

CHAPTER 2

COLLECTIVE ENTREPRENEURSHIP: DEVELOPING AN ENTREPRENEURIAL-NETWORK-ORGANISATION FRAMEWORK

Chapter 1 has shown that the problem with traditional economic development theory is that there is too much concentration on quantitative rather than qualitative variables. Static approaches to economic development are reluctant to incorporate entrepreneurial factors (producers) into their explanatory framework (Shieh 1992).

To most economists, entrepreneurship is not a problematic matter because this factor is contingent upon other economic variables (mainly capital and labour). The entrepreneurial factor is merely a resource-mover and in existence only when opportunity is available to maximise profit. But to economic sociologists, social psychologists, business historians and anthropologists; entrepreneurship matters most because this factors is deeply embedded in any society and culture (Martinelli 1994).

Considering the above proposition, the foremost task of this Chapter is to develop an analytical framework of ENO by incorporating entrepreneurial factors into the existing analytical model of hybrid organisations on the belief that no economic action would take place without the effort of these factors to organise other inputs in particular organisational forms. It means that entrepreneurial factors, in this context, assume a dynamic, instead of a static role in economic decisions and actions.

Owing to the fact that such a framework is absent in the literature, myriad studies of entrepreneurship, network and organisation must be thoroughly examined to find any similarities and conceptual harmonies in them. Hence, a single analytical

framework with a special name could be established. Better understanding of the concepts would be helpful, at least, for the present study to find an intimate way to use them to full potential, but in a reduced form. Otherwise, one may think that those conceptual analyses are, instead of being harmonious, conflict with one another. The last section of this Chapter discusses briefly the developed ENO framework in real practice before it extends into greater detail in the next Chapter.

2.1 Entrepreneurial Factors in Retrospect

Richard Cantillon (1680-1734) was the first economist who introduced the word, “entrepreneur” into the economic theory. But the development after him was quite unsatisfactory. The birth of classical economic thought advocated by Adam Smith (1723-1790) that premised on capitalism after Cantillon’s time vanished the entrepreneurial significance in the history of economic thought. Capitalists were widely recognised in the early era of capitalism and probably because they also took entrepreneurial functions during the time, the two factors of capitalist and entrepreneur were seen as resembling one another.

There was hardly any effort to distinguish between capitalists - the people who provide capital and earn interest; and entrepreneurs - the people who use capital and earn profits. The effort of Jean Baptiste Say (1767-1832) and John Stuart Mill (1806-1873) was largely overshadowed by the work of the great neoclassical economic marginalist, Alfred Marshall (1824-1924), which still premised on capitalist-employer arguments of the classical Smith-Ricardo. By the 1930’s, entrepreneurial factor disappeared from the mainstream economic theory (Barreto 1989).

Macroeconomics theory which accepts an equilibrium state with unemployed resources as in the Keynesian viewpoint is, according to Kirzner (1982), a fundamental denial of the entrepreneurial function. Only if such unemployed resources could be used to satisfy society's wants, then there is a scope for entrepreneurship and it may later disturb the equilibrium to shift to a higher level.

The argument of Baretto (1989) on the disappearance of the entrepreneurial factor in economic theory should, however, be examined carefully. He may be right if one looks at the historical context of British's mainstream economic thought; but he may be wrong if one looks at the history of heterodox economic thought in other Western countries, such as France and Germany.

The work of a German scholar, Joseph Schumpeter (1883-1950) makes major impact on the argument of entrepreneurship in the context of economic development. The major contribution of Schumpeter is his argument on innovation - new combinations of scarce resources to generate new products, new production processes and functions, new markets and even new organisations - that brings about economic development. Scarce resources in his context may be extended to both economic and non-economic resources - capital, labour, raw materials, land, information, knowledge, skills, culture, power, control, trust and many others.

Broehl (1982) argues that despite the enigmatic character of entrepreneurial factors (individuals or groups) in the drama of economic development, particularly in less developed countries, it turns out to be an important agent in every society. Following Harbison (1956), any well-rounded analysis of economic development should include the entrepreneurial factor and this is agreeable by most economists. To

him, innovation is the primary function of entrepreneurship with entrepreneurs carrying on new combinations of factors of production and distribution. He adds that the most critical skill required for industrial development on a large scale is organisation-building ability. It is the ability of key persons of an organisation to translate research into development, to bring forward innovation of different sources, to pool and develop human resources is assumed "the most precious of all entrepreneurial skills" (Harbison 1956: 367). The ability endowed in someone is nearly fulfilling the role of true entrepreneurs, though such building abilities may not be his genuine ideas.

2.2 Entrepreneurial Concept and Analysis

The 19th century saw the rise of a new mode of economic organisation characterised by outstanding actions of large enterprises in economic activities, particularly in the automobile industry. This phenomenon led to the ascent of entrepreneurial history as a new substantive discipline (Livesay 1982, Cole 1968, Soltow 1968). This does not mean that the entrepreneurship concept is merely the product of the great 19th century industrial revolution. It is therefore the responsibility of the present section to explain clearly and, to a certain extent, to develop extensively the concept of entrepreneurial factors and their actions which led to the configuration of particular types of organisation.

Entrepreneurial research branches out into three mainstreams, namely the results (outcomes) of entrepreneurial activities, the cause of entrepreneurial actions and the process (way) of entrepreneurial actions. It is interesting to examine each of them because of their strong correlation with three other constructs: its influence on economic

development, its reaction to surrounding environment and its selection of certain mode of organisation respectively (Stevenson and Jarillo 1990, Ray and Ramachandran 1996).

Entrepreneurship has no clear-cut standard definition resulted in substantive studies from different perspectives - economics, psychology, sociology, anthropology, history and management. All the studies are not synchronised onto a unanimously commonly-agreed ground, but are scattered over diverse grounds with idiosyncratic piles. No wonder, Casson (1982: xiii) points out that the effort to explore the literature on entrepreneurship "is rendered still more difficult by the fact that in most economic studies of entrepreneurs the word 'entrepreneur' in the title is non-academic or is not about entrepreneurs at all".

The concept itself was derived from the basic word "entrepreneur", which had its origin from "entreprendre" in French which means "go-between or between-taker" (Martinelli 1994). Its origin could be traced way back from the 12th century, but its popularity was eminent in the 17th century and remained in the domain of economics until the middle of the 20th century (Ray and Ramachandran 1996). According to Martinelli (1994), Cantillon and Turgot were the two economists who incorporated entrepreneurs as the actors who willingly to take the risk and uncertainty inherent in economic activity. But the term seemed to disappear in the later development of economic theory till the time of Joseph Schumpeter (1883-1950).

For centuries, successful businessmen were treated as entrepreneurs. They played significant roles in Western society, from which the definition stemmed. Economists generally accept that entrepreneurs have three principal functions - to bear

the risk and uncertainty, to carry innovation, and to organise and manage business enterprises (Harbison 1956).

They were seen beyond the mere possession of particular intellectual or emotional qualities and the inclination to perform certain roles relative to other members of society; they were also conceived to initiate, maintain and aggrandize specific business units (Cole 1968). Their motivation for achieving self-interested economic goals rewarded them in the form of material prosperity, public recognition and esteem, as well as being acknowledged as generators of social welfare. Thus, in the old time, the three elements - entrepreneurship, proprietorship (Livesay 1982) and *prosperity* - were assumed to go hand-in-hand (italics is added).

Baretto (1989) stresses that entrepreneurs are risk-bearers, speculators, owners, decision-makers, coordinators, innovators and arbitrageurs. Baretto's functional roles of entrepreneurs are summarised in Table 2.1. Martinelli (1994) points out that Karl Marx, Max Weber and Joseph Schumpeter were among the prominent classical scholars who contributed significantly to the contemporary study of entrepreneurship, particularly in the field of economic sociology. Adding an impact on the explanation of the evolutionary process in entrepreneurial life cycle is the work of John K. Galbraith - "The New Industrial State" (1967).

Despite differences in its meaning, the concept of entrepreneurship and its analytical construct can be derived by examining some definitions offered by many scholars. Of significance and the most frequently cited definition of entrepreneurship is the one offered by Joseph Schumpeter. He was among the first scholars who brought the entrepreneur to the centrestage and segregated sharply the entrepreneurial factor

Table 2.1
Baretto's Functional Roles of Entrepreneurs in Economic Theory

No.	Functional Roles	Proponents
1.	Speculator - in conducting his transactions	Richard Cantillon (1680-1734)
2.	Coordinator - combiner of resources	Jean-Baptiste Say (1767-1832)
3.	Owner- of output	Frederick Barnard Hawley (1843-1929)
4.	Decision-Maker - under uncertainty	Frank Knight (1885-1972)
5.	Innovator - in economic development	Joseph Schumpeter (1883-1950)
6.	Arbitrageur (adaptor) - an equilibrating agent in a world of imperfect information	Israel Kirzner (1973)*
7.	Uncertainty-Bearer	Baretto (1989)

Note: * Based on his published work of "Competition and Entrepreneurship" (1973).
Source: Adapted from Baretto (1989).

(entrepreneurs) from the managerial resources (managers) in the economic development of a capitalist world. His work on “The Theory of Economic Development” that was first published in German in 1911, brought about a profound impact on the later development of entrepreneurial studies; any work on entrepreneurship since then seems invalid without highlighting his contribution.

Entrepreneurship, in Schumpeter’s view (as quoted in Hansemark 1998), can be defined as a process to which anyone, not necessarily the capitalist or those who have command over resources, who undertakes new combinations of factors of production in an innovative manner in the form of new products or processes and by doing so he disturbs a stationary equilibrium state of an economy and hence provides a dynamism to the circular flow. Other scholars, such as Cole (as quoted in Livesay 1982: 10 - italics is added by Livesay himself) defines entrepreneurship as a “purposeful and *successful* activity to initiate, maintain and develop profit-oriented business.” Stevenson and Jarillo (1990) with their emphasis on corporate entrepreneurship, define entrepreneurship as a process by which the willingness of individuals - either on their own or inside organisations - pursue opportunities, regardless of the resources under their control.

Leibenstein (1968) defines entrepreneurship in two broad perspectives, namely, routine entrepreneurship and Schumpeterian, or new-type entrepreneurship (called N-entrepreneurship). The function of the first type is just to coordinate and carry on a well-established and known parts of the production function and markets; whilst the second is to create or to carry on an enterprise to which parts of the production function and the markets are unknown or not clearly defined. N-entrepreneurship is a gap filler and input completing-maker, owing to its ability to compensate for great gaps in the knowledge or in assembling information of the production function. It hence enables it

to connect different markets, make up for market deficiencies and create or expand business organisation (Broehl 1982).

The definition itself tells us of how the concept is treated in the literature. There appears two conceptual levels of analysis in the study of entrepreneurship; one is at the individual level and the other is at the organisational level. As pointed out by Rieple and Vyakarnam (1994), most of the research on entrepreneurship in the past was linked to the founders and owners of firms. Such an individual level of analysis is a common view in the study of entrepreneurship (Schendel 1990).

Only recently, some scholars devoted their research interest to organisational (corporate) entrepreneurship as their level of analysis (Rieple and Vyakarnam 1994, Schendel 1990, Stevenson and Jarillo 1990, Chang 1998), owing to the significant presence of especially large corporations in contemporary business activities, characterized by the separation of ownership and management or control.¹

Corporate entrepreneurship in certain studies is identified in two forms, namely intrapreneurship and exopreneurship (Chang 1998). The first entrepreneurship centers on entrepreneurial action to which innovations are generated internally to revitalise largely bureaucratised organisations to become strategically entrepreneurial performers, while the latter acquires innovation from external sources, particularly from business counterparts.

At the organisational level of analysis, organisations can be further disaggregated according to their size - whether they are tiny, small, medium, or large entities which subsequently appear in many forms of legal registrations - proprietorship, partnership, private non-limited companies, private limited companies and public

companies. It may also appear in various forms of economic coordination or governance - hierarchies and hybrids.

2.3 The Network Concept

It is useful to explore the network concept and its level of analysis in order to show that the concept can be constructed within the organisational framework and is the result of entrepreneurial actions.

The network concept is a fashionable and trendy one (Jarillo 1988, Nohria 1992) and is in renewed interest (Stern 1979). There are two important points in the rapid development of the network concept: Firstly, it is their day for network advocates. Secondly, the indiscriminate proliferation of the network concept threatens to relegate it to the status of an evocative metaphor, loosely applied and it means nothing (Nohria 1992).

Growing interest in network analysis has sacrificed the establishment and maturity of the concept itself. Despite vast theoretical arguments proposed by a myriad of scholars, no one could claim that their theoretical or analytical framework is best to explain any form of network relations. There is a tendency for network terminology to be overlapped and confused. Its popularity is accompanied by a general vagueness about what idea is precisely all about (Powell and Smith-Doerr 1994). It was exacerbated by the fact that networks encompass a wide variety of interorganisational relations (Nassimbeni 1998) with which the research focus devoted to different elements, components and levels (Benson 1975).

Although the concept has been developed in a few decades, no one was quite sure whether networks were a metaphor, a method, or a theory (Barnes, as quoted in Powell and Smith-Doerr 1994). No convincing theory was found to bind together the conceptual fragmentation (New and Mitropoulos 1995). New and Mitropoulos add that despite prevailing some excellent studies on particular cases, a coherent and general framework has yet to appear. It also lacks the generally accepted theoretical framework, with a deep theoretical background to epitomize the plentiful anecdotal evidence and especially to put the phenomenon in a context, consistent with the overall strategic paradigm (Jarillo 1988). Indeed, the "social network analysis remains more of a paradigm and framework than a theory and more promise than fulfilled potential" (Pfeffer, as quoted in Nohria 1992: 16).

