CHAPTER 1

INTRODUCTION

Globalisation has been seen as the most dominant force in opening up international markets. Since the conclusion of the Uruguay Round in 1994 and the enforcement of the World Trade Organisation (WTO) in January 1995, all trade agreements have been made to conform with the term "globalisation". As a small-open economy and a developing country, Malaysia cannot escape this recent development. One of the great concerns among Malaysians now is whether or not this country is ready to take the new international commitments.

The recent unilateral move by Malaysia to delay the scheduled tariff reduction in the automobile industry from 2003 to 2005, has sparked off concern that Malaysia is not prepared for global competition even at a regional level. The last minute action of Malaysia to delay the tariff arrangements is featured by some observers as an upset to the other ASEAN-member countries (The AWSJ, 12 October 2000) as well as a major setback to the future of ASEAN Free Trade Area (AFTA) itself. Probably due to their frustration, some AFTA members insisted for a greater trade with non-AFTA members, i.e. China and Japan (The AWSJ 24-26 Nov. 2000).

The recent developments in AFTA reflects that some ASEAN member countries are not truly ready to compete more openly even on a regional basis. All the early efforts to accelerate the implementation of AFTA seem to have been done halfheartedly. In the early stages, Malaysia was the most ambitious in its attempts to integrate its economy into AFTA. However, its ambitious commitment, especially for
the automobile industry, has since become diluted as the due date for the trade agreements inches closer.

In line with the recent developments in the international arena, this study aims to explore the recent issues and new sources of economic development and competitiveness with special reference to the automobile industry. This chapter discusses the changing focus on economic theory, sources of economic development (the most efficient way of economic organization) and the limitation of the theory to tackle some qualitative factors in practice. A section of this chapter devotes to the upsurge of interest in entrepreneurial hybrid organisations induced by recent developments in economic and business activities. The last few sections of this chapter will devote attention to the questions related to methodology and scope of the study.

1.1 Sources of Economic Development and Competitiveness

Analysis of the sources of economic growth and development\(^1\), whether in the form of theory, model, metaphor or method, by various social scientists and over centuries brings hardly anything new. Most of the literature remain largely in the capitalist domain.\(^2\) In many cases, studies on economic development at various times and by various scholars tend to focus on a single most important determinant factor, e.g. technical knowledge, ideological fervour, natural resources, government role, motives, attitude, or capital (Papanek 1962). Casson (1982) concedes that for a long period of time, a successful or a failing story of an economy is linked to quantitative factors of labour, capital and natural resources which are in turn correlated to population growth rate, savings and natural endowment respectively. Casson asserts that the emphasis of the classical development theory is more on quantitative, rather than qualitative factors.
This means that there is a "denial syndrome" among mainstream economists of the potentially significant influence of qualitative variables on economic development.

Indeed, capitalism as advocated by mainstream economists excessively treats physical or financial capital as the only source of economic development. Such a treatment defies reality because there exists two other sources of capital, namely human capital (human natural abilities) and social capital (the extent of relationships among economic actors) in which they also contribute significantly to economic growth (Burt 1992).

Development theories based on the single factor of capital have been undermined by empirical studies in the late 1950's (Solow 1956, Nafziger 1988). The studies by Abramovitz, Solow and Massel demonstrate that the contribution of technological progress to economic growth accounted for as much as 80-95 per cent, 81-90 per cent and 67-90 per cent respectively (Ozawa 1985). Their findings have sparked off a new interest to study the influence of qualitative variables such as entrepreneurial skills, organisational mode, education and technological change on economic development.

In connection with entrepreneurial skills and organisational mode, the recent studies see that networks or hybrids as termed by Powell (1987) and Williamson (1991), a new form of economic organisation, as another significant factor influencing economic development. The hybrid forms of entrepreneurial organisation are referred to differently by many different scholars depending on the pattern and the nature of relations as well as the sectors and the participants involved in them. Irrespective of the types and sizes of organisation and entrepreneurship, networks are seen as an observed pattern of organisations. Firms act in complex environments and no firm can really be
understood without a reference to their interaction with other firms (Thorelli, as quoted in Jarillo 1988). Business practices have also changed profoundly in recent years as Harrison (1994) concludes that networking among companies is now in fashion all over the world.

In an environment with stiffer competition in which products are getting more complex while technology keeps changing, it is hardly surprising that the new hybrid entrepreneurship is increasingly popular as a vehicle to link complicated components, to transact value-added related products and to exchange up-to-date information among firms. The phenomenal change has attracted a large number of academics and practitioners. This means that the changing interests occurred in both theory (academic world) and practice (among companies and policy-makers). In the academic context, researchers from various scholarly interests, such as institutional economists, organisational sociologists, lawyers, management strategists as well as organizational theorists, (Ring and Van de Ven 1992) devote their attention to study the structure, conduct, superiority and applicability of the new entrepreneurial organisation and hence contributed to a myriad of literature.

1.2 Changing Interest in the Study of Economic Organisation

The question of how best scarce resources and economic activities would be organised has been debated for centuries. This question narrows down to two economic ultimate goals, the quest for efficiency and effectiveness. Theoretical development on the organisational form, conduct and performance is largely influenced by contemporary developments of the economy and business themselves. At one time, markets were seen the best organiser of scarce resources and economic activities, but
when time changed, hierarchies were assumed the best of all organisational modes. Now, hybrid forms of organisation are treated the most efficient and effective organisation to meet the present economic opportunities and challenges in highly competitive markets.

Markets were firstly seen as the best coordinator of economic resources and activities. Adam Smith, the first among classical economists, believed that competitive markets would lead to natural prices and optimum levels of resource allocation. His belief was supported by many other economists, during and after his time. J. B. Say (1776-1832), for instance, reinforced that “supply creates its own demand” (Sloman 1991:535) or “a supply creates demand of the same magnitude” (Hunt 1992: 168).

Until The Great Depression in the 1930s and the publication of The General Theory of Employment, Interest and Money by J. M. Maynard Keynes in 1936, a majority of economists maintained that the markets were self-adjusted and able to allocate resources and economic activities most efficiently. This means that the markets are seen as the coordinator for economic system, whilst the society is merely an organism and not an organisation (Hayek, as quoted in Coase 1937).

