

# DYNAMICS OF NETWORKING: A CASE STUDY OF PRINTING INDUSTRY IN KERALA

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**Abstract:** This paper is an attempt to understand the dynamics of printing industry in Kerala through the conceptual framework of networking. In particular the study explores the inter linkages between technology, marketing and networking. Networks offsets some of the disadvantages of small scale production vis-à-vis large scale production, while at the same time enhancing benefits such as innovation and flexibility. The choice of the framework of networking to explore the organization of printing industry in Kerala is influenced by the fact that the central aspect of the recent changes in Kerala's printing industry is the movement of firms from being isolated, independent centers of production to becoming a part of interdependent, networked communities.

**Keywords:** Networking, Printing Industry, Technology, Marketing.

## I. INTRODUCTION

The economic restructuring of the 1980s induced important reorganizing strategies in industrial firms. Some analysts particularly Piore and Sabel, argues that the economic crisis of the 1970s resulted in the exhaustion of the mass production system, constituting a second industrial divide in the history of capitalism. For others such as Harrison and Storper the diffusion of new organizational forms was the response to the crisis of profitability in the process of capital accumulation. In spite of the diversity in the approaches, there is coincidence in four fundamental points of analysis

1. From the mid 1970s onwards there occurred a major divide in the organization of production and markets in the global economy
2. Organizational changes interacted with the diffusion of information technology but by and large the two were independent. Organizational changes preceded the diffusion of information technologies in industrial firms.
3. The organizational changes were triggered by the need to cope with the uncertainty by the fast pace of change in the economic, institutional and technological environment of the firm by enhancing flexibility in the production management and marketing.
4. Many organizational changes were aimed at redefining labor processes and employment practices, introducing a model of lean production.

A wealth of industrial case studies has amazed over the past decades documenting the appearance of new ways of organizing production systems, labour market and labour capital relation. Recent evidence suggests that vertical integration, mass production and stable oligopolistic market structures – the hall marks of fordist industries are not the necessary culminations of sectoral development as was often assumed in the early post war years. Post fordism stresses a break with all that is fordism. Post fordist theory argues that at the heart of the new era of post fordism, are new forms of the capital- labour relations. These forms are able to overcome the problems for capital like trade union resistance which have arisen within the fordist labour process. The core argument of post fordist theory is the idea of flexibility in production, design, inter-firm relations, labour market and labour processes. Broadly expressed, we can define a flexible economy as one in which individuals, organizations and institutions efficiently adjust their goals and resource allocations in the light of changing constraints and opportunities.

A major new trend of organizational evolution that has been identified is the transition from mass production to flexible production. When demand became unpredictable in quantity and quality, when market were diversified worldwide and thereby difficult to control and when the pace of technological change made obsolete single purpose production equipment, the mass production system was found to be too rigid and too costly for the characteristics of the new economy. A tentative answer to overcome such rigidity was the flexible production system. This strategy is based on flexible multi use equipment, skilled workers and the creation through politics of an industrial community that restricts the forms of competition to those favouring innovation. Flexible specialized industries have three defining characteristics.

1. They produce a range of products for highly differentiated markets and also constantly alter these goods in response to changing tastes and in order to expand markets.
2. Individual firms use flexible and widely applicable technologies- general purpose machine rather than large dedicated machine system.
3. Flexibly specialized industries balance competition and co-operation among firms through networking.

## II. NETWORKS IN PRINTING INDUSTRY

Networks of co-operating small and middle sized firms play a vital role in the present day industrial organization. To a considerable extent the current industrial organization model of flexible production is rendered possible through networking. Any production process may be analyzed as a series of more or less well defined steps. All these steps may be carried out within the confines of a single enterprise. Alternatively each of these may be developed as specialties of separate but interdependent enterprises. If each step is carried out by autonomous enterprises, an enterprise network is needed to ensure the co-ordination of the entire process. Another reason that has given rise to networking is fluctuations in demand. Producers may find it uneconomic to build capacity sufficient to meet peak demands. The limited capacity of firms to undertake all the activities of a complex production within one firm is also responsible for networking. If a firm does not have the required skills in a particular activity, it may prefer to hire another enterprise which already has the abilities. Investment is usually kept low so that the entrepreneur can easily switch to new product when the market for the existing product collapses.

The persistence of networking explains to a considerable extent the apparently paradoxical survival of small scale manufacturing units in the process of economic development. Networks are supposed to offset some of the disadvantages of small scale production. Small firms can successfully compete with large scale industry by co-operating in production, marketing, transport, even advertising. In a network of small firms, all are linked to each other by networking, that is, by market relations. Theory and empirical evidence suggested that networking offers economic benefits for participating business and foster overall industrial growth.

In India, networking exists in a wide range of industries from automobiles, metal engineering and electronics to consumer goods industries like electronic appliances, clothing, leather products and the like. With the growing importance of this phenomenon, there appear a number of studies in India, mostly between late 1980s and early 1990s that dealt specifically and in a fairly detailed manner, with the issue of networking.