Whatever the critics are, the concept is definitely useful looking at its widespread practice in the real world of business and economic activities. There must be some ground to believe that this concept is helpful to understanding the importance and role of networks in economic development. Relying on the assumption that the relationships among social actors in a population can be represented by a set of ties among them (Stern, 1979), an economic sociology vantage point defines a network as a set of relations, or ties among actors of either individuals or organisations (Powell and Smith-Doerr 1994) to pursue their congruence of economic goals. Actors may also involve persons, informal groups, or formal corporate groups (Burt 1980), meaning that the concept considers the relationships at individual and organisational levels, disregard of whether the actors interact directly or indirectly.

At the individual (interpersonal) level of analysis, the network concept is popularised by scholars in diverse fields such as anthropology, psychology, sociology, mental health and molecular biology (Nohria, 1992). In the field of economic theory and organisational behaviour, the concept is even described dated back to 1930s, when Coase (1937) stressed the formal relations among firms. At about the same period, Roethlisberger and Dickson (as quoted in Nohria 1992) also emphasised the importance of informal networks of relations in organisations.

Excitedly, network analysis focusing on social relations among actors became increasingly important in the 1970s and has been used to analyse the relations among organisations. Hence, the closed-system framework (based on an individual organisation as the unit of analysis) that dominated organisational analysis for decades has also shifted to a more open-system framework (the organisational environment premised on interorganisational networks). A network in an interorganisational level of analysis comprises organisational units and the linkages between them and the unit of analysis is based upon the totality of the network (Stern 1979).

As mentioned earlier, organisation studies have apportioned networks into informal (emergent) and formal (prescribed) relations. The former is a form of loose ties among friendship cliques and governed by tacit workplace norms; while the latter is a clear chain of a complex mix of authority, friendship and loyalty that is normally represented in an organisation chart. In other words, formal networks represent a form of social structure as a pattern of identifiable relations linking social units of whether they are individuals, collectives, or corporate actors to adopt similar structures and pursue common strategies and rewards. Each of them is certainly accountable for their

behaviour and actions in pursuing common goals. Thus, networks assume a social glue that binds social units together into a coherent system and typically found in industrial districts in the form of an interdependent web. Such a structure is typified as relational contracting, collaborative manufacturing, or multistranded interfirm alliances.

Numerous literature on the sociology and economics of organisation concerns more the formal structure of authority and pays less attention to the informal structure due to the vague existence of the latter. Sociologists devote much attention to the study of formal organisations, particularly in the field of industry, government and trade union (Levine and White 1961). Nevertheless, it is undisputed that the informal or unofficial networks which represent the spontaneous and flexible ties among members, guided by feelings and personal interests are indispensable for operation of the formal, which is planned and agreed upon (Dalton, as quoted in Powell and Smith-Doerr 1994).

2.4 Network Structural Analysis

Network structures can be analysed in several constructs. This section presents the analysis in two perspectives, namely general and inter-organisational perspectives. The first perspective treats network structure as a broad social relation that may occur at various dimensions, while the latter focuses specially on interrelations amongst firms, or organisations.

2.4.1 General Perspective

Burt (1980) proposes in detail the model of network structures to present a framework, linking abstract concepts with empirical research and micro with macro

levels of social theory, for describing relational patterns among actors in a system. What is interesting and may be applicable to real life is that he sees the structure in a six-fold typology defined by two axes. As shown in Table 2.2, the aggregation of actors in a unit of analysis is apportioned into six analytical modes against two frames of reference - relational and positional approaches - in which actors are analysed. Each level of aggregation or unit of analysis is distinguished from the other by the frame of reference.

Relational approach describes the intensity of relationship between the pairs of actors. It focuses on direct ties between actors and often identifies densely connected cliques among organisations by using graph-theoretic techniques (Mizruchi and Galaskiewicz 1993). The approach treats an actor's involvement in one or few relations without attending to his many other relations. Studies suggested that the variations in network configurations were primarily based on activity or functional area. Levine (1972) in his study of networking among 70 large non-financial firms and 14 large financial institutions of the U.S.A found that the firms were organised into a series of geographically based clusters centred around financial institutions. Mizruchi and Galaskiewicz (1993) also found that the relational networks were structured around geographically based groups, frequently led by a financial institution.

Positional approach describes the pattern of relation defining an actor's position in a system comprising many other actors. This approach treats an actor as one of many in a system so that his defined interconnection with other actors is given attention. A system can be stratified as social relations, economic relations, political relations, kinship relations and some other relations. It focuses on ties to third parties and identifies actors that are structurally equivalent, or having identical relations with other

Table 2.2
Concepts of Network Structures Within Each of Six Modes of Network Analysis

Analytical Approach	A unit analysis: By actor's aggregation		
	Actor	Multiple Actors: A Network Subgroup	Multiple Actors/ Subgroups: A structured system
Relational	Personal network as extensive, dense and/or multiplex	Primary group as a network clique: A set of actors connected by cohesive relations	System structure as dense and/ or transitive
Positional	Occupant of a network position as central and/or prestigious	Status/role-set as a network position: A set of structurally equivalent actors	System structure as stratification of status/role- sets

Source: Adapted from Burt (1980), Table 1, p.80.

members of the group (Mizruchi and Galaskiewicz 1993). White *et al.* (1976) develop blockmodelling (based on discrete distance), while Burt (1982) develops a clustering approach based on continuous distances to explain network in the positional approach.

Actions (attitudes and behaviours) of actors in an organisation are best explained by knowing their position relative to others (structural autonomy) in any network of relationships, rather than knowing their different attributes (e.g. relative size and technological capabilities). But in certain circumstances, it cannot be totally disputed that the attributes would in turn determine their position.

Five different principles, namely cohesion, equivalence, prominence, range and brokerage, are normally used by analysts to analyse the action of an actor and their influence on his action (Burt, as quoted in Nohria 1992). Cohesion and equivalence are the two models explaining similarities in the action of actors in an organisation. The first model groups actors together when they share strong common relationships with one another derived from consistently discussed opinions in an environment of strong, socialising relations. The latter groups actors together when they have strong common relations with their counterparts in an organisation which arises from similar roles played by one another and ultimately narrows down to a shared opinion.

The last three models are applied to elucidate the extent to which an actor is advantageously positioned relative to others in an organisation. The prominence model explains the position of an actor based on more or less the demand on him. His prominence increases as he is the object of many others and of course the source of many relations. Actors can use the asset to push others into doing things that would reinforce their own interests.

The range and brokerage models measure the extent of the ability of actors to get away with pursuing their own interest. Network sizes - a sum of the actors' relations and the bridging ties that actors have are two of the many assets enabling the actors to strengthen their position in network relations. The more the advantages, the stronger are the actors in a network position. The brokerage model is based on the causal mechanism of contact, the contact with others who are disorganised and so can be played off against other members in a network organisation.

Provided with social differentiations, those two models of relational and positional approaches seemed to develop quite distinctly (Burt 1980). Notwithstanding, both approaches have obviously yielded similar results (Mizruchi and Galaskiewicz 1993). As stressed by Mizruchi (quoted in Mizruchi and Galaskiewicz 1993: 52), "the convergence between the two models is that members of maximal subgraphs automatically share a certain number of ties in common (the other members of the subgroups) increases the possibility that they will be structurally equivalent in terms of the larger network."

2.4.2 Inter-organisational Perspective

Another perspective of the network relation which has gained interest among scholars recently are networks among firms or organisations. Inter-organisational networks could involve various units of analysis - people, enterprises and sectors (Scott 1991) and exchange many kinds of resources - money, materials, clients and technical staff services (Van de Ven, Walker and Liston 1979). Such relations that involve public, non-profit and private organisations are now mushrooming for their affiliated members to pursue R & D and to tap market shares. Collaboration in the intricate

production web may also enable any one firm to benefit from its suppliers, end-users, distributors and former competitors.

Hamilton, Zeile and Kim (1990) divide the inter-organisational network configuration (structure) into four forms, namely ownership networks (firms linked through common ownership), investment networks (firms linked by capital and investment), production networks (firms linked by production sequences) and distribution networks (firms linked by distribution of commodities). Of significance are the production networks that are currently in fashion and a dominant form of organisations (Harrison 1994). They are widely found in industrial production activities.

Using the organisation structural model developed by Mintzberg, Nassimbeni (1998) also concedes the existence of various inter-organisational networks. However, based on the labels and theoretical background of interorganisational relationships, he divides networks into three basic characteristics. First, a network that contains two or more firms (at least, in part, it is autonomous) in which they exchange relationships. Second, a network of legal structure which is normally governed by a “relational contract”. This form of relationship is normally founded on a longer term basis for fulfilling mutual interests. As time passes by all the parties involved would carry out their tasks and mutually adapt to unpredictable contingencies, should they arise. Finally, a network among parties which is more dynamic in communication and co-ordination to adapt and synchronise the activity of each node to the activities of the whole system.

Based on the objectives and the main area involved in network interactions and the integration vehicles; Nassimbeni (1998) divides relational networks into three groups, namely supply networks, agreements and joint ventures and regional industrial systems. Powell and Smith-Doerr (1994), on the other hand, group the network relations

of the industrial sector into four principal classifications. They are regional, research and development, business groups, strategic alliances and collaborative manufacturing (Table 2.3).

Comparing the two, the classification made by Powell and Smith-Doerr (1994) is more comprehensive and representative than the one made by Nassimbeni (1988). The first and the second categories of Nassimbeni belong to the fourth category of Powell and Smith-Doerr, whilst the third category of Nassimbeni is equivalent to the first one of Powell and Smith-Doerr. Again, what should be borne in mind is that the taxonomy is only for analytical simplicity. They are still overlapping in reality, because other types of networks may appear in each classification. For example, networks of research and development, strategic alliances and business groups may appear together in industrial districts. Details of selected forms of interorganisational networks and the forces influencing their configuration will be presented in Sub-section 2.6.1 and Sub-section 2.6.3 respectively.

Disregarding the analytical levels, there are two components that tie together the actors. First, is the content, i.e. the type of relation, including information or resource flows, advice or friendship, shared personnel or members for directors. Second, is the form, i.e. the strength of the relation (Burt, 1980). Any type of social relations can be mapped as a tie. Due to a variety of relations, a network in an organisation or between individuals are typically embedded in multiple, often overlapping interactions which could be possible in various forms of resource exchange networks, information networks, board of directors interlock networks, production networks and distribution networks. Though, the complex nature of the network tie is recognised,

Table 2.3
Four Types of Production Networks in Industrial Activities

Types	Literature	Examples	Key Concepts	Basic of Trust
Regional or Industrial Districts	Sabel (1989), Scott (1990), Herrigel (1990), Saxenian (1994)	Manufacturing in the Third Italy, high tech in Silicon Valley	Flexible specialisation	Location, kinship, norms of reciprocity
Research & Development	Hagedoorn & Schakenraad (1990), Powell (1993)	Basic science collaborations	Innovation, learning	Common technological community
Business Group	Dore (1987), Gerlach (1992), Granovetter (1994)	Japanese keiretsu, Korean chaebol	Benevolent authority	Common business group identity
Strategic Alliances and Collaborative Manufacturing	Sydow (1991), Kanter & Myers (1991), Sabel <i>et al.</i> (1991)	Joint ventures, sub-contracting	Identity altered from repeated interaction	Calculative, common dependencies

Source: Adapted from Powell and Smith-Doerr 1994, Table 4, p. 386.

there is a tendency that the tie is concentrated in the form of a network pattern rather than on their content (Wellman, as quoted in Nohria 1992).

Their relational characteristics may also be quantified in terms of direction and amount (Van de Ven, Walker and Liston 1979). Based on the direction and the amount (degree of network relation), there would be three patterns of inter-organisational networks: pair-wise interagency, interagency set and interagency network.

Figure 2.1 shows the patterns of the inter-organisational network. Pair-wise interagency as in Figure 2.1a is the simplest form of inter-organisational network that involves dyadic relationship between two organisations (Firm A1 and Firm A2). The amount of their inter-relationship (indicated by n) in the resource exchange is explained by resource dependence, communication, awareness and consensus. Two other forms of inter-organisational network, interagency set (as in Figure 2.1b) and interagency network (as in Figure 2.1c) are only a series of pair-wise relations. The only difference is that these two involve more complex interactions.

An interagency set focuses on dyadic relations between one focal agency (FA) and its associated members (MA). It does not see the relationship among MAs. Network relations in this case is thus clustered around a FA. The third pattern (the interagency network) is more dimensional in the relationships among organisations. It seems that there is no dominant firm in the web of networks since each firm in the cluster has its own particular interaction with other firms.

