasised, thus, the sociology of production. Further, we pointed out that the organisational flexibility in the peripheral formation was very much linked to the flexible nature of the product market, primarily influenced by the rapidly changing consumer tastes in the metropolis. While our enquiry is rounded off at this point, a complete story requires a close analysis of the consuming citizen in the metropolis. This in turn demands a movement from an analysis of the sociology of production to the sociology of consumption.