Alfred Marshall was the first economist introducing “organisation” as a production factor (Coase 1937, Hanson 1969), but this term was not popularised until the work of Ronald Coase at the end of 1930s. Coase (1937) argues that due to the weak assumptions of the old economic theory, the role of organisation as a coordinating body in allocating resources in the production process is seriously neglected. In his words he questions “if production is regulated by price movements, production could be carried on without any organisation at all, ........, why is there any organisation?” (Coase 1937: 5), or “why a firm emerges at all in a specialised exchange economy” (Coase 1937: 7).
The answer lies in the coordination needed to mobilise resources, to run production and to transact or exchange products among atomised individual firms due to the emergence of market failures.

Coase’s insight has attracted a number of scholars whose arguments are devoted to the issue of the most efficient mode to save marketing costs (transaction costs), the cost associated with determining relevant prices, negotiating and concluding contracts. In other words, they base their arguments on the institution that is most efficient to govern transactions. Among the leading scholars to fully develop Coase’s proposition is Williamson (1967, 1971, 1975, 1979, 1981, 1991).

Based on the transaction cost economics approach, Williamson (1975) enhances Coase’s question by looking at two different modes of organization, i.e. markets and hierarchies, as alternative mechanisms for allocating and governing the resources. Whether markets or hierarchies are the most efficient depend on three dimensions of transactions: uncertainty about individual actions in groups and future contingencies, both of which complicate contract writings; asset specificity that may lead to opportunistic behaviour among contracting parties; and frequency in contract rewriting. They in turn affect the costs associated with writing, executing and enforcing contracts respectively.

Transactions that involve independent parties are thus governed by contract law of an altogether different kind (Williamson 1991). Hence, transaction costs arise. Under the condition of which such costs are high, market failure is inevitable; thus, it furnishes a platform for hierarchies to replace the markets (Bradach and Eccles 1989). Derived from Williamson, Jarillo (1988) classified transaction costs into those costs of
opportunism, asset specificity, early-mover advantages and other strategic considerations incurred to buyers.

Jarillo (1988) contends that a shift from markets to hierarchies would take place when the first fails to perform their functions due to costs that make market transactions inefficient. These costs would emanate from four sources: man’s bounded rationality, uncertainty about the future, the existence of a smaller number of firms for a given transaction and the possibility of opportunistic behaviour on the part of some associates. The last source becomes the central concept in the study of transaction costs, whilst the transaction costs are central to the study of economics (Williamson 1979). Opportunism is therefore undesirable for a firm to establish an interaction with other firms (Chapter 2 will explain some details of the transactional costs).

Jarillo (1988), however, argues that Williamson does not consider that the transaction costs can be affected by conscious actions of entrepreneurial factors. In an environment where transaction costs do not exist or can be lowered, *ceteris paribus*, the resulting firms will be less integrated and more efficient. Jarillo’s argument is true by looking at dramatic changes in the organisational forms of economic activities in North America, Europe and Japan in the last two decades (Perrow 1992). Entrepreneurial firms of these countries seem to move towards decentralised structures and loose alliances. This network organisation is an alternative to market and hierarchy approaches in the analysis of organisational theory which becomes the backbone of this study volume; this form of organisation is “neither markets nor hierarchies” (Powell, as quoted in Larson 1992).

Williamson (1991) who spent too much time on his study of hierarchical organisation (transaction cost approach) had to revise his old theory of economic
organisation. He submits that the key differences that distinguished the three economic organizations, i.e. market, hybrid and hierarchy, are their distinctive coordinating and control mechanisms and abilities to adapt to disturbances. Although Williamson (1991) does not mention specifically the power that is able to adapt to disturbances, it is strongly believed that the only factor can do so is entrepreneurship.

1.3 Specific Forces Inducing the New Interest

There are quite a number of approaches to explain the forces that induces an upsurge of new interest in the organisational entrepreneurship. Students of multinational firms, such as Porter and Fuller (1986) argue that the transnational companies enmesh their activities in business alliances and linkages. The large companies eschew centralised controls by enhancing the flexibility and adaptability to local markets. Some others assert that new information technologies bring entirely about new, disaggregated and flexible production arrangements (Morton 1991, Rockart and Short 1991). Sharing similar arguments are some economists who insist that information-based networks can usher the transition from the era of machines to the new age of information. This is done within the context that the externalities in knowledge and technology and the collective nature of the innovation process require firms to form networks (Antonelli 1992).

Nohria (1992) observes that, by and large, three major forces contribute to the upsurge of interest in the concept of networks as a mode of organisation. They are the emergence of new concept dubbed as the “new competition” over the last two decades; recent development in technologies; and the maturing of network analysis as an academic discipline. Alliances among corporations are more common and widely
publicised as a result of more laissez-faire regulatory philosophy, the weakening of the Federal Trade Commission and a series of legislation enacted to promote organisational cooperation, thus provide new opportunities for research agenda (Barley, Freeman and Hybels 1992). Ring and Van de Ven (1992) also highlight that competitive environments, rapid changes in technology, firm strategies and other pressures prompt firms to seek cooperation with other firms: therefore a close examination of this entrepreneurial phenomenon in the vantage point of economic development is interesting and useful.

1.3.1 The New Competition

The recent commitment of the world to globalisation and liberalisation of economic activities has opened a new gateway for social and/or economic units to collaborate and form a link among them. Porter and Fuller (1986) observe that a shift in the pattern of coalitions has occurred from traditional tactical purposes in the past to more strategic aims in the new context of international competition. An exaggerated focus on market share and market growth as sources of competition of old paradigm is no longer appropriate because a broader range of factors has turned out to be competitive forces as well.

Porter (as quoted in Cash and Konsynski 1985) argues that five other forces comprising bargaining power of suppliers, bargaining power of buyers, threat of new entrants into the industry segment, threat of substitute products or services and positioning of traditional intra-industry rivals are influencing competitive state of an industry. Schoenberger (1994) argues that time and space have also become part of firm's competitive strategy in the market; the more the firms are able to compress time
in delivering new products or turning around an order and integrate their manufacturing activities in a geographical area like in the case of the Japanese Toyota City, the more competitive the firms are in the international markets.

Networking is a powerful competitive weapon, particularly in an environment of rapid change due to stiffer competition, swift changes in technology; and the apparition of new, flexible, focused, deintegrated competitors (Porter 1986). Operation strategy which focuses on individual firms competing in homogenous products, seeking advantages through the maximisation of efficiency and productiveness of internal resources, seems increasingly outmoded (New and Mitropoulos 1995). Departing from Porter's proposition, Barley, Freeman and Hybels (1992) also argue that interorganisational organisations are a useful weapon to combat the potentially adverse impact of head-on competition. It hence leads to opportunities and constraints for new competition.