Figure 2.1
Patterns of Inter-organisational Networks

Figure 2.1a: Pair-wise Interagency

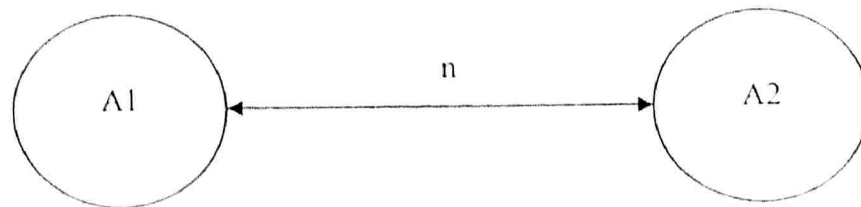


Figure 2.1b: Interagency Set

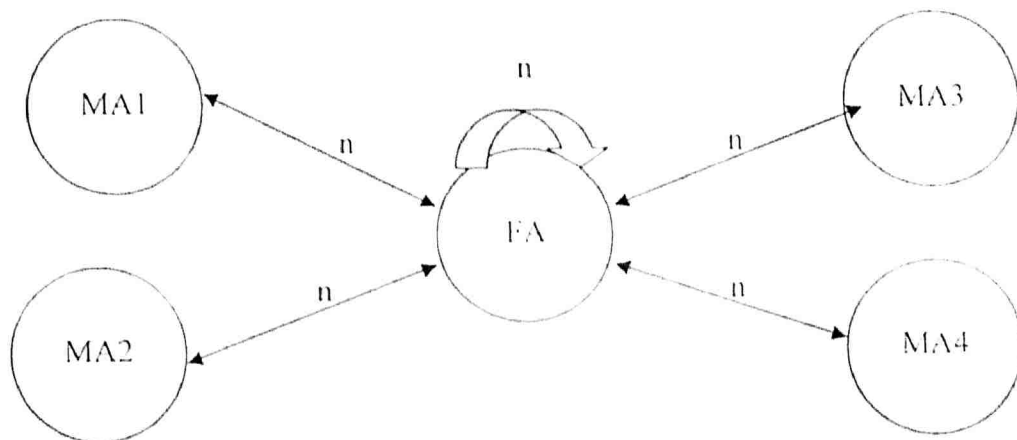
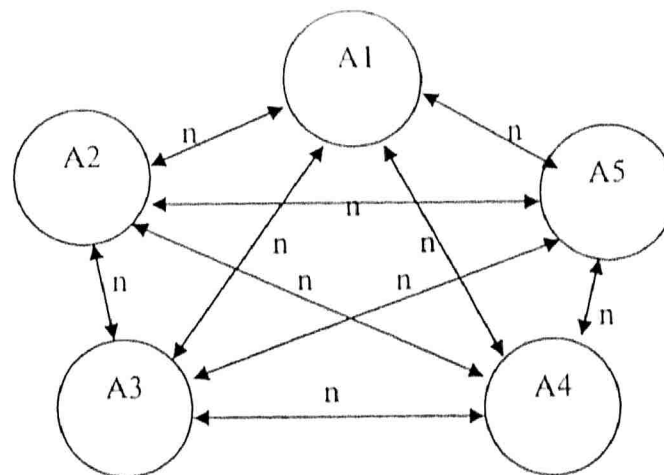


Figure 2.1c: Interagency Network



Source: Van de Ven, Walker and Liston (1979), Figure 1, p. 21

2.5 Entrepreneurial Reaction to Changing Tasks and Environments

Entrepreneurial factors, as mentioned earlier, are not static but a dynamic actor. They would actively react to any changes in their internal and external environments. The only problem is how to identify this dynamic factor when business or economic organisation exists. The solution to this problem could be achieved by examining historical and analytical developments of the concepts of entrepreneurship and organisation themselves.

2.5.1 Entrepreneurial Process and Organisational Formation

Harbison (1956) argues that the principal weakness of previous entrepreneurial concepts such as derived from Alfred Marshall is the implicit assumption of the entrepreneur as an individual person, which is quite true in the case of small firm as the single proprietor-operator can perform all entrepreneurial functions independently. Penrose (1980) in similar argument asserts that owner-entrepreneur and organisation are difficult to distinguish at the initial stage of any business, particularly the small one. These two entities seem synonymous since they are similar in operation and management.

In the presence of a perfectly competitive market, internal organisation is unnecessary inasmuch as price mechanism, in both factor and product markets, and is able to allocate scarce resources efficiently. Any tendency towards a disequilibrium state will be automatically adjusted through the price mechanism till it restores to the equilibrium point of production and distribution.

Coase (1937), however, realises that such an assumption goes against the current business practice. Without giving a specific name but by simply putting a legally master-servant or employer-employee relationship to his construct, he argues that the organisation or firm² exists because entrepreneurs need it for exercising some authority so that they can direct resources or factors of production at lower prices than that of market transactions which comprise marketing costs.

Ray and Ramachandran (1996) also agree that entrepreneurial activities stem from individuals, but as the size of business grows, the individuals need organisation to perform their venture-related tasks for the fulfilment of entrepreneurial ambitions. The need for the hierarchical organisation is more apparent as the business becomes more complex (Nafziger 1997) because it connotes both a constellation of functions (including specifically the management of risk and uncertainty, planning and innovation, coordination, administration and control and routine supervision of an enterprise) and the integrated hierarchy of the functionaries - the managerial resources who are primarily concerned with the exercise of these functions (Harbison 1956) into a common engagement.

In fact, one of the crisis points for an organisation occurs when it grows large enough with which its owners are no longer capable of overseeing directly all that goes on (Whyte and Preston, as quoted in Dill 1965). Almost everyone agrees now that the owners of large corporations are generally passive recipients as they no longer perform entrepreneurial functions because these tasks have been taken over by the organisation through its management team (Zeitlin 1974). At this stage, it is the responsibility of top managers to pursue opportunities, regardless of the resources under their control; and

they would in turn depend upon the attitude of individuals below their rank within the organisation as well as upon motivational factors available to them (Stevenson and Jarillo 1990).

Sub-divided functions and functionaries are obvious in an organisation characterised by a clear separation of ownership and management. The management itself may be then subdivided into more managerial functionaries with a different combination of people, as for instance the top, middle and first-line supervisory management as well as the line and staff management (Harbison 1956).

Relations between superior (managerial resources) and subordinate (labour resources) are normally embodied in a pyramidal hierarchy which displays the clear-cut division of labour into four layers. Firstly, ownership and top management, particularly the risk and uncertainty management, are shouldered by principal shareholders and directors, which are then delegated to some top managers. Secondly, planning and innovation are carried out by the chief executive with the cooperation of executive directors, vice-presidents, or persons specialising in engineering, product development, markets, organisational methods or systems and personnel development. Thirdly, administration and control are in the responsibility of division managers, cost and quality controller, production planner, experts in personnel and industrial relations and other specialised works. Finally, working supervision is headed by supervisors or foremen. At the bottom of an organisation is located the operation and production line which is carried out by non-managerial labour resources - "white-collar" clerical employees and "blue collar" employees of shop and factory (Dill 1965).

The difference between large organisations and small-medium organisations is not much in their organisational functions, but more in the amount and type of managerial resources required by them. For small-medium organisations, ownership and top management may be confined to one or few members of a family; thus it follows that all responsibilities from risk and uncertainty management to planning, administration and control and more often, supervision, are taken up by one or few owner-operators. But as the small-medium business grows, they may hire professional managers, engineers, accountants and other experts to take over the administrative and controlling functions; and they may also employ craftsmen or foremen to do supervisory work.

All the propositions show that entrepreneurs are not really static factors as presented in traditional theories of entrepreneurship. There are two traditional approaches in the study of the entrepreneurial process (Deakins and Freel 1998). The first approach is on the nature of entrepreneurs and their role in economic development. The emphasis of the first approach is more on the effect of environment, market opportunities and resource coordination on the success of entrepreneurs, whilst environmental factors are taken as exogenous and not as endogenous. Secondly, the psychological approach focuses on inherent personality traits of entrepreneurs that determine their success.

Following Deakins and Freel (1998), both of the approaches do not capture the dynamic process of entrepreneurship. They propose an organisational learning theory to show that entrepreneurial factors would alter their behaviour through experiential

learning. It means that their model takes environment as an endogenous variable to an entrepreneur.

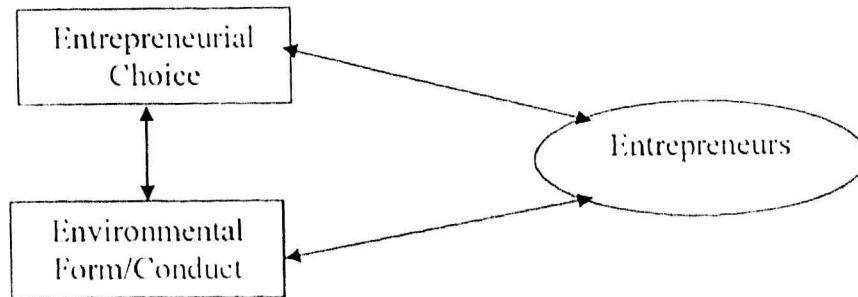
A more general model of entrepreneurial processes is presented in Figure 2.2. It reveals that the relations between entrepreneurs and environments become more complicated as the business grows from the simplest relational form at the pre-start-up stage (Figure 2.2a) to the medium relational form at start-up stage (Figure 2.2b) and toward the complicated relational form at survival and growth stage (Figure 2.2c).

Moving from Figure 2.2a to Figure 2.2c, one can see that only some elements should be taken into consideration in the formation of entrepreneurial organisation at the pre-start-up stage. But it, however, becomes complicated as it moves towards the survival and growth stage in which a lot of elements must be taken into account before an organisation is formed. At any stage, entrepreneurs have many choices in formulating any type of organisation suitable to their needs.

The relations among constructs are indeed complex, bidimensional from one to another, interwoven and dynamic. Which construct has dominant influence over another is contingent upon many environmental factors, among others, entrepreneurial skills, the extent of interdependency, resource accessibility and social responses. In the case of less developed countries, the relationship between environmental inputs - including information and resources - and the selection of entrepreneurial organisations is more complex. Hence, not only local and national socio-economic attributes and practices are taken into consideration but also the developed world's values and practices (Broehl 1982). Many other environmental factors that may influence forms, conducts and outcomes of entrepreneurs and entrepreneurial organisations are beyond the scope of

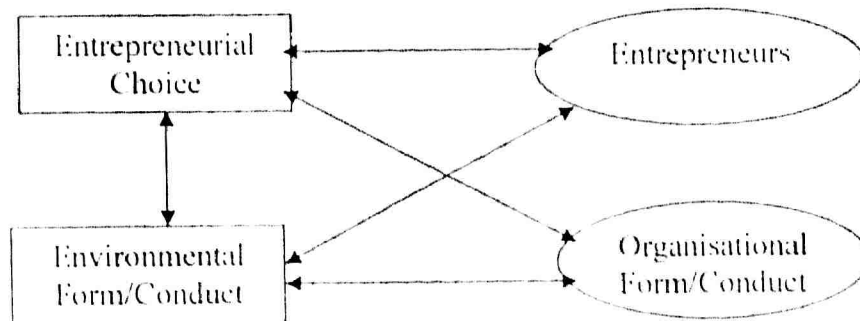
Figure 2.2
General Model of Entrepreneurial Processes

Figure 2.2a: Entrepreneurial dynamism at pre-start-up stage



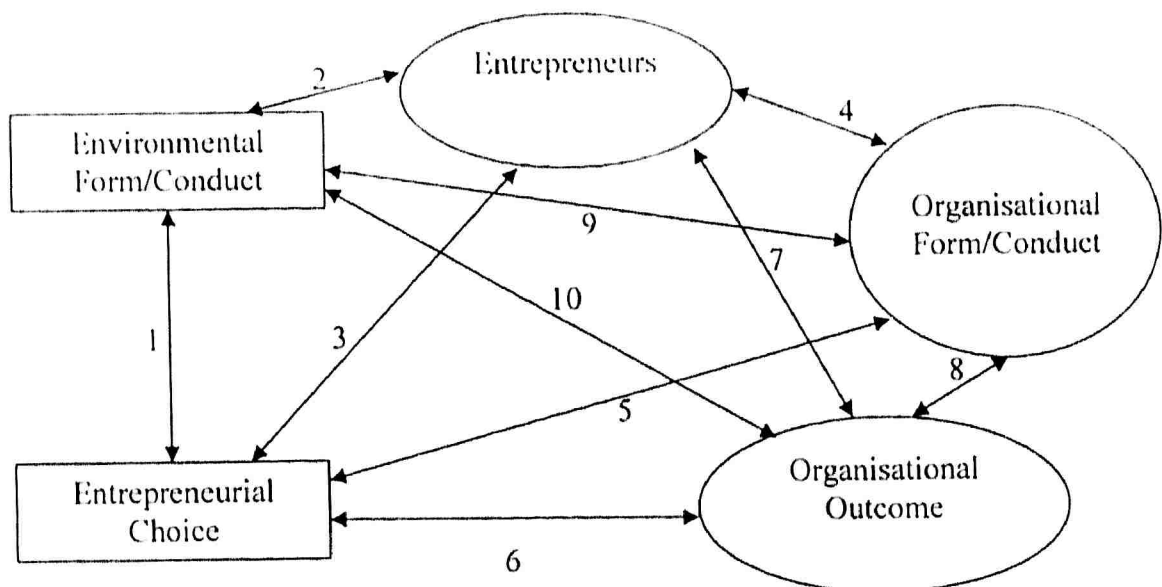
Source: Ray & Ramachandran (1996), Figure 2, p.7.

Figure 2.2b: Entrepreneurial dynamism at start-up stage



Source: Ray & Ramachandran (1996), Figure 3, p.9.

Figure 2.2c: Entrepreneurial dynamism at survival and growth stage



Source: Ray & Ramachandran (1996), Figure 1, p.6.

this study, but can be found among others in Ray and Ramachandran (1996), Hannan and Freeman (1977), Stinchcombe (1965) and Bruno and Tyebjee (1982).