The present paper intends to study about the implications of networking for the sustenance and growth of firms in printing industry in Kerala. This empirical study used both primary and secondary data. The paucity of data owes to the nature of the industry comprising that it does of innumerable small firms and often unregistered with state agencies. Data on networking was even more difficult to come by in secondary literature. It is difficult to quantify the total number of firms in the industry because most of these were not registered firms. Identifying a proper sample frame for the survey therefore becomes difficult. In such cases the usual methodological practice is to attempt case studies of individual firms. However as the study explores the aspect of inter-firm relationships, individual firms do not qualify as appropriate units of analysis.

Hence the study used “community” as the prime unit of analysis. The field work was conducted in ten such communities. As a part of the study the units of printing industry were divided into three – namely, pre press, press and post press units. Prepress consists of DTP, designing and film making units. Press comprises printing process. Post press includes lamination and binding. The individual firms specializing in one stage of production process enter into networks with other firms.

Each community consists of six units, that is, DTP layout, designing, film making, printing, lamination and binding units. The composition of community could change. A cheaper rate quoted or a better quality of production may induce a constituent firm to drop an existing networker and choose another. Sometimes it is seen that a single unit undertakes the entire pre press work and at the same time they undertook the works of other firms.

The printing industry is a diverse and heterogeneous sector. In detail, it is composed of such conglomeration of producing units, varying so much in size in kind of output, in methods and processes, in efficiency and quality, in structure, in organization, as to make almost any generation no more than narrowly applicable at best. It is this diversity that has paradoxically helped to ensure the survival of the small print unit.

Printing differs from most manufacturing industry, in that much it is produced, to the particular specification of the customer, the type of work demanded vary greatly, and there is a room for a wide range of printers to specialize in a particular product. It is thus demand oriented custom jobbing that has ensured the survival of the small printer.

The printing industry in Kerala was traditionally large scale and capital intensive. After the initial year of household production the units were mostly organized along composite lines, with all operations being carried under a single roof. Letter press, the more traditional method, consists of setting up cast metal letters in printing frame and imprinting the made up image on the paper. There was no need for specialized units in different processes that used in the production of a printed material. All the processes were done under one roof. Since the early 1970s there has been a tendency towards fragmentation of the composite units. Because printing industry increasingly has to face changes in demand and technology. The demand for printed material increased as a result of social and economic changes in the country during that time. Again it will be necessary to examine the effects that recession had on the printing sector. Printing sector had not escaped from the effects of a generalized economic crisis. The sector should badly hit, is not surprising because the printing industry finds much of its products from the activity of other industries. During the 1970s many of the printing firms in Kerala are being run at 50% capacity. Because of these reasons, large enterprises in the more dynamic sectors were suffered from rigidities incorporated in the large fixed assets and ossified one dimensional organization.

Since mid 1980s the organization of production has been more through networking than through vertical integration. Since 1990s there has been a marked diversification in the product profile, more and more firms began to produce products of better quality using new designs and wider variety. Due to diversification of the product profile the production process has undergone a series of changes. These changes have largely been by way of additions to the number of operations required for producing a product.

Thus the printing industry in Kerala shows three important characteristics of flexible specialization model. Firstly there is transition from mass production to flexible production in printing industries. Secondly, they produce a wide range of products for highly differentiated markets. Thirdly, there arises a strong networking relationship between firms in the printing industry.

Technological changes may occur both in the pre press and post press stages. Pre press work splits into three groups. Each of these units specialized in one production process and hence each unit gets a lot of benefits like less fixed cost, quality improvement etc. What is important here is that a networking relationship is needed to ensure the smooth working of the production process. The growth and survival of these small units depends upon the networking relationship with other firms.

The organization of production varies from fully integrated establishment to a fragmented production process based on several establishments, each specializing in a specific stage of production. The fragmentation of labour process has led to the development of small highly specialized print shops. Each firm specializes in one stage of production and enters into networks with other firms, who are engaged in other stages of production. The networking relationship gives the workers and their employers most of the advantages of large firms without their disadvantages.

The networkers make business relationships possible. Sometimes these networkers play a multi disciplinary role, that he/ she may be a printer, binder or designer. They intervene at all levels of production process, putting designers in touch with printers or printers with binders. Sometimes networkers may even organize the whole production process. The networker thus appears as an indispensable actor, a specialist in the organization and use of networks, ensuring the establishment of connections between areas and the free interplay of demand and supply.

### III. CONCLUSION

The primary characteristics of flexible production are vertical integration whereby production of a good or service is accomplished through the combined contributions of networks of specialized and most commonly small firms. In printing industry, the organization of production varies from fully integrated establishment to a fragmented production process based on several establishments, each specializing in a specific stage of production. The fragmentation on labour process has led to the development of small highly specialized print shops. Each firm specializes in one stage of production and enters into networks with other firms, who are engaged in other stages of production. The networking relationship gives the workers and their employers most of the advantages of large firms without their disadvantages.

In printing industry, large scale production is made possible by supplying several independent buyers. They may result from the specialization associated with concentrating on only one process. Advantages here may come from economies of scale. Networks are supposed to overcome the disadvantages of small scale production. Small firms can successfully compete with large scale industry by co-operating in production, marketing, transport and even advertising.

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