Still related to the source of competition, Nohria (1992) disagrees with the argument that prices are the only source as in the traditional economic theory. According to him, as the business grows, large hierarchical organisation is in place for the source of competition; but in recent developments, the ability of entrepreneurial factors to change the mode of organisation into networks has become another source of new competition. Old large established firms seek to become more like a new, amongst others, by either restructuring their internal organisations along the networking path or redefining their relationships with vendors, customers as well as competitors. They rely no longer on arm's-length competitive relations, but on collaborative relations that are realised through a network organisation.
Based on Porter's (1986) arguments on the value chain, the network mode of organisation is obviously important. By farming out a firm's activities in which it has no competitive advantage, it enables the firm to contribute to the value chain which is essential in its competitive power in marketplace. By doing so, the firm would gain economies of scale (capacity enhancement) and, to a certain extent, economies of scope (product diversification). Forces in changing the production process of large hierarchical, vertically integrated corporations are no longer a story, but its existence is clear evidence.

The fundamental changes inside large entrepreneurial organisations involve two processes, namely the shrinkage of large-scale organisation through downsizing or layoffs and the devolution of strategic authority and the decentralisation of almost every stage of their production processes. While the former transforms the large organisation internally, the latter spreads the core activities of the firm across a much wider array of actors, with greater dilution in centralised control. Both changes entail vertical disintegration (the shrinking of hierarchy) and the spread of horizontal affiliations, or the expansion of network-like linkages.

Hub firms only need to focus on specific segments of economic activities along the value chain, while the other activities are put out to its networking members which are capable of producing more efficiently than themselves. Networking provides some flexibilities to participants as well, as they need no commitments on activities that are not essential to them (Jarillo 1988). Firms which farm out their activities and concentrate on certain specific functions would also reduce costs, because they are to reap economies of scale and at the same time develop distinctive competencies.
Accurate estimation of internal and external costs enables entrepreneurial firms to carry out activities where they really have competitive advantage and, at the same time, they may also be able to reduce costs as the process goes on.

1.3.2 Recent Development in Technology

The technological factor is not static but changes over time, either through new creations, innovation, adaptation, or imitation. The development does not circumscribe to production-related technologies, but more strikingly, it includes information-related technologies. This heralds the reconfiguration of the organisational mode and the new patterns of competition. As insisted by Abdul Latif (1997), these changes may occur via international production which subsequently leads to interorganisational arrangements. These arrangements may in turn induce two things; one is technological spillovers in which certain technologies that originate from a firm are also useful for other firms, and the other is the potential for cooperation among firms that share similar technologies.

Powell and Brantley (1992) assume technological innovation as a typical engine of change which may be built on existing know-how (knowledge base, such as organic chemistry and its clinical applications) as in the case of established pharmaceutical industry and may also be based on a radical break from previously dominant technologies (scientific base, such as immunology and molecular biology) as in the case of biotech industry. In the latter context, innovation reduces the value of existing competencies; and it also requires new modes of organisation to fit to the novel development (Schumpeter 1934, Tushman and Anderson 1986). Powell and Brantley (1992) found that biotech industry (the process of altering genetic structures) has
changed drastically since the 1970s; the basic research in biotech has indeed turned out to be one of the hottest areas in contemporary science.\(^3\)

The bio-technological innovation is used widely in many aspects of current life. Its innovation can be grouped into three major discoveries (Powell and Brantley 1992). Firstly, monoclonal antibody or hybridoma technology which operates at the level of a cell clone is used in essence to unite an antibody-producing B-cell with an immortal cancer cell; secondly, recombinant DNA or genetic engineering technology which operates at the level of the genetic code is the process of cutting and pasting pieces of DNA, the helical molecules that form the heart of the code to allow new combinations of genetic information to be constructed; and finally, protein engineering is the recent core technology which combines both the first and the second techniques to manufacture novel molecules.

The new process technology may threaten the competitiveness of large established pharmaceutical, chemical and agricultural companies as small start-up-entrepreneurial firms are massively involved in the industry. But, it may also provide new opportunities for the established firms to switch to the bio-tech industry since they have abundant cash and well-established worldwide marketing channels.

Whatever it is, they still need to cooperate with other parties (universities, government laboratories, non-profit research institutes and foreign and domestic commercial firms), because the industry requires a full range of skills that include basic research, applied research, clinical testing procedures, manufacturing, marketing and distribution, and knowledge of and experience with the regulatory process. It is impossible for the firms to gather all the expertise under one roof. Therefore, networks
through joint ventures, research agreements, minority equity investments, licensing, and various alliances and partnerships are now a common phenomenon in the industry.

Barley, Freeman and Hybels (1992) also agree that commercial biotechnology is a fast changing industry. It poses adverse uncertainties for the players. Aided by the need for rapidly diverse changing knowledge and skills that are impossible to gather under one roof, diversified corporations are impelled to form a well-defined web of formal collaborations with dedicated biotech firms, universities and research institutes. Their relationships are reciprocal because as large corporations gain access to the new technology, small dedicated biotech firms in return obtain financial support, marketing channels and even manufacturing capabilities from their larger counterparts.

Rapid development in the information technology system that is increasingly and widely used in banking, construction, automobile and aerospace industries provides another frontier for potential collaboration among organisations (Cash and Konsynski 1985). Participants of either competitors, or organisations in the buyer-suppliers chain, or a combination of both can develop, operate and use the infrastructure to exchange information that supports their primary economic activities.  

Mansell (1992) characterises the current phase of industrial development as an information economy due to the fact that radical changes in electronic mediation of resource-based and product-based information involve not only traditional modes of communication. But more excitedly, it also sets up networks that incorporate new information and communication technologies; this results to major changes in the way
firms organise their internal and external networks towards more intricate webs of
information relationships. The use of internet in the production and distribution
activities is now a familiar phenomenon that enhances greater interest of researchers in
inter-personals as well as interorganisational network relations.