2.5.2 Entrepreneurially Innovative Adaptability and Organisational Configuration

Entrepreneurial ability to adapt to environmental changes that ultimately shapes certain patterns or forms of organisation is explicitly or implicitly elaborated in a myriad of entrepreneurial and organisational studies. Of the numerous literature, the work of Schumpeter (1934), Coase (1937), Weber (1947), Galbraith (1967), Williamson (1967, 1971, 1975, 1981, 1991), Kirzner (1973), Chandler (1974, 1977, 1982) and Powell (1987) receive much attention from later scholars. Whether their work is focused on entrepreneurship and/or organisation, their analytical approaches tend to complement one another where entrepreneurs are responsible actors in shaping certain patterns of the economic organisation. Their actions are, in turn, largely influenced by environmental conditions that impel them to adapt the existing or to establish new organisations.

In their survey, Aldrich and Pfeffer (1976) find that environment is conceptualised in two different perspectives. The first is concerned with the flow of information perceived by members of different organisational boundaries and the second treats environment as resources available to different organisational members without caring about information flow among the decision-makers. Both perspectives consider seriously the active role of an organisation in selecting the structure instead of the environment selecting appropriate organisational structures and responses.

Hence, once an organisation is established, it does not remain static because the embedded entrepreneurial factors rarely hold long to their initial actions. With their successive expanding knowledge about the aggregate situation surrounding them, the factors would modify their preceding objectives fitting closely to the present needs of the economy (Cole 1968). Therefore, unsurprisingly, the reverse would happen in the later developmental stage of a large-established entrepreneurial organisation. As well-documented by Dill (1965), there is also a tendency for large organisations to fractionate their activities into sub-units in which each has its own goals and programmes. Each sub-unit is called upon to appraise its own resources and capabilities against the opportunities and constraints available in the surrounding environments and by doing so it can define its own goals, actions and programmes independently *vis-à-vis* its competitors.

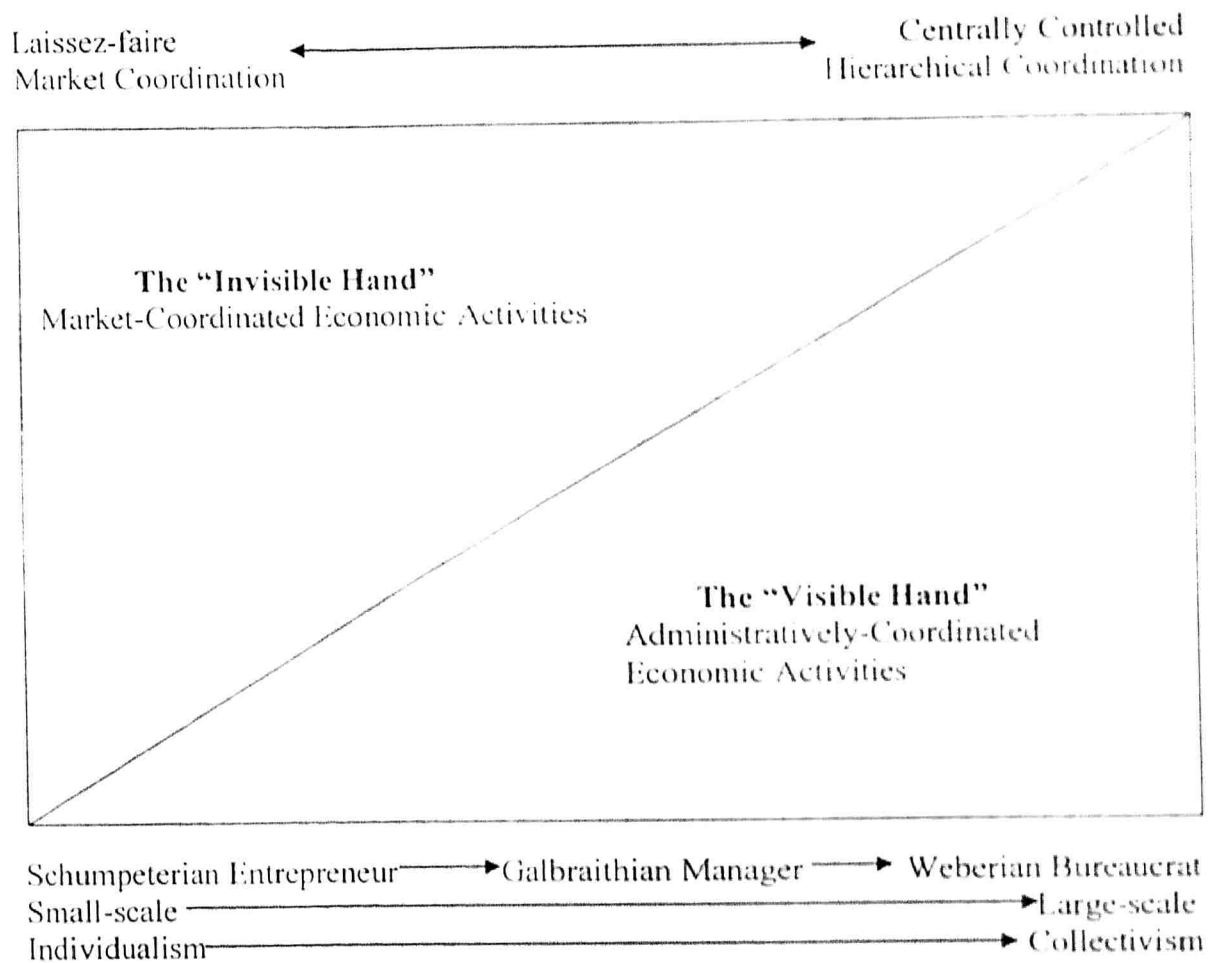
Stinchcombe (1965) also asserts that the emergence of any organisational form at any point of time are innovative product responses to historical conditions of the surrounding environment. Thus, not only the complexity of business determines the organisational forms, but also the nature and size of business, the technology employed, the need and behavioural conduct of entrepreneurial factors as well the social variations. In other words, a particular form of organisation is not merely determined by internal (particularly economic) factors but also by external or environmental factors. It also means that the explanation for the existence of the organisational form unambiguously transcends the Williamson's transactional costs construct since the conscious action of entrepreneurial factors, as argued by Ouchi (1980) would reduce, if not eliminate, the transaction costs.

Nonetheless, numerous studies on entrepreneurship and organisation tend to perform several generic forms of economic or entrepreneurial organisation. In his study of entrepreneurial function, Ozawa (1985) distinguishes economic organisations into three constructs. First, the Schumpeterian-entrepreneurial type is the one that typically exists in an economy of which whose activities are coordinated by the markets similar to Coase and Williamson's markets. Second, the Galbraithian technostructure (professionalisation) which is similar to Williamson's hierarchies - the coordinating forces are no longer in the "invisible hand" of the marketplace but in the "visible hand" of the hierarchical organisation.

As business grows, a transformation process, which is known as "market internalisation", occurs in a continuum between the first and the second cases. The process demonstrates changing forces in economic activities from market-coordinated to administratively-coordinated; when the process is completed, the firms are no longer a price-taker but a price-setter in the marketplace. Once the entire business activities in a particular industry are determined by one hierarchical organisation, a pure monopoly arises; but as similar cases occur in the entire economy, a centrally controlled economy comes in place. Finally, Weberian bureaucracy is similar to the case of Ouchi's bureaucracy. This final case is heavily dependent upon formal rules and regulations - purely administrative and control, as coordinating forces in any economic activities. Figure 2.3 displays how economic organisations change as the business and economy grow.

In his study of economic organisation of capitalism, Williamson (1991, 1994) identifies three generic forms of organisation - market, hybrid and hierarchy - of which each possesses its own logic and distinctive cluster of attributes. The choice of

Figure 2.3
Three Forms of Economic Organisation



Source: Ozawa (1985), p.95.

entrepreneurial actors to take market form (to buy, or market procurement), or hierarchical form (to make, or internal procurement) of organisation is greatly contingent upon dispute-resolution respects (Williamson 1991) since both are governed by a “nexus of contracts” (Fama 1980). But of course, the first involves independent contractual parties in the marketplace or industry, whilst the latter involves dependent contractual parties such as employer-employee within a firm.

The entrepreneurial actors prefer market form if there is no transaction costs; but, in case of the availability of transaction costs, they would turn to hierarchical forms of organisation. As mentioned in Chapter 1, transaction costs which lead to market failure would emanate from several sources, for example, bounded rationality, opportunism, information impactedness and atmosphere (Williamson 1975).

Bounded rationality as stressed by Simon (quoted in Williamson 1975: 21) refers “to human behaviour that is intendedly rational, but only limitedly so” due to their limited access to knowledge, foresight, skill and time. As a result of the limited access, they have limits in formulating and solving complex problems and in processing (receiving, storing, retrieving, transmitting) information (Williamson 1981). It is, therefore, costly to write detailed contracts, specifying every obligation of the contracting parties. It would be worse under the conditions of complexity, uncertainty and language variations of a market transaction. Hence, turning to the hierarchical organisation is the best solution for the entrepreneurial actors to avoid such a market failure.

Opportunism is motivated by self-interest seeking of economic actors. This problem would arise when there are a small number of exchange parties and there exists the problem of asset specificity. In the condition of small number of exchange parties

(for instance the parts suppliers) confronts an entrepreneurial buyer-firm, it is in a weak position for the buyer-firm to deal with its suppliers. Its supplier-firms would behave opportunistically to bid higher prices in the next round of contracting arrangements. A similar case would also arise when one party (e.g. supplier-firms) has advantages of asset specificity. If a particular transacted product requires specialised site, physical capital and human skills, buyer-firms would be again in a weak position in every round of negotiations. Thus, buyer-firms have no choice but to integrate their production system internally to avoid such opportunistic behaviours.

Information impactedness is the source of transaction costs that arise mainly because of uncertainty and opportunism (Williamson 1975). For the success of a market transaction, information exchange between buyers and sellers should be identical. Under the conditions of market uncertainty and opportunistic seeking behaviour, information would be asymmetrically distributed among the exchange parties but the exchange is normally subject to hazards. Alternatively, hierarchical organisations are a better choice for buyer-firms.

Finally, the atmosphere is typically taken for granted by economics. Interactions among buyers and sellers in the market construct are merely limited to economic calculations for each party to maximise its own net benefits. Whereas in reality, particularly in the context of technological non-separabilities, social interactions among economic actors are essential for their future development and greater satisfaction. A good atmosphere to foster continuous relations amongst them has to be provided by means of an internally integrated organisation.

The integrated organisation was popularised by Alfred DuPont Chandler based on his study of corporate organisations in the United States. His model is known by

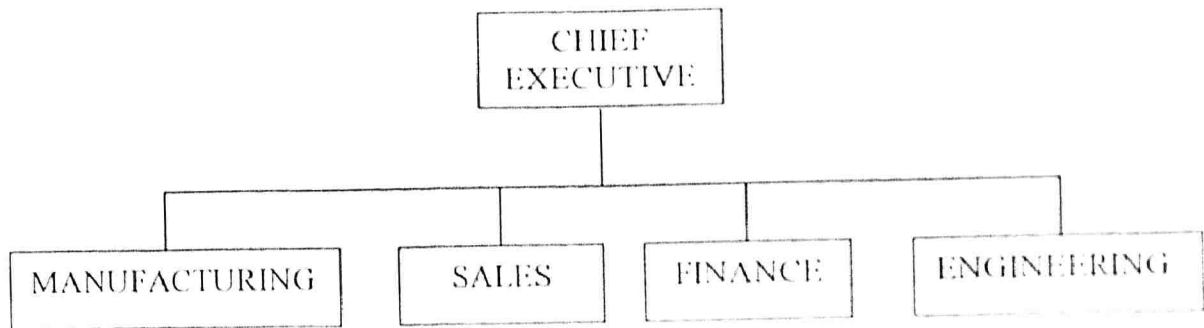
several names, including Chandlerian organisation and Chandlerian hierarchies. A hierarchical organisation (typically found in large corporations) prevails because it can mediate economic transactions between its internal members at lower cost than a market mechanism (Ouchi 1980).

It is a relatively new phenomenon that emerged at the end of the 19th century and during the early 20th centuries (Chandler 1977) to reap the cost advantages of constant flows of multi-functional processes, from materials purchasing, production processes and to distribution and sales (Wells and Rawlinson 1994). It represents the best method of managing transactions when the environment is completely stable. But when the environment is fully unstable the market is the best instrument to respond quickly and efficiently to the change (dynamic efficiency).

Hierarchical organisations may appear in several forms: unitary form (U-form), multidivisional form (M-form) and conglomerates. These hierarchically organisational forms also refer to Chandlerian organisations as a tribute to Alfred D. Chandler for his remarkable contributions to organisational studies (Williamson 1975). An U-form firm was a large, single product, multifunctional organisation and was the phenomenon of the late 19th century in steel, meatpacking, tobacco and oil industries. As the U-form firm is organised along functional lines, its core operating units are divided into functional divisions (see Figure 2.4), but are governed by one head office.

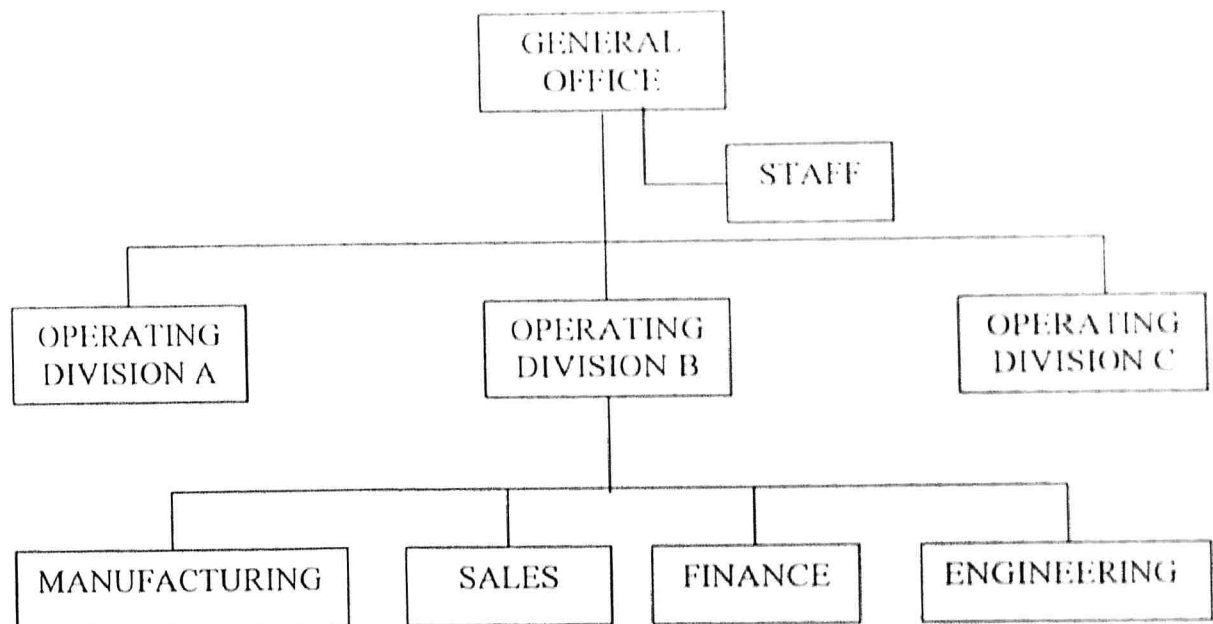
In the early 1920s, Chandler (1977) observed the emergence of another form of organisation in the business world when DuPont Company and General Motors devised M-form firms to tackle the growing size and complexity of their businesses. More differentiated, related products required more specialised tasks and responsibilities. The

Figure 2.4
Chandlerian U-Form Firm



Source: Williamson (1975), Figure 5, p.134

Figure 2.5
Chandlerian M-Form Firm



Source: Williamson (1975), Figure 6, p.138

M-form structure is a group of autonomous operational divisions producing for different product markets which are integrated and centrally administered by a large corporate office or central administrative authority within the group.

This organisational innovation provides quasi-autonomy to operational divisions that are defined by product, brand, or geographical lines. Each of these operational divisions is subsequently divided into functional lines as in the case of U-form (see Figure 2.5). It means that the M-form is the only specialised U-form structures of which each structure is attached along each operational division. It produces a rank of managerial resources which is also known "managerial hierarchies" in Chandler's terminology (Chandler 1980). On top of the hierarchy is placed a general or corporate office administered by general executives who are responsible for the whole organisation, whilst in the middle are operational divisions assigned to middle managers. Perrow (1992) describes the U-form as an onion-shape and the M-form as a set of onion-shapes with a hat on the top. The hat is the headquarters that has coordinating power to oversee all the divisions (including subsidiaries) under its jurisdiction.

Contrary to the M-form, a conglomerate, according to Chandler (1982), emerges as a result of further diversification into totally unrelated products, particularly through the acquisition of existing firms (Chandler 1977). Thus, the apparent differences between the two lie in their organisational structures and their strategy. The M-form grows through internal expansion by direct investment in plant and personnel in industries related to its original line of products, whilst the conglomerate grows through external expansion by acquiring existing firms with unrelated products. The acquired

operating firms are given more autonomy than the divisions of the large M-form.

As in the case of an integrately diversified M-form, a conglomerate has a general office but it is smaller in size and limited in its functions, particularly to advisory staff. The conglomerates have their centralised financial and legal staff, but they do not have staff for purchasing, traffic, research and development, sales, advertising, or production as in the case of the M-form. Regarding advisory staff, the only staff they have is corporate planning. Such an arrangement enables conglomerates to focus single-mindedly on investing in new industries and new markets and withdrawing easily from any less performed activities; but, it makes them less effective to monitor and evaluate the action and performance of their operating divisional firms.

2.6 Entrepreneurial Network Organisation As An Integrative Framework

Before furthering the discussion on hybrid forms of entrepreneurial organisation, it is more timely to stress again that the present study differs slightly from earlier studies only in its approach. It attempts to integrate the concepts of entrepreneurship, network and organisation in a single framework which is called entrepreneurial network organisation (ENO). This integrative approach is undertaken due to the fact that despite diversified analytical frameworks of the three constructs offered in the literature, there has been one thing in common - the economic actors (entrepreneurial factors) in any organisation are rational, aiming at allocating economic resources efficiently and reaping maximum returns from their economic activities. The achievement of their

goals is, in turn, largely determined by their ability to adapt to surrounding environments.

It has been shown that past studies, whether focused on entrepreneurship, network, or organisation, share a common ground in their analyses, that is entrepreneurial factors need organisation to perform their functions and to achieve their goals. Hence, the concepts of entrepreneurship, network and organisation become more multi-dimensional, interwoven, embedded and interrelated to one another. A simple model of the ENO and its relation to economic performance is shown in Figure 2.6.

An ENO, in a broad concept, is a set of entrepreneurial organisations spatially linked to one another by economic-related activities to pursue their congruent goals. Specifically, the link is represented by a principal firm at the top and a set of peripheral firms at the bottom levels of the network relations. Its characteristics are beyond traditional entrepreneurship because their functions are no longer confined to Hawley's owner-operators, Baretto's risk-bearers, Cantillon's speculators, or Say's coordinators; but it has a mixed feature of Kirzner's adaptable entrepreneurship and Schumpeter's innovative entrepreneurship.

Interactions in an entrepreneurial network organisation can be observed in two ways. Firstly, the interaction may be confined only to coordination and cooperation between horizontal units such as production, marketing and research and development. Secondly, it may also be extended to interaction across vertical boundaries (hierarchical levels) as well as across spatial boundaries (multiple geographic locations). In some cases, the interaction may be a mixture of vertical and horizontal structures which exists within a spatial geographical location, as the Toyota City in Japan.

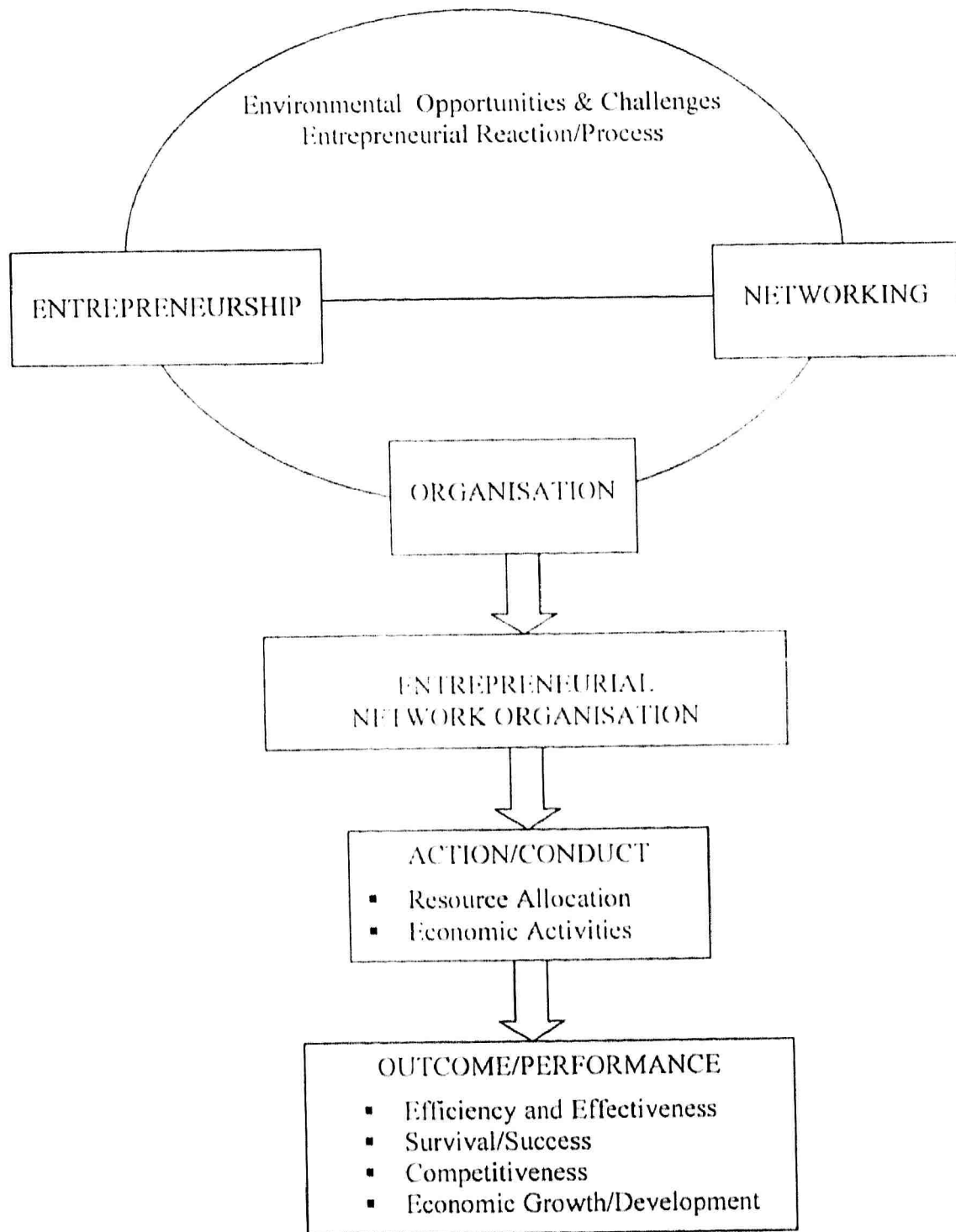


Figure 2.6
Entrepreneurial Network Organisation: An Integrative Framework

This a-three-in-one approach would be the most powerful and useful tool to explain patterns and relations among entrepreneurial organisations in the study of industrial activities, specially in the case of the automobile industry. It is able to improve explanation about economic development and economic relations in the industrial sector due to the fact that all types of organised networks subsume to this framework. The strength of this analytical framework is its ability to explain the patterns and contents of interrelationships among organisational members in a particular spatial ENO as they are bridged by socio-economic capital that glues their relations in order for them to pursue the congruence of economic goals.

2.6.1 ENO Configuration: Several Illustrative Forms

An ENO which has been much overlooked by the neoclassical theory³ is an intermediate form of organisation. This concept shares the characteristics of markets and hierarchies. It mediates Schumpeterian-Williamsonian markets and Coasian-Chandlerian-Galbraithian-Williamsonian hierarchies; and has the characteristics of Kirznerian and Schumpeterian entrepreneurship. Table 2.4 shows general characteristics of the three generic forms of organisation.

As in the case of hierarchies, ENO may come up in many forms and have slightly different characteristics from one to another.⁴ The most common one is ENO in industrial production as shown in Table 2.3. This sub-section devotes its discussion to several conceptual forms of ENO in industrial production, namely industrial districts, business groups, strategic alliances and collaborative manufacturing.

Table 2.4
General Characteristics of Three Generic Forms of Organisation

Variations	Markets	Hierarchies	ENO
Organisational Structure	Horizontal and Individual	Integrated/Vertical Internal	Mixed Collective
Coordinating Forces	Contract/Price	Authority	Mixed, Trust
Degree of Applicability of Contract Law	Strong	Semi-strong	Weak
Degree of Administrative Controls	Weak	Strong	Semi-strong
Influencing Forces in Each Configuration	Market with zero transaction costs	Transaction costs	Mixed, economic and socio-cultural factors
Parts Sourcing	Buying	Making	Buying > Making

Source: Simplified from Porter (1986), Bradach and Eccles (1989), Williamson (1991) Schoenberger (1994), New and Mitropoulos (1995).

2.6.1.1 Industrial Districts

This form of ENO is typically found in some European countries, particularly in Germany and Italy. The emergence of close networks between small-scale firms in a specific urban area or in a certain geographical area in those countries dates back to the late 19th century. What binds them is kinship, norms of reciprocity, industrial associations and public institutions that are responsible for providing common services. The network relations among firms is at technological-productive level and does not involve a specific function. Its main objective is the realisation of strategic synergy in the joint creation of marketing initiatives, technological efforts and common services (Nassimbeni 1998). A firm connection with its counterparts is based on recurrent needs.

Powell and Smith-Doerr (1994), however, quite distinct from Nassimbeni, find that the network among small independent firms is more than to meet the common services. The firms also involve in a specific task and function. They are specialised in producing certain products and serving the need of other firms in the same region. In many cases, a portion of firms that initiated the production markets the products, but the production process is carried out by other groups of firms.

Specific industrial districts in Italy are identifiable by their products: Modena with clothing, transport vehicles, ceramics, machine and metal; Bologna with bicycles, motorcycles and shoes; Parma with food processing machinery (Brusco 1982); Prato with woollens; Montebelluna with sports footwear; and Schio-Valdagno with clothing-textile (Nassimbeni 1998). Other industrial districts also emerge, including Oyannax (France) as an injection moulding centre; Sheffield (England) in cutlery industry; Swiss

watch-making region (Nassimbeni 1998); and the Silicon Valley in California (Saxenian 1994).