1.3.3 Changes in Production System

The changing patterns of consumer demands have also spawned a new
technological development in existing production lines of the manufacturing sector. The
present generation of consumers prefers to consume higher quality and more
specialised, diversified products to standardised products. This means that the market
for standardised products has reached a saturation point. Producers have no choice, but
to shift from the old technological mode of production based on vertical integration,
dedicated machinery, rigid, hierarchical work rules and a detailed division of labour (a
standardised mass production approach) to a new logic of production (a flexibly
specialised production method) and organisation.

Piore and Sabel (1984) argue that the change in the marketplace is a crisis that
forces producers to respond quickly to consumer demand. Firms have to begin to adopt
new modes of organisation by spreading production across diversified interfirm
linkages of suppliers, sub-contractors and end users. The change has seen the adaptive
capacity of entrepreneurial organisations (including small and medium firms) to adjust
efficiently and flexibly to the new environment of the market economy.
The recent development indicates the demise of the mass-production paradigm, which was introduced since the Industrial Revolution (1770-1800). Since the 1980s, many dynamic sectors, particularly steel, automobile and semiconductor, have experienced a tremendous change from a rigid to a flexible, or agile production led by Japanese manufacturers. This change is also known as a Post-Fordist paradigm. Table 1.1 displays several dimensions of differences between the old and the new modes of the production system.

The strength of the flexible production system is heavily dependent on the working mechanism of the Just-in-Time (JIT) system. The ability of the JIT system to compress time and to synchronise and self-control all parts of production lines (production stages within assembly plant and supplier-assembler relation) in the delivery and production systems of Japanese automobile industry which leads to overall quality and productivity improvement as well as paperwork and cost reductions is broadly recognised (Sheard 1983, Best 1990, Young 1992, Sadler 1994, Nishiguichi 1994, Wada 1994, Kunon 2000).

Following Best (1990), JIT is not simply an inventory management system, because the ability of Japanese firms (pioneered by Toyota) to minimise inventories is attributed to their success in production innovations. Such innovations in production technology and source inspection methods have contributed to a sharp reduction in changeover times and lead times. Thus, large amount of on-the-shelf inventories, as in the old production system, is no longer applicable.
Table 1.1
Comparison between Mass Production and Flexible Specialisation

<table>
<thead>
<tr>
<th>Main Feature</th>
<th>Mass Production (Fordism System)</th>
<th>Flexible Specialisation (Post-Fordism System)</th>
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<tbody>
<tr>
<td>Organisational Form</td>
<td>Large, integrated, vertical, arms-length, hierarchies with monopolistic power and fierce competition</td>
<td>Hybrids, inter-firm networks with intimate collaboration and competition</td>
</tr>
<tr>
<td>Organisational Framework</td>
<td>Centralised national and multinational Keynesianism</td>
<td>Decentralised and local institutions which fuse cooperation and competition</td>
</tr>
<tr>
<td>Coordinating Governing</td>
<td>Authority</td>
<td>Mixed: Contract, Authority, Socio-cultural variables</td>
</tr>
<tr>
<td>Mechanism</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology</td>
<td>Specialised, dedicated machinery</td>
<td>General purpose machinery</td>
</tr>
<tr>
<td>Labour Skills</td>
<td>Narrowly trained, fragmented and routinised tasks</td>
<td>Broadly trained, multi-skilled and varied tasks</td>
</tr>
<tr>
<td>Labour Managerial Attitude</td>
<td>Seeing labour as a cost, hierarchical and formal</td>
<td>Seeing labour as a resource, flat hierarchy, informal</td>
</tr>
<tr>
<td>Product Strategies</td>
<td>Standardisation, high volume and limited range</td>
<td>Diversified, customised, rapidly responsive and innovative</td>
</tr>
<tr>
<td>Production System/Process</td>
<td>Making rather than buying (in-house production)</td>
<td>Buying rather than making (outsourcing)</td>
</tr>
<tr>
<td></td>
<td>Internal conveying belt</td>
<td>Spatial conveying belt</td>
</tr>
<tr>
<td></td>
<td>Just-in-Case (high inventory)</td>
<td>Just-in-Time (Minimum Inventory)</td>
</tr>
<tr>
<td>Product Values</td>
<td>Low value-added</td>
<td>Higher value-added</td>
</tr>
<tr>
<td></td>
<td>Little sub-components</td>
<td>Greater sub-components</td>
</tr>
<tr>
<td>Economic Sources</td>
<td>Economics of scale (capacity enhancement)</td>
<td>Economics of scope (product differentiation)</td>
</tr>
<tr>
<td>Competitive Behaviour</td>
<td>Strategy to control market</td>
<td>Swift adaptation to change</td>
</tr>
<tr>
<td>Sources of Competition</td>
<td>Price, market share and growth</td>
<td>Price, quality, delivery (space and time)</td>
</tr>
<tr>
<td>Technological Leader</td>
<td>The United States</td>
<td>Japan</td>
</tr>
</tbody>
</table>

Note: These dimensions of comparison are similar with the organizational studies of hierarchies (vertical) and hybrids (networks)
Figure 1.1 displays partly the working mechanism of the JIT system. One of the elements of the JIT system is the application of kanban (cards) as an information, or communication system to control the flow of production input materials (Feldman 1994). The number of required parts and new orders of parts are equivalent to the number of cards (kanban). The cards are separated into conveyance card and production card which contain some information on the type of parts, contents, delivery time and destination within the assembly plant.

The system starts to work when a particular part is taken away from a pallet by a worker at an assembly plant. The conveyance card at the pallet is detached and placed in a nearby box. The number of cards increases as the parts are increased in use. These cards are collected by the sub-contractor's workers at the next delivery time to bring back to their plants and are attached to each pallet of parts (one-for-one basis) already awaiting in stocks. The latter action is followed by the removal of production card which is attached to each pallet. This removed production card becomes an order for additional production of parts within the supplier's plants.

This system is efficient because the sum total of conveyance cards is often a signal to suppliers to produce a certain pallet of products. This system seems similar to conveyor belt under the old mass-production system, the only difference is that this new system is extended spatially. Though the two firms are spatially separated, the production lines of the suppliers are regulated by and synchronised with the production line at the auto-assembly plants. It also enables the auto-assembly plants to minimise stock level of parts and hence it saves costs of stock keeping.
Figure 1.1
Spatial Sequence in the Flow of Conveyance and Production Cards (*kanban*) within the JIT Delivery System

![Diagram showing the flow of conveyance and production cards between Shimizu City and Toyota City.]