Of many European industrial districts, the Third Italy (situated in the North Central part of Italy) is a notable example. The fastest growing region in the country, compatible to the Japanese achievement, is Emilia-Romagna. The manufacturing centre of this region is Modena – the province which produces a range of industrial products for export markets. In 1983, Emilia-Romagna recorded an international trade surplus that amounted to US\$5 billion; Modena alone accounted for US\$2 billion of the trade surplus (Best 1990).

The outstanding achievement lies in the ability of small entrepreneurial independent firms of the region to collaborate in manufacturing activities. Following Brusco (1982) and Lazerson (1988), the small firms tend to be clustered in municipally-sponsored-small-sized industrial parks in accordance with their product. Only a proportion of the small firms market finished products, whilst the others become sub-contractors to the marketers. Citing the case of the garment industry, Brusco (1982), however, points out that not only the small firms but also the larger industrial firms of the region undertake part of the work in-house while the other bulk of the work is subcontracted out to external firms.

2.6.1.2 Business Groups

Granovetter (1994) defines a business group as a collection of firms bound together in some formal or informal ties. Powell and Smith-Doerr (1994: 388) also refer to diversified business groups that are seemingly based on a complex mix of vertical

and horizontal affiliations or common membership to “a network of firms that regularly collaborate over a long time period.” For a more specific definition, Chang and Choi (1988) define a business group as a set of formally independent firms under the single common administrative and financial control of certain families.

This practically widespread entity lies intermediate between a strategic alliance that binds firms short-term arrangements and a legally consolidated single business body that is based on physical proximity. All firms in a business group are at least partially owned by a parent firm that may be a holding company, a bank, or a key manufacturing firm (Clegg and Redding 1990).

Many large corporations in Latin America, Japan, Korea and Pakistan which are known by different names such as *grupos economicos*, old *zaibatsu* or new *keiretsu*, *chaebol* and *the twenty two families* respectively maintain their stable relations but with quite loose coalitions. There has been no legal status governing them and hence no single firm or individual controlling other associated firms. This is similar to the case of which Granovetter (1994) calls a “benevolent authority”. The details of several Asian business groups will appear in Chapter 3.

2.6.1.3 Strategic Alliances

The Japan External Trade Organisation (JETRO) defines strategic alliances as “a managerial tie-up with multiple companies in a variety of forms which involve contractual or cooperative relationships between companies - including joint ventures, license agreements, information exchange agreements, sharing minority equity ownership and holding joint research and development programmes with a wide range

of partners - foreign clients, suppliers and competitors” (as quoted in Dhingra 1991: 48). Of importance, the definition may apply to all types of collaborations as long as they are governed by contractual agreements that curb potential opportunism. It means that the network has little basis on trust.

This type of collaboration is based on short-term arrangements to carry out specific tasks such as to produce sub-components, to share information, or to enter new markets. According to Nassimbeni (1998), networks in the form of agreements or joint ventures do not restrict to co-operation among firms in a nation but now such a co-operation has crossed national boundaries. It encompasses several types of commercial and technological agreements. Its main objective is to realise the functional synergy in Research and Development (R & D), distribution and marketing; its main area of network interaction restricted to a single support function; and its main integration vehicle is the expertise flow and skills exchange within the network units. The areas in which the firms enter collaboration are normally more complementary than competitive.

With rapid development and short-life spans of technology, firms prefer to distribute risk by collaborating with one another in R & D activities through a specified agreement. By doing so, respective firms would benefit from size advantages, economies of scale, economies of scope and cost savings, particularly in technologically intensive projects. Those agreements are structured around the distribution of tasks among collaborative partners. Each partner is responsible for a specific task of a project. Its findings in specific know-how and technological skills are to be exchanged with other partners in the later period.

Through joint-ventures, the collaborative firms delegate specific tasks in R & D, distribution and/or marketing to a common subsidiary, normally to reap the benefit of complementary and size advantages. A company is normally formed to carry out the tasks and its establishment is completely independent from parent companies. A careful study by Hagedoorn and Schakenraad (as quoted in Powell and Smith-Doerr 1994) concede that strategic alliances and R & D networks are both formed to share information and to produce innovation but the difference between the two is the level of intensity. In the first, such as through joint ventures and licensing agreements, the depth of information transferred is rarely as massive or as proprietary as the latter.

Jarillo (1988) contends that strategic networks among autonomous firms allow them to be more competitive relative to their nonaffiliated outsiders. The decision pertinent to whom should be in the collaboration and how long such a collaboration should sustain is contingent upon resource needs. Complementary resources - from information and technology to materials and labour - among potential partners would bring them together in a reciprocal collaboration and this cooperation might be sustained so long as collaborative partners feel that they need one another.

2.6.1.4 Collaborative Manufacturing: A Special Focus on Sub-contracting Arrangements

Another form of ENO that is widely adopted across industries and economic regions is collaborative manufacturing. Most strikingly are sub-contracting arrangements between suppliers and assemblers (Powell and Smith-Doerr 1994). It is one of many forms of ENO acceptable today as a source of new competition, exemplifying the case of the Japanese automobile industry. It is a central element to the

work organisation of large firms and economic development of many countries (Imrie 1986).

Synergistic problem solving in Japanese sub-contracting rather than antagonistic bargaining among organisations as normally practised in Western purchasing is the source of new competition. It is an arrangement in which the core contractor “commissions the sub-contractor to fulfill a part of the major contract by manufacturing parts and components (normally but not necessarily with the contractor’s own design and specifications), producing finished products, providing assistant capacity and/or labour for performing a given production process, or providing other miscellaneous services that may not necessarily be directly concerned with manufacturing” (Nishiguchi 1994: 3).⁵

Watanabe (1971) defines sub-contracting as an arrangement between a parent firm, enterprise, or company and independent firm(s) or sub-contractor(s) in which the parent firm requests the independent firm(s) to undertake the whole or part of an order it has received instead of undertaking the task by itself, while taking full responsibility for the work against the original customer.

The parent firm can be either a wholesaler, and retailer or manufacturer. The first case may be called commercial sub-contracting and the latter may be convenient to call industrial sub-contracting. Both types of the sub-contracting differ from the simple purchase of ready-made parts and components in that there is an actual contract between the two parties setting out the specifications of the order (Watanabe 1971). Transactions between a parent and a sub-contractor differ from market transactions for standardised products in that the parent provides specifications for quality, function,

form, design, or other features and there is also a difference in the size of the firms acting as sellers and purchasers (Yokokura 1988).

In the manufacturing industry, the work can be processing (stamping, testing, inspection, polishing, packaging) and making finished components (body, brake system, engine and transmission for automobile), half-finished parts (motors, regulators, etc.) or sub-parts (bearings, bolts, nuts, screw, etc.). Service activities, such as repairing and transportation of products also include in the sub-contracting activities, but they are typically not considered as part of manufacturing work (see Watanabe 1971). For industrial sub-contracting to establish, at least two additional technological conditions are required: the production process and product are divisible and every part or process is not necessarily produced or performed at one spot continuously (Rawlinson 1991).

Holmes (as quoted in Rawlinson 1991) identifies three types of sub-contracting. First, specialist sub-contracting refers to an arrangement in which a customer-firm relies on skills of its sub-contractors. The customer-firm benefits from this type of sub-contracting because it needs not invest in new technologies for limited use and short life cycle. Second, capacity sub-contracting exists when a customer-firm sub-contracts out parts of the same components or parts that are produced in-house to other firms due to the shortage of its own production capacity. Finally, supplier sub-contracting refers to a situation in which a customer-firm enters into an agreement with supplier-firms to acquire dedicated and proprietary parts and components with which these intermediate inputs are developed, designed and made by the suppliers. These supplier-firms are normally large in size with established markets.

Nassimbeni (1998) uses the network supply concept to explain the relationships between sub-contracting parties. According to him, the main objective of this type of network is the realisation of operations synergy between production units: the prime area involved in network relation is the operating core of the member firms; and the main integration vehicle of the firms is the material flow which intersects them. The nature of the end product as a result of supply links gives rise to a two possible configurations: a three-net and a spinneret configuration.

A three-net configuration arises when the end product is the result of separately manufactured components. This configuration consists of main contractor (a firm) and his sub-contracting units (various firms). The main contractor who acts as a barycentre of the production system is located at the top of the net to integrate and coordinate the external firms or its sub-contractors producing the components or parts (Nassimbeni 1998).

Some components or parts which are impossible or uneconomical to produce in-house are contracted out to the sub-contractors. The obligation of the main contractor is to manage the outflow and inflow of such arrangements so that the end products could be produced as projected. This sub-contracting exercise is simply a mechanism to enable large firms exporting some of their business risk to smaller, defenseless sub-contractors (Jarillo 1988).

The relationship between the core firm and its sub-contracting firms is generally exclusive and strong in nature. The interaction is focused more on production-based or upstream activities. In the case of JIT management, the need for informative and logistic integration between the buyer and its suppliers ushers them to synchronise

product development, operation systems, value creation, and overall cost reductions for production and transaction and resource supply (Nassimbeni 1998).

A spinneret configuration, according to Nassimbeni (1998), applies when the end product is the result of a series of phase transformations, or when its material bill develops mainly along one dimension. The production chains (spinnerets) come into existence when the process of production involves many stages, where each stage brings about economies of scale, or each stage of production is so specialised and different in dimension and structure so that it is impossible or uneconomical to be carried out by a single unit of production. The relationship between core and supplier firms in the latter case is not as strong as the first case. With little interdependence on the production system and synchronisation of operations and logistics, the interaction between firms is normally at the downstream point or is merely a market-based relationship.

The key factors that require a core firm to collaborate with its supplier units or other firms in an intricate production network can be attributed to several dimensions. In the making of various parts, sub-components or sub-systems, it is uneconomical if not impossible, for a single firm to perform the duty or task. Therefore, collaboration with sub-contractors is essential based on two principle calculations: cost minimisation and capability enhancement. The first enables large-assembler firms shifting at least part of their risks and costs of product development to smaller supplier firms, whilst the latter allows the realisation of economies of scale and economies of scope (Nassimbeni 1998).

Following Nassimbeni (1998), the benefit from economies of scale is derived when a core firm puts out its components, parts or production processes to other firms so that each supplier-firm specialises in a single component or production activity. Such an arrangement permits cost efficacy when a supplier-firm focuses on a subset of value-adding functions and relies on coordinated interaction with other firms to contribute to the remainder of the value chains of production activities. Economies of scope are generated when a core-firm devotes its resources to the development of its core competencies and at the same time it benefits from the innovation and specialised professional capabilities of other supplying counterparts as well as spreads its risk of technology and component development to other supplier-firms.

There is also the possibility that strategic alliances and collaborative manufacturing are held simultaneously. Large assembler firms are now expecting their smaller sub-contractors to actively diversify their markets in order to avoid vulnerability. Instead of depending on a single buyer or assembler, small firms market their products to some other buyers. Hence, a strategic alliance may be formed to ensure the smooth flow of product supplies. Such a collaboration is based on shorter time frames, variety of product design and higher quality of products (Powell and Smith-Doerr 1994).

2.6.2 Coordinating Mechanism: The Source of ENO's Strength

Hall *et al.* (1977) defines coordination as the extent to which organisations attempt to ensure that their activities take into account other organisations' activities. Coordination is the most important element in management. It harmonises separate

activities and departments into a single whole (Fayol, as quoted in Nassimbeni 1998). Hence, the organisation itself refers to a system of co-operative efforts and coordinated activities (Barnard, as quoted in Nassimbeni 1998).

Coordination is more important when the units involved belong to several independent organisations rather than to a single organisation (hierarchy), especially when an organisation operates between units that are separated by different geographical, cultural, legal and organisational levels. This means that the collaborative firms are organised in a common organisational system and their activities are co-ordinated so that all networking units adapt their competitive behaviour to a joint regime which requires a transformation of culture, mode of organisation, work and management of parties involved (Nassimbeni 1998). Coordination matters most because despite their interdependence, the collaborative firms still maintain their own autonomy in certain decision-makings.

Masten (1996) proposes that market transactions would operate on two conditions: discrete market transactions and contracting transactions. In contractual transaction, Ouchi (1980) details out that each of the market transaction or exchange is governed by one of the three contractual relations. First, "spot or sales contract" is the simplest form of contract dealing with the transaction that fulfills all obligations on the spot (very short time period). Second, the contingent claims contract involves a longer period of transaction. Each party to an exchange is obliged to other parties which is detailed out in a document that specifies their respective obligations, dependent upon all possible future states of nature. Finally, the sequential spot contract is a contractual relation based upon a series of written contracts. Each one is written for a short period

of time and will be followed by another one after taking into consideration the future events. The process follows until the transaction is completed.

An ENO is quite impossible to sustain without a common accepted mechanism to govern or monitor its networked members. A complex set of interdependencies between one firm and the others is a common feature of ENOs. Vertical interdependencies prevail among member firms when they complement one another in producing or commercialising their products. Horizontal interdependencies appear when collaborative firms exchange knowledge or resources to develop new products or technologies as well as to promote and distribute their products.

Different typologies of ENO require different modes of coordinating mechanism which are defined by the interdependency between units. Mintzberg (1979) identifies four types of interdependency. First, interdependency in work flow is normally found in the supply network system. Coordinating problems arise when the main contractor contracts out part of his production to external supplying units. He has to synchronise his internal production activities with the external flow of materials and complementary components.

Second, interdependency in processes is commonly found in the regional industrial system. In this case, each unit performs different work flows, but all production units are joined by similar steps or operation processes in product development, marketing and distribution. In other words, each unit works on different products but it still needs to interact with other units in order to choose the right tools and to adopt similar procedures or systems.

Third, interdependency in scale prevails in production spinnerets to reach efficient dimensions and economies of scale. The production is articulated on separated

units in which each production step is characterised by different dimensions and technical- productive trims appropriate to the step it manages. Finally, interdependency in social relationships is fundamental to all network structures because all production activities are surrounded by social rapport.

Given the interdependency variations, Mintzberg (as quoted in Nassimbeni 1998) classifies coordination into three main mechanisms: direct supervision, standardisation and mutual adjustment. Direct supervision occurs when the whole production system or process is coordinated by a central brain as in the case of the supply system where the main sub-contractor governs, schedules and tracks the flow of internal and external units along the supply pipeline.

Standardisation takes place when predefinition and codification of task of each unit are set, i.e. before the network system works. The standard set may cover inputs, outputs, processes and skills. Each network member is discouraged to achieve below the standard. Input or output standardisation is a dominant coordinating mechanism used in production spinnerets. In this system, each stage of the production process of a product is carried out by different units, so that a tight standard of input or output is imposed throughout the production cycle (Mintzberg in Nassimbeni 1998).

Process standardisation is a coordinating mechanism that is more regularly found in the regional industrial systems. All networked member firms, through their joint-planning and decisions, are agreed on the work contents to include quality certification procedures, technological standards and promotional initiatives. By agreement, they use a uniform process to make the district able to produce a higher uniformity of products in the eye of consumers (Mintzberg in Nassimbeni 1998).

Skill standardisation is more common in a network of agreements or joint ventures. Since the objective is to optimise sharing or exchanging original and specific capabilities of resources, each networked firm contributes its skills complementary to the skills of other member firms (Mintzberg in Nassimbeni 1998).

Mutual adjustment comes in at the early stage of network ties when each firm is searching for a more precise definition of its role inside the network. Through informal communication, the firms adapt and synchronise their role, thus gradual sedimentation of procedures and mediation of problem solving are achieved (Mintzberg in Nassimbeni 1998).

It should be borne in mind that the coordinating mechanism of ENO is more intricate than that of any markets or hierarchies. It depends not only on contracts or prices as in the markets and hierarchical fiat (rules or legitimate authority) as in the hierarchies (Bradač and Eccles 1989), but also on the coordination through adaptation between independent and self-regulating units (Jarillo 1988). Social capital forces furnish not only the self-regulating and affiliated firms, but also the core firms to adapt their position in the given network structure. This proposition would be clear when the determinants of ENO configuration are explained in the next sub-section.

2.6.3 Explanation for ENO Configuration

Owing to its special configuration, the explanation for the emergence of ENO branches out into several approaches. Besides the application of transaction costs as in hierarchies, some most common approaches are internal economies (including

efficiency and risk-sharing), institutional, resource dependence, social class and social capital.⁶

Considering numerous studies in the past, the subsequent part confines influencing forces for ENO configuration only to three outstanding perspectives - economic, social class and social capital perspective. The first perspective views the decision of a firm to cooperate in a web of networks from the firm's careful judgement on economic factors that would benefit itself to do so, while the second and the third perspectives take into account various socio-cultural factors inherited by a society which are typically exogenous to mainstream economic explanation.

2.6.3.1 An Economic Perspective

This perspective owes most to the transaction costs and resource dependence approach. The transaction cost approach offered by Williamson is the most influential in the analysis of network structure (Mizruchi and Galaskiewicz 1993). ENO configuration based on transaction costs is similar to the argument of the existence of hierarchies - to minimise transaction costs. The only difference in them is the dimension of economic units under analysis. In hierarchies, collaboration is restricted to internal units of an organisation, whilst collaboration in an ENO involves various external organisations.

The resource dependence approach is based on the principle that organisations operate in uncertain environments over which they attempt to gain control. Due to the fact that critical resources are beyond the control of an organisation, it must find ways to ensure a smooth and predictable flow of resources from other organisations. Hence,

networks can be used as a means for quick access to scarce resources and know-how that cannot be produced internally (Larson 1992, Nohria 1992).

Resource dependence among organisations is also explained by Levine and White (1961). Within the framework of organisational exchange, they see that under actual conditions of elements of scarcity - consumers, labour services and other resources - an organisation needs to do transactions with other organisations in an exchange system so that it would be able to perform its specific functions to meet reciprocal goals or objectives. But as put by Levine and White (1961), such an interdependency is contingent upon three related factors: the accessibility of each organisation to necessary resources from outside the system; the objectives and particular functions of the organisation to which it allocates resource elements under its controls; and the degree to which domain consensus prevails among the network organisations.

Benson (1975) suggests that interorganisational network may be analysed in terms of two related sets of concept, namely interaction patterns of the cooperative organisations and the processes of resource acquisition. With the emphasis on the latter concept, he asserts that acquisition of resources (i.e., money and authority) is an essential element in determining interaction among organisations in which decision makers obviously attempt to acquire and defend an adequate supply of resources. This is actually the ultimate responsibility of the top management in maintaining and expanding the prior set of organisational machinery, particularly in older, larger and more complex organisations with multiple goals rather than with a unitary or simple goal structure.

Van de Ven and Walker (1984) argue that interactions among organisational units in a network occur, either at the level of unit goals, or resource acquisition. The units in pursuing their specified goals seek to reach the agreed consensus on valued domains and at the same time develop and maintain resource flows in the network system. The content of the organisational relationships may be normative (expectations), exchange (goods and services), or communicative (information) and may appear distinctly or simultaneously in an organisational network.

Interdependence between an organisation and its environments (other organisations) could also be seen in the form of input-output transactions of the scarce and valued resources. The relations are more associated to generalised goals rather than specific goals. This is because resources themselves are defined in a broad context as generalised means or facilities that are potentially controllable by social organisations and are potentially, but indirectly in relationships between an organisation and the others (Yuchtman and Seashore 1967). In a broad context, Gamson (1966) defines resources to include not only physical resources, economic objects and states, but also social resources (reputation, power, energy in the form of human activity and bargaining position of an organisation with relative to others). Resources may also be distinguished according to their properties of liquidity, stability, relevancy, universality and substitutability (Yuchtman and Seashore 1967).

2.6.3.2 The Social Class Perspective

This perspective treats individuals as primary actors, while organisations are used as their tools (Palmer 1983, Pfeffer and Salancik 1978). It is derived from the arguments of Mills (1956) that social, political and economic linkages among elite

groups (including corporate leaders, key policy-makers and elite social groups) create a cohesive power elite. Useem (1984) cautions that interorganisational networks formed out of overlapping elite memberships are a vehicle for enhancing upper-class cohesion and the control of key social institutions.

Mizruchi and Galaskiewicz (1993) disclose that concurrently with the rise of the resource dependence framework, social class theorists have developed an alternative analysis of the corporation in American society. The linkages among dominant corporate actors are seen to have both social and economic roots. Relations among corporations, firms, foundations, universities, country clubs, policy-making groups and government agencies are inclined to ensure the continued dominance of upper class or capitalist interests than that of meeting the resource needs of organisational actors. The similar conclusion is also found in Zeitlen (1974) in that the separation of ownership and control in large corporations of the United States of America does not halt the new dominant class of managerial capitalists (as their predecessors, owner-capitalists) to consolidate their class positions in American society.

2.6.3.3 The Social Capital Perspective

Generally, economists focus most on financial, physical and human capital in any economic organisation and activity. The concern of some other social scientists, however, goes beyond the economic capital arising from the fact that factors such as “cultural norms and beliefs, class relations and collective actions, state intervention and control, organisational structures, bounded solidarity and trust, deviant behaviour and marginal status and motivations for achievement” (Martinelli 1994: 480) influence different societies differently.

Only some economists, probably greatly influenced by the work of Schumpeter, concede that economic performance is responsive not only to economic variables, but also to variables such as social status and political influence (Kilby 1983). These socio-cultural factors are referred to as social capital and also known by various names - social resources, moral resources, and social support.

Defined by its function, social capital consists of a variety of different entities, but it has two common elements. First, it comprises some aspects of social structure; and second, it facilitates certain actions of actors (persons or organisations) within the structure (Coleman 1988). It is distinctively endowed from one region to another and is also responsible for shaping different patterns of the entrepreneurial organisation and collaboration among them. Differentials in social capital embedded in actors fosters actual ties and exchanges among them (Marsden 1990).

Different geographic trading regions (North America, Europe and Pacific Basin) would erect different motives behind the co-operative supply network relations and hence produce different network configurations (Frankel and Whipple, as quoted in Nassimbeni 1998). A highly time-based supply strategy as widely adopted in the Pacific Basin, specifically in Japan, is completely possible due to the cultural heritage in which co-operation is prioritised, corporate interlocking is encouraged by the government and small size of retail and wholesale businesses allows frequent deliveries of smaller quantities of products.

There are some industrial districts in Europe owing to their strong handicrafts tradition, long historical existence of family enterprises and strong government support in terms of technological development and commercial support services for small and

medium firms. Indeed, interrelationships among entrepreneurial firms in these industrial districts are influenced by various economic, political and social bonds (Lazerson 1988, Toni and Nassimbeni 1995, Nassimbeni 1998).

All the evidence consolidates the proposition that economic capital is necessary, but not sufficient without social capital for firms to remain sustained in ENO arrangements. It is profitable for actors to establish firms, but with the absence of such social resources it makes it difficult or impossible for them to realise (Granovetter 1994). They serve to bridge economic actors into more developed, diffused and sustained networks. Opposite to physical capital, they increase with use and become depleted if unused (Powell and Smith-Doerr 1994).

The most frequently cited social capital in the study of network organisation is culture and its two elements - trust and power. Culture, despite witnessing growing interest in it, is until recently the most neglected factor in the explanation of economic development. Perhaps due to its most complicated word in the English language (Clegg, Higgins and Spybey 1990) and its vagueness in definition, scholars tend to ignore its significant contribution to economic development (Zakaria, 1997). It may be defined, either in an overly broad view, or in an overly narrow definition: the first refers to the entirety of a way of life and the latter refers to the arts and letters (DiMaggio 1994).

Looking at the broader concept, DiMaggio (1994) concludes that culture has indeed played many roles in economic life: in constituting actors and economic institutions, in defining the means and ends of actions and in regulating the relationship between means and ends. Because culture refers to different constructs such as scripts, metaphor, routine, category schemes, norms, values, rituals, institutions, schema and

frames and switching rules and distinct in different societies, its influence on the activities of production, exchange and consumption would be different across regions.

Cultural influence also applies to organisational modes as some organisational entities (particularly in Japanese business groups) are seen as social groups; they themselves are family-like as they pervade into the private lives of their employees (Nakane, as quoted in Hamilton and Biggart 1988). In an advanced manner, firms with entrepreneurial cultures surpass those firms that emphasise merely internal efficiency (Deshpande, Farley and Webster 1993).

Cross-cultural theory, according to Zakaria (1997) focuses more on particularism than universalism in the interpretation of social behaviour because there is no so-called "global work ethic". Thus, capitalism and organisation emerge and work differently in different cultures. Historical and cultural variations that translate into philosophies (entrepreneurial attitudes) and management practices make network structures across different regions obviously different: Japan is well-known for its non-kin corporations; America with more free-market enterprises; Korea, China and Italy with their family-oriented firms; and France with its state-controlled patterns.

Trust is one of the elements of culture which is used in two different definitions in the literature. One is the confidence or predictability in one's expectation and the other is the confidence in the other's goodwill (Ring and Van de Ven 1992). Both show the degree of quality embedded in the actors. Without trust, any transaction and exchange would not perform smoothly, effectively as well as efficiently. Without such a value actors would avoid those relationships even from the onset. The longer the relationships among actors, the higher would be the trust among them, especially when past transactions were made successfully.

It should be stressed again that opportunism is undesirable in a network relation. It is conducive for more efficient problem-solving because information is exchanged freely and more solutions are arrived at since each decision-maker does not feel that there is an opportunistic behaviour in their relation (Zand 1972). Idiosyncratic relations in exchanges and transactions involving specific assets which feature personal trust will, other thing being equal, "survive greater stress and display greater adaptability" (Williamson 1979: 241). Trusting one another in a network relation appears quintessential (Jarillo 1988). The ability of entrepreneurial actors to foster trust is another important factor to reduce such costs and hence it determines the existence and survival of a network. Trust would foster both efficiency and effectiveness as a network which would operate smoothly without hesitation among members. Each member trusts each other by assuming that the action of his associates is in line with his assumptions and needs, enabling him to save costs and times of distrust.

Trust would occur naturally through long-term relationships or kinships. In the absence of these two variables, trust could still be generated through two other variables: assumptions of the owner of the resources and intrinsic situation (Jarillo 1988). The first variable requires entrepreneurial actors to choose carefully their networking partners based on similarity in values and motivations. The second variable reminds entrepreneurial actors not to behave opportunistically in their relations. By so doing, they should realise that such a behaviour would jeopardise themselves in the near future due to the fact that no one is interested in dealing with such a character. Track records and reputation are two things that prove whether an entrepreneurial actor could be trusted or otherwise (Fama 1980).

Power is also an element of culture that has no clear-cut definition. Its definition varies in contextual use. It differs in the context of political theory and social theory. Pfeffer (1981) contends that most definitions of power incorporate an element reflecting that power is the capability of one social actor to overcome resistance in the way to achieve desired objectives or results.