Keys:
- **C**: Conveyance Cards
- **P**: Production Cards
- **Headlamp Stocks**

1. C is detached by workers on final assembly line as the first head lamp is taken away from new pallet. This process continues from pallet to pallet
2. C is taken back to head lamp maker
3. C is attached to pallet of head lamps awaiting delivery
4. P is detached from same pallet, indicating new additional order for head lamps
5. C is taken over to auto-maker with pallet of head lamps

Source: Sheard 1983, Figure 3, p. 61.
1.4 Exploratory Power of Economic Sociology

Mainstream economists seem reluctant to explore economic development in social contexts, as Marxian did. Most mainstream economists claim that the economic sphere is separable and autonomous from other social spheres with which non-economic motives, social relations and detailed historical processes can be put aside (Granovetter 1992). They are more interested in economic exchange; and as a result of this economic agents in the transaction are seen acting alone rather than in cooperation (Granovetter 1994). The actions of atomised, rational, calculative, individuals are treated as the ideal state for achieving an economic prosperity.

Looking at real economic activities, however, it could be observed that economy and society are the two sectors which are indeed inseparable due the fact that economy is a mere branch of social activities. Granovetter (1985: 481–483) accentuates that behaviour and institutions are so constrained by on-going social relations, thus any attempts to “construe them as independent is a grievous misunderstanding”. It is correctly put out by Naiziger (1988: 128) that “reality is an unbroken totality, a seamless robe and is not compartmentalized into social and economic spheres”.

Given such controversies, it is obvious that a single discipline to explain economic development, particularly in the present society, has been pushed to the limit. Recent phenomenon shows that economic development is closely associated with the ability and readiness of many sections of a society to pool their resources together in order to satisfy their economic motives. Economic development which implies some degree of change is in turn influenced by the cultural values, norms, belief systems and social change (Zakaria 1997).
Due to increasing demise of mono-disciplinary approach, the present study seeks to apply economic sociological approach in the study of economic development and automobile industry within the framework of entrepreneurial network organisation. The immediate reason for the application of this approach is that the explanation of economic and industrial organisations of certain countries would transcend the traditional economic arguments as offered by Coase (1937) and Williamson (1971, 1975).

Sociology is defined as a systematic study that seeks to describe and explain collective human behaviour, as manifested in cultures, societies, communities and subgroups, by exploring the institutional relationships that hold between individuals and so sustain this behaviour (Harkavy 1996). Following Harkavy, the emphasis of contemporary sociology is on the study of social structures and institutions and on the causes and effects of social change. It is also defined as the systematic effort to explain the causal and interactive processes that relates several types of regularities and variations such as individual as well as group orientations and behaviour, social structures (institutions) and social controls (sanctions, norms and values) to one another (Smelser 1976).

Given the definition, economic actions are apparently difficult to divorce themselves from sociological actions; it may be separated only analytically, but may be hardly separated empirically. In some instances, the economics itself is defined in a sociological construct. Marshall (as quoted in Froyen 1993: 3), for example, defines economics as the “study of mankind in the ordinary business of life; it examines that
part of individual and social action which is most closely connected with the attainment and with the use of material requisites of well being”. It can also be defined as a study of human or social activities in making decision, adjustment and allocation as well as managing scarce resources to fulfill their needs.

By integrating the two disciplines together, economic sociology covers a large amount of grey area between economics and sociology (Davern 1997) in which it can be defined as “the application of the frames of references, variables and explanatory models of sociology to that of activities concerned with the production, distribution, exchange and consumption of scarce goods and services” (Smelser 1976: 1, Smelser & Swedberg 1994: 3).11

Smelser & Swedberg (1994) contend that economic sociology has grown as a field within general sociology by regarding economic process as an organic part of society, constantly in interaction with other forces. This is about the same line of argument with MacDonald (1965) in that the economic theory, at a higher level, must be embedded in an economic sociology or social theory which offers criteria for weighing the relative significance of economic and non-economic elements.

Recently, the discipline in realising the importance of social interaction in economic activities devotes much attention to the social networks approach for understanding socio-economic behaviour (Davern 1997). This development was manifested only after Weber and Schumpeter had long recognised the presence of social factors in economic theories in the first decade of the 20th century (MacDonald 1965).
Attributable to its relatively broad conception against mainstream economics, as summarised in Table 1.2, economic sociology is recently conceived as a powerful tool to explain economic actions and institutions of substantive actors, especially in the context of economic development. This is fortified by Granovetter (1992) based on three fundamental reasons. First, the pursuit of economic goals is typically accompanied by non-economic goals, such as sociability, approval, status and power. Second, economic action is socially situated and embedded in ongoing networks rather than carried out by atomised actors. Finally, economic institutions (organisations) do not appear automatically, but they are socially constructed.

1.5 Research Problem and Approach

Recent interests in the study of economic organisation have increasingly converged on hybrid organisation. But the question is: how does this organisation look like? In line with this problem, the present study attempts to develop a framework of entrepreneurial network organisation (ENO), i.e. a new outstanding form of economic organisation. The analytical content of the present study is not much different from a myriad of the earlier studies on hybrid forms of organisation. The difference in the present study only lies in its approach. Instead of having blurred actors in the past literature, this study furnishes entrepreneurial factors to be a real organiser to such hybrid organisations.

The economic sociological approach is adopted in the process of developing the framework. This analytical tool is important because it is the only approach that permits economic actors to interact and cooperate with one another. Thus, the economic actors have networks with one another in particular organizations due to economic
<table>
<thead>
<tr>
<th>Points of Comparison</th>
<th>Mainstream Economics</th>
<th>Economic Sociology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept of the Actor</td>
<td>The actor is uninfluenced by other actors (self-individualism)</td>
<td>The actor is influenced by other actors and is part of groups and society</td>
</tr>
<tr>
<td>Economic Action</td>
<td>All economic actions are assumed to be rational; rationality as assumption</td>
<td>Different types of economic action used, including rational, traditional and speculative-irrational; rationality as variable</td>
</tr>
<tr>
<td>Constraint on the</td>
<td>Constrained by the taste, scarcity of resources, including technology</td>
<td>Constrained by the scarcity of resources, social structure and meaning structures</td>
</tr>
<tr>
<td>Economic Action</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economy in Relation</td>
<td>Economy and market are the basic reference; society is a “given”</td>
<td>Economy is an integral part of society; society is always the basic reference</td>
</tr>
<tr>
<td>to Society</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goal of Analysis</td>
<td>Prediction and explanation; rarely description</td>
<td>Description and explanation; rarely prediction</td>
</tr>
<tr>
<td>Method Used</td>
<td>Formal, especially mathematical model building; no data or official data are often used- “clean model”</td>
<td>Different methods used, including historical and comparative ones; the data are often produced by the analyst “dirty hand”</td>
</tr>
</tbody>
</table>

Source: Adapted from Smelser and Swedberg, 1994, Table 1, p.4
calculations as well as social capital. Some other frameworks from the literature are also taken into account while developing the present framework.