The most quoted definition in the study of power in organisations is the one proposed by Robert Dahl (Pfeffer 1981, Mintzberg 1983, Clegg 1975, Clegg 1989). He defines power as a relation among social actors in which A, as a social actor can get another social actor B, to do something that B would not have otherwise done. The Penguin English Dictionary (as quoted in Clegg 1975: 1) defines power as the "ability to do something; strength, force; vigour, energy; ability to control or influence others, ability to impose one's will...." In the words of Mintzberg (1983:4), power is "the capacity to effect (affect) organisational outcome.

There are few words that relate to power - politics, control, authority and influence. An actor is endowed with power because he derives authority, amongst others, through politics, enabling him to control and influence other actors. Given the inherited nature, these words may be used substantively in different contexts, but in many examples they are used interchangeably (Mintzberg 1983, Pfeffer 1981).

Power may be embedded in and accrued to individuals, owners, suppliers, clients, competitors, sub-units, organisations, institutions, or the whole of the social system, but surely the degree of power accessible to them differs from one to another. Power emerges in the organisation itself which is internally derived from its control over strategic interdependencies (Boje and Whetten 1981). Such a power that exists in a network relation may shape the pattern and function of the relation.

With the provision of the people's mandate, financial and other resources, states or governments are conceived to have every source of power to shape network structures and in return the governments at every level and manifestation seek to benefit from the organisation's action (Mintzberg 1983). Thus, Mintzberg argues that though many other tangible forces that affect what organisations do, power is a major factor that cannot be ignored in the understanding of how organisations work and end up doing things.

Following Mizruchi and Galaskiewicz (1993), laws and traditions of societies may influence the action of organisations. They assert that "as cultural systems become more complex and the power of the state and dominant subcultures permeate the boundaries of the organisation, decision makers are forced to adapt accordingly, even if doing so runs contrary to their resource needs or the interests of the top management" (Mizruchi and Galaskiewicz 1993: 48).

The role of state is obvious in the socialist economic system as against the market role in the capitalist world. The role of the state in the developing countries is also applicable since such economies confronting market failures and some parts of the community should be protected. Therefore, it is hardly surprising that most developing countries are practising mixed economic systems, but of course the degree of the state intervention varies from one country to another.

DiMaggio and Powell (1983) recognise the role of the state quite indirectly. They contend that organisational fields, defined as aggregated organisations that constitute a recognised area of institutional life (key suppliers, resource and product consumers, regulatory agencies and other agencies that produce similar services or

products), display a considerable diversity in approach and form in the initial stages of their life cycle, but push towards homogenization once the field becomes established.

They identify coercive isomorphism, mimetic isomorphism and normative isomorphism as three mechanisms that change institutional fields to a similar vein. The first emanates from the problem of legitimacy as an organisation confronts formal and informal pressures from other organisations upon which it depends. The problem also arises from the cultural expectations and political influence or pressures in the society within which it functions; the second results from uncertainty, amongst others in technologies, goals and environments forcing organisations to imitate other organisations; and the last stems from professionalisation.

Boje and Whetten (1981) argue that power becomes the central point in an exchange network, regardless of seeing the relation in the power-dependency perspective, or in the resource-dependence perspective. The understanding of the power relationships that surrounds and infuses the organisations is imperative because by doing so it would provide a clearer ground even from the scratch of their initial existence and particularly their structures and functions.

By and large, significant roles of social capital in the existence of network organisations in certain parts of the world are understandable if one goes through empirical evidence of a particular society. One thing that should be borne in mind is that, all social capital may appear simultaneously in any society, but the significant influence of any one over the other varies from one economic region to the other. Thus, it is neither necessary, nor desirable to discuss elements of social capital separately when it deals with empirical evidence of some economic regions in the next chapter.

2.7 Entrepreneurial Network Organisation in the Context of Economic Theory and Development

Economic theory hardly pays any attention to ENO because the theory itself is derived from the basis of self-independent actions of economic actors as proposed by mainstream economics. Only economic sociology provides some grounds for network relations among entrepreneurial actors.

Indeed, theoretical frameworks of mainstream economics defy reality because network relations among economic actors were already seen in practical business transactions of the Western society since the advent of the industrial economy. During the 16th century of England, the “putting-out system” emerged as the new mode of production system for the capitalist society. Increasing demand pressures from export markets for manufactured goods compelled merchant-capitalists to source out the products from independent workshops. They furnished independent craftsmen who owned tools, machinery and buildings with materials and paid some fees for transforming the raw materials into finished products. The merchant-capitalists acted as the coordinator and controller of all stages of production performed in the independent workshops.

Only in the later period of the system, i.e. by the 17th century, the merchant-capitalists embarked on integrating production activities on their own. All factors of production, including independent craftsmen, were integrated under their domination. Hence, the craftsmen had nothing left to sell, but their labour power (Hunt 1992).

Despite entrepreneurial process towards integrated organisation since the 17th century, it does not mean that ENO has nothing to play in economic development. Leff (1978, 1979) observes the emergence of distinctive industrial groups in Latin America, Africa and Asia. In Latin America, this type of organisational structure is known as the “group” and defined as “a multi-company firm which transacts in different markets; but it does so under common entrepreneurial and financial control” (Leff 1978: 663).

Distinct from other capitalist organisations (including public enterprises, public companies, family-owned companies and multinational corporations) which have been widely recognised in less developed countries, the group has two essential features. First, it draws its capital and top managerial resources from sources beyond a single unit family. In other words, distinct from family companies, its owner-manager involves more than one family, but remains as a single economic unit. Second, it invests and produces in several product markets, rather than a single product market line, through a diversification strategy.

The industrial group resembles some features of developed countries’ conglomerates premised on vertical integration, but its activities are sometimes selective on the basis of forward and backward linkages. New investments may be made in unrelated and diverse product markets ranging from consumer durables to chemicals and steel mills, but before the group does so, it has to ensure whether or not its nodes have complementary inputs, such as technical and managerial capabilities.

Contributions of the ENO pattern of industrial organisation to less developed countries may appear in many ways, amongst others it: (a) relaxes the entrepreneurial

constraints since the group provides capital, technical and managerial resources which otherwise remains idle - Schumpeterian type of entrepreneurship; (b) facilitates the economies in the use of scarce entrepreneurial resources; (c) increases entrepreneurial mobility by deploying entrepreneurial resources to specific intragroup firms so long as opportunities are available; (d) increases information flows and reduces uncertainty and risk of investment and production decisions as the group involves itself in diverse activities; (e) provides a platform for the recruitment of abundant human resources; (f) helps to achieve economies of scale and scope through a good rapport among participants, thus leading to faster growth of outputs; (g) speeds the adjustment process of scarce resources since investment and production decisions are made along the path of backward and forward linkages; and (h) reduces the need for and lessens the burden on, government planning for industrial sector as scarce resources are well-coordinated by the group.

By and large, ENO is much less functional and pervasive in underdeveloped countries. Market failures which are a dominant feature in the less developed economies provide better ground for the birth of integrated organisations (Chang and Choi 1988). The existence of more integrated private-owned as well as public-owned monopolistic organisations is a common phenomenon in almost all economic sectors of these countries.

Following Ozawa (1985), the least developed economies are typically characterised by public-owned Weberian bureaucracy since such economies are in a

serious inadequacy of business infrastructure - easy access to venture capital and well-developed product markets - to allow the rise of Schumpeterian type of entrepreneurship; and lack of ready supply of professional experts and specialists - administrative managers, marketing specialists, research scientists, engineers and accountants - to allow the ascent of Galbraithian-manager form of entrepreneurship.

In the intermediately developed economies, such as China, India, Malaysia, Philippines and other Newly Industrialised Economies, private-owned Schumpeterian and Galbraithian-manager forms of entrepreneurship are a much superior organiser of industrial activities to bureaucracy-type entrepreneurship.

Apart from exposing some features of entrepreneurial organisations in underdeveloped countries, Ozawa (1985) deals little with potential network relations in the industrial sector. In his proposition related to the intermediately developed economies, he contends that such economies provide a platform for the development of large-scale corporations, including bank or industrial groups, which can embark on new industrial activities by adopting and adapting internal and external resources, whilst at the same time, side by side development of small and medium entrepreneurship provides opportunities for these firms to be supportive or complementary industries. This is quite irrefutable due to the fact that most entrepreneurial activities in large organisations are carried out through a cooperative or shared effort (Rieple and Vyakarnam 1994).

2.8 Conclusion

Against the mainstream economic arguments, entrepreneurial factors have actually played a significant and dynamic role in shaping the economic mechanism and organisation as suited to their needs and the requirements of contemporary business. Thus, there is a conducive platform for the three concepts of entrepreneurship, network and organisation to be reduced into a single framework "Entrepreneurial Network Organisation" (ENO) due to the fact that the entrepreneurial factors are embedded, either directly or indirectly, in the three conceptual analysis.

There are many types of ENO identified by different configurations, characteristics and patterns of relations; but the most common ones in industrial production are industrial districts, business groups, strategic alliances and collaborative manufacturing. Owing to the fact that each ENO has many different members (firms), it has to have a common accepted coordinating mechanism in terms of economic and social obligations. Explanation for the emergence of ENO itself varies, among others, through the perspectives of economic, social class and social capital.

Again contrary to mainstream economic belief, ENO actually plays an active and significant role in the economic development of the world. Its emergence is, however, more apparent in advanced countries than in less developed economies. Market failures, a dominant feature in less developed countries, provide a better platform for the appearance of integrated organisation in the economies.

Endnotes

- ¹ Entrepreneurial organisation is less common in use than corporate entrepreneurship, but they take similar meanings. This study prefers the first terminology with agreement to Baker (1992). Baker argues that network organizations may be placed in the context of present organisational theory. In an advanced manner, the present study places both entrepreneurship and network concepts in the existing framework of hybrid organisation.
- ² Organisation and firm are used interchangeably to denote a conceptual entity that comprises entrepreneurs with which they emerge as the result of market failure- the existence of marketing costs. An organisation can be either profit- or social welfare-oriented and applicable to both private and public sectors.
- ³ Neoclassical theory recognises two types of organisations or linkages only, namely internal organisation (hierarchies) and external organisation by arms-length transactions between firms governed by the free markets (Imrie 1986, Biggart and Hamilton 1992).
- ⁴ Among other organisational forms of ENO found in the literature are strategic alliances, partnerships, coalitions, franchises, research consortia and various other forms of governance (as surveyed by Ring and Van de Ven 1992); long-term contracts between buyers and suppliers, joint ventures, equity sharing, sponsorship events, public-private partnerships and interlocking directorates (as in Mizruchi and Galaskiewicz 1993, Powell and Smith-Doerr 1994); and quasi-integration (Blois 1972, quoted in Sheard 1988). Porter and Fuller (1986) use the term "coalitions" that represent many types of network relations, such as joint ventures, licensing agreements, supply agreements, marketing agreements and variety of other agreements. Gereffi, Korzeniewicz and Korzeniewicz (1994) look at networks in an international context; they use the term "Global Commodity Chains", the model that derived from the network analysis to explain networking among firms, or enterprises across geographically national boundaries. Contractor and Lorange (1988) reveal that interorganisational networks may appear in many forms, namely technical assistance, buyback agreements, patent licensing, franchising, know-how licensing, non-equity co-operative agreements, equity joint ventures and co-operative buyer-supplier relationships (in Nassimbeni 1998). The manifestation of stable long-term relationships between independent associates in industrial sector also has been surveyed by Bradach and Eccles (1989). They found that such relations exist between the two poles of markets and hierarchies which carry various names, among others, cooperative arrangements (Ricardson 1972), relational contracting (Macneil 1978, Golberg 1980), joint ventures (Mariti and Smiley 1983), quasifirms (Eccles 1981), global coalitions (Porter and Fuller 1986) and dynamic networks (Miles and Snow 1986). Whatever the concept and scope is in use, however, one thing is in common agreements that they are all networks- a glue that binds all reciprocal network members in specific forms of organisation to pursue a diverse set of economic as well as business objectives that require their cooperation.
- ⁵ It means that there are two parties involved in the arrangement. One is the core contractor and the other is the sub-contractors. The core contractor is the one that awards contracts to sub-contractors and is known in different names as original equipment manufacturers (OEMs), assemblers, customers, purchasers and core firm depending on the the context and the way they are used. The sub-contractor on the other hand is the agent who undertakes the sub-contracting work and also known in different names as sub-assembler, supplier, seller and ancillary firm.
- ⁶ See the literature on internal economies, including efficiency and risk-sharing among others in Schermerhorn 1975, Ouchi 1980, Porter 1985, Porter and Fuller 1986, Baker 1992; on transaction costs in Jarillo 1988, Ring and Van de Ven 1992, Mizruchi and Galaskiewicz 1993, Nishiguchi 1994, Williamson 1981, Williamson 1975, Williamson 1994, Inaba and Tabeta 1995, Tabeta 1996, Tabeta and Shahidur 1996; on institutional in DiMaggio and Powell 1983, Carroll, Goodstein and Gyenes 1988, Orru 1991, Mizruchi and Galaskiewicz 1993; on resource dependence in Levine and White 1961, Benson 1975, Wong 1991, Mizruchi and Galaskiewicz 1993; on social class in Pfeffer and Salancik 1978, Mizruchi and Galaskiewicz 1993, Palmer 1983, Useem 1984, Van de Ven and Walker 1984; and on social capital in Hamilton and Biggart 1988, Wong 1991, Granovetter 1994, Powell and Smith-Doerr 1994, Nassimbeni 1998.