This analytical framework does not claim to be concretely definitive, but it attempts to provide a general framework for analysing idiosyncratic forms of entrepreneurial organisations and to offer a fairly comprehensive and in-depth analysis of ENO in many economies by solving the problem of inconsistency in the previous literature.

The present study is rather exploratory and analytically descriptive. Since many elements or variables involved in the framework and in real world and they may change over time, it is believed that descriptive analysis which is largely based on literature surveys and empirical evidences is a useful and helpful approach in dealing with the study. This is in agreement with Stern’s (1979) assertion that the exaggerated application of quantitative research strategies on the argument that the representation of ties among actors in mathematical matrix form permits accurate prediction and complete description has actually prevented network analysis from obtaining its full potential.

Quantitative approach, as one aspect, permits the analytical tool to dominate substantive and theoretical intrepretation, but on the other, it fails to identify how the network as pictured in the quantitative formulation is formed. It also pays less attention to interaction amongst network associates. How and why business and industrial organisations form networks among their affiliated firms transcends economic considerations because socio-cultural factors also play their role and these variables are
subjective to understand conceptually, leave alone to quantify them. They have no clear-cut definition and hence attempts to quantify them would face the danger of misquantification. Thus, to make the study more exploratory and to provide opportunity for network analysis showing its full strength, the only alternative is to undertake the qualitatively descriptive approach.

Quantitative analysis is merely used to show the empirical results of the study on sub-contracting arrangements in the Malaysian automobile industry. This approach is important to answer the following research questions: how does the present Malaysian auto-subcontracting look like?; and what are the present patterns, trends and performances of the arrangements?

1.6 Objectives of the Study

There are two main objectives in this study, i.e. general and specific objectives. General objectives focus more on developing analytical framework and exploring real evidences in the more advanced countries, whilst specific objectives dedicate to ENO in the Malaysian automobile industry, i.e. the sub-contracting arrangements.

1.6.1 General Objectives

There are three general objectives pertinent to developing analytical framework and exploring real evidences in advanced countries, particularly in the Asian countries, which are listed as follows:

(a) To develop an entrepreneurial-network-organisation (ENO) framework:
(b) To compare entrepreneurial organisations across regions and countries as well as to provide detailed explanations for collective entrepreneurship in Asia; and

(c) To examine the Japanese automobile industry and its sub-contracting arrangements.

1.6.2 Specific Objectives

For the Malaysian automobile industry, specific core objectives of the study are to understand the present position of its sub-contracting arrangements (a special type of ENOs) and to examine its patterns, trends and performances. These two objectives are not mutually exclusive since the former would be manifested in the latter. To get a clear picture of this arrangement, specific objectives of the study are seen from two viewpoints - from the automakers' vantage point and that of the sub-contractors' perspective. The following first two objectives are seen from automakers' perspective and the remaining three objectives are seen from sub-contractors' viewpoint.

(a) To identify a governing mechanism in auto sub-contracting arrangements among automakers;

(b) To examine auto parts production and sourcing in auto sub-contracting arrangements among automakers;

(c) To investigate the relationships between influential factors in binding or governing auto sub-contracting arrangements (supplier-buyer networks) and firm size and firm ownership.

(d) To identify factors that influence auto parts production and specialisation; and

(e) To identify factors that influence auto parts markets.
1.7 Research Methodology

The present study attempts to fit the developed analytical framework of FNO with historical and empirical evidences in the context of economic development and the automobile industry of some Asian economies. The method of inquiry is both utilising literature surveys and data base. For the case of Asian entrepreneurial organisations (including in the Japanese automobile industry), the researcher depends heavily on literature surveys. For a more specific case, the Malaysian automobile industry, the researcher did literature surveys, set several hypotheses and employed both secondary and primary data. This research approach is discussed in the following sub-sections.

1.7.1 Research Hypotheses

A hypothesis is *a priori* in research and used to guide researchers to meet the objectives of their study. In definition, a hypothesis is a statement or question which put forward for statistical testing (Mohd. Ariff 1990). To examine the patterns, trends and performances of auto sub-contracting arrangements in Malaysia, some variables are expected to have certain types of correlation with other variables.

Based on the research objectives and literature surveys in this study as well as on the researcher’s observation, several hypotheses pertinent to two variable groups - auto parts production and specialisation, and auto parts market - have been set and numbered as available in Chapter 4 and Chapter 6. Discussions on empirical findings with tested hypotheses of these two variable group classifications are presented in Chapter 6 (Sub-section 6.5.3 and Sub-section 6.5.4 respectively).
1.7.2 Explanation for Defined and Combined Variables

For analytical purposes of Chapter 6, certain variables are defined and combined such a way that readers would get a clearer picture about a particular subject matter. Government proposals and recommendations are taken into account in defining certain variables, such as firm size and national status of automakers.

1.7.2.1 Influential Factors in Binding Network Relations

Economic and social-capital variables were broadly defined to enable the respondents to rank the degree of importance of the compared variables. It is recognised that both economic and social capital variables play their distinctive roles in shaping, governing and or binding network relations. Economic calculation focuses more on business-related factors that enable the two parties having networks. This comprises resource dependence as well as economies of scale and economies of scope derived from asset specificity, cost competency, wage differential and cheaper cost control which automakers would obtain from their sub-contractors; whilst social capital variables include power (government role), trust and culture which may be available in the society. Government role in this context includes protective measures (tariff and non-tariff barriers and local content policy), and stimulatory and investment measures (incentives and equity participation). Trust bases more on track records of the companies which enable buyers to trust them. Cultural factors include social norms, common industrial facilities, ethnicity, kinship, regional and so on.

However, to get a better picture of which one variable dominates the other, respondents were asked to choose the most dominant one from the two economic and
social capital factors. To detail out social capital variables which bind supplier-buyer networks in the form of sub-contracting arrangements, respondent were then required to select the most dominant one from the listed social capital variables, i.e. power (government role), trust and culture. Since there were merely a few sub-contractors cited culture as the most dominant factor in binding their networks with automakers, this factor is combined with trust in the analysis of this study.

1.7.2.2 Auto-Parts Production and Specialisation

Definition for auto parts bases on the classification made by Inaba and Tabela (1995) and Monteverde and Teece (1996). Acknowledging the huge number of individual auto parts (which ranges from 20,000 to 30,000 parts), it is almost impossible to detail out their classifications. By doing so, it would be a tedious and also require a high level of knowledge in automobile engineering. As an alternative, only the basic parts were included in the classification (see the last page of Appendix A or Appendix B for the classification of auto parts).

Because there was a small number of sub-contractors involved in producing functional parts and performing sub-assembly, auto parts production is combined into three variable categories, i.e. functional/specific parts category, general/standard parts category and the mixed functional and general parts category. Functional parts comprise engine and emission, chassis and brakes, transmission, steering and clutch, and electrical and electronics parts; whilst general parts include body and other standard parts.
In the levels of parts making, auto parts production is also divided into two categories, namely individual parts category and a mixed individual parts and sub-assembly of individual parts category.

1.7.2.3 Auto-Parts Market

Most of the sub-contractors would be involved in many market segments. Hence, several variables have to be defined and combined. In a broad perspective, auto parts market for sub-contractors is classified into two categories, i.e. local market category and local and export market category.

Due to the fact that most of the sub-contractors marketed their products locally, a special focus is given to this national market. And because there were sub-contractors sold their parts to various local market segments in the manufacturing industry and the automobile industry, this study, once again, combines some market variables into specific categories.

For the manufacturing industry, this study combines local market variables into two categories, namely automobile market category and automobile- and non-automobile market category. Non-automobile market exists because there were sub-contractors sold their products to electrical and electronics, telecommunication, spare parts and other industries. For the automobile industry, this study divides auto markets into types of auto parts buyers, number of automaker-buyers and nationality status of automaker-buyers.

For analytical purposes, types of auto parts buyers are combined into two categories, i.e. automakers category and automakers and auto-sub-contractors category.
Number of automaker-buyers is combined into two categories, namely less than five automaker-buyers and more than five automaker-buyers. Nationality status of automaker-buyers are divided into two categories, i.e. national-automakers category (Proton and Perodua) as well as national- and non-national-automakers (Japanese and non-Japanese-based automakers) category. National automakers refer to the firms under the Malaysian automobile projects initiated by the government, whilst non-national automakers refer to the firms that assemble Japanese automakes, such as Toyota and Nissan and European automakes, such as Volvo, B.M.W and Mercedes Benz.

1.7.2.4 Firm Size

In Malaysia, firm size is defined based on total number of full-time employees, paid-up capital and annual turnovers. Table 1.3 details out the definitions of firm size into small, medium and large firms. Nevertheless, this study adopts firm size definition based on total number of employees because this definitional approach is widely used in many past studies (Fong 1990, Mohd. Rosli 2000).

Firms or sub-contractors are then divided into two categories, namely small and medium sub-contracting firms (or briefly small and medium sub-contractors, SMSCs) and large sub-contracting firms (or briefly large sub-contractors). SMSC's are combined together because there was a rather small number of small firms in the sample (18 or 15 per cent of the total number of firms). In addition, SMSC's are always referred to as an
Table 1.3
Definitions of Firm Size by Number of Full-Time Employees,
Paid-Up Capital and Annual Turnover

<table>
<thead>
<tr>
<th>Variables</th>
<th>Definition/Inclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>By number of employees</strong></td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>Not more than 50 full-time employees</td>
</tr>
<tr>
<td>Medium</td>
<td>51-150 full-time employees</td>
</tr>
<tr>
<td>Large</td>
<td>More than 150 full-time employees</td>
</tr>
<tr>
<td><strong>By paid-up capital</strong></td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>Not more than RM500,000</td>
</tr>
<tr>
<td>Medium</td>
<td>More than RM500,000 to RM2.5 million</td>
</tr>
<tr>
<td>Large</td>
<td>More than RM2.5 million</td>
</tr>
<tr>
<td><strong>By annual turnover</strong></td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>Not more than RM10 million worth of sales a year</td>
</tr>
<tr>
<td>Medium</td>
<td>More than RM10 million to 25 million worth of sales a year</td>
</tr>
<tr>
<td>Large</td>
<td>More than 25 million worth of sales a year</td>
</tr>
</tbody>
</table>

Note: These definitions are based on the definition made by the Small and Medium Industry Development Corporation (SMIDEC).
entity in many government documents (see the latest five-year development plans). A
SMSC is a firm having not more than 150 full-time employees, whilst a large sub-
contractor is a firm hiring more than 150 full-time employees.

1.7.2.5 Firm Ownership

Sub-contractors in the Malaysian automobile industry are owned either by local
and foreign entrepreneurs or joint venture companies. Ownership of each firm is
defined based on individual majority shareholdings in the firm. In this connection, firm
ownership is compartmented into two categories, i.e. local-owned sub-contractors
(briefly local sub-contractors) and foreign-owned firms (briefly foreign sub-
contractors). Local sub-contractors refer to any firm in which Bumiputera or non-
Bumiputera or both of them holds majority shares in the firm, whilst foreign sub-
contractors refer to any firm with which its majority shares are held by foreigners.

1.7.2.6 Firms With Foreign Equity Participation

There are two types of firms seen from equity participation perspective. The first
refers to the sub-contractors without foreign equity participation and the second refers
to firms with foreign equity participation. The former are firms without any foreign
shares, whilst the latter are firms with foreign shares up to 100 per cent.

1.7.2.7 Firm Position

A firm position is defined based on its position in the supply chain or in a
networked production structure. Respondents are asked to identify themselves whether
they are first-tier or second-tier or lower-tier suppliers as clearly defined in the Japanese sub-contracting arrangements (see Chapter 4). Nonetheless, this study found that there were two types of suppliers from this perspective, i.e. first-tier and second-tier sub-contractors.

1.7.2.8 Technical Collaborators

Technical collaborators of sub-contractors are also classified into two groups, i.e. first, Japanese firms and second, the mixed and other parties. The former refers to technical support obtained solely from Japanese firms and the latter refers to technical support acquired from a collaboration involving Japanese firms and other firms of different nationalities as well as technical support sourced from any single firm or institution other than the Japanese, such as Korean, European, U.S., and Malaysian.

1.7.3 Other Relevant Definitions

For consistency, this study uses some terms interchangeably. An automaker or auto-manufacturer and an auto-assembler may be distinctively defined based on its participation in the process of production. It is the real automaker or automanufacturer who is actually involved in the production processes from the initial stage of individual-parts manufacture to the final stage of end-unit assembly (see the elaboration in Chapter 4). But, it is not so in the automobile production containing several thousands of individual parts and sub-components. It would be neither possible nor desirable to produce such many parts by a single producer.
An automaker may also be referred to as an assembler because it usually performs the final assembly before the automobiles roll out of the plants. Hence, an automaker and autoassembler (also autofirms) are actually the same actor. They may also be called a contractor or buyer since they may contract out parts of the work or tasks and buy back the contracted outputs from their suppliers, vendors, sub-contracting firms or sub-contractors. This means that the suppliers, vendors, sub-contracting firms and sub-contractors are the same actors as they can be interchangeably used in real practice.

1.7.4 Research Instrument

For collecting primary data, the researcher used two sets of questionnaires to separately interview automakers and auto sub-contractors. As displayed in Appendix A, the questionnaire for interviewing automakers is divided into four sections. Section A examined the company profile, including plant location, number of years in operation, legal status of the company, and equity structure of the company. Section B, Section C and Section D investigated issues pertinent to the company’s activities, auto parts production and sourcing, and network organisation and governing mechanism respectively.

The questionnaire for interviewing sub-contractors (as shown in Appendix B) is segregated into three sections. Section A looked at the company profile. Section B and Section C inspected issues relating to the company’s activities in auto parts and components and supplier-buyer networks respectively. At the back of each
questionnaire was attached a sample of auto parts classification to assist the respondents to answer questions pertinent to auto parts production.

This study uses structured, instead of open-ended, questionnaires as a strategy to minimise the time needed by top or middle managers of automakers and sub-contractors to answer the questions put forward. By using this type of questionnaire, the chances for the respondents to answer the questions would be high, too.

1.7.5 **Data Collection Procedure**

Secondary data were obtained from several sources, including from the Malaysian Industrial Development Authority (MIDA), the Malaysian Automotive Association (MAA), the Proton Vendors' Association (PVA) and the Malaysian Automotive and Component Parts Industry (MACPMA). Comprehensive data on Malaysian automobile production and sales were collected from MIDA and MAA.

With respect to automakers, application letters together with the questionnaire were sent before a series of follow-ups were made through phone-calls. But it took several weeks just to confirm with the automakers whether or not they received the questionnaires. Several sets of questionnaires were lost through the mailing process. The questionnaires had to be sent repeatedly until the automakers confirmed that they received them. It took another week or so just to arrange for an interview or meeting session with the automakers. When they were contacted, the researcher was, in most cases, told that the persons in charge were either not in the office or away attending meetings.

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Despite struggling for about six months, only three out of 12 automakers actually completed and returned the questionnaires. The rest kept on making promises to return the questionnaires every time they were reminded; it was probably the most subtle way for making excuses for not cooperating in the survey.

Each of the three automakers also took too much time to fill up the questionnaires because of the diverse nature of the questions. Hence, the questionnaires had to be passed on to several divisions. First, it had to get through the department of human resources for approval. After getting the approval, the questionnaires were then passed on to several other departments such as purchasing, supplier sourcing and technology.

Compiling data from sub-contracting firms (sub-contractors) was also not as easy as the researcher earlier thought to be. Two attempts were made to collect data from the respondents listed in the Proton Vendor’s Directory 2000-2001. In the first attempt made in June and July 2000, the researcher managed to get five out of 122 respondents. This attempt failed because the respondents had no time to entertain too many questions (a 7-page questionnaire). They were also reluctant to give detailed information about their company’s activities and performance for their own reasons.

The second attempt was then made in June 2003 to collect information from the same respondents. The researcher had to use a smarter strategy this time. The questionnaire was reduced to three pages. Only variables that were reflective of network relations in Malaysian sub-contracting arrangements were asked. Certain information about each surveyed firm, such as plants location, paid-up capital, annual turnover, number of employees, technical collaborator, manufacturing activities, auto parts production, and auto parts market, was available in the Proton Vendor’s Directory;
whilst information about equity structure of each firm was available in the list provided by MIDA. This information from 122 firms (the sub-contractors not only to Proton, but also to other automakers operating in the country) was filled-up in the questionnaires.

To verify the validity of the available data, the researcher did double checking with respective firms, but those data or information, in almost all cases, did not change much and still remained in the coded values. Any changes in data or information given by the respondents, albeit little, was taken into account accordingly by this study.

Other insensitive variables were obtained directly from each sub-contractor, either through phone contacts or plants visits. In this connection, this study managed to get 103 sub-contractors or 84.4 per cent of the potential respondents for the interview. The rest was either reluctant to cooperate or not available for comments.

1.7.6 Data Analysis

The compiled data were then transferred into the Statistical Package for Social Science (SPSS) Release 10 for Windows for processing and statistical tests. "A frequently used test of significance in social science" (Babbie 2001, p.459), i.e. the Chi-square test, is adopted to examine the listed hypotheses, but only significant results were reported. Although many tested variables were not significant at $\leq 0.05$, it is believed that the information or data obtained from the survey would still be useful to analyse because there would be some patterns of relationships between dependent and independent variables and different influences of independent variables on dependent variables. If this is the case, the researcher relies heavily on percentage analysis to analyse the relationships and influences among variables.
By using percentage analysis, some inferences about the patterns, trends and performances of network relations in the Malaysian automobile industry, particularly its sub-contracting arrangements, could still be made. To provide a clear picture about the subject matter, this study presents its research findings in tables and resorts to both quantitative and descriptive analyses to explain relationships and influences among variables. Information or data that appeared in the tables were based on the answers provided by the respondents in the survey.

Upon request for confidentiality, the company and respondent's names were not exposed throughout the texts or tables in this study. Anyone involved in the study of the Malaysian automobile industry would realise that this industry is endowed with a high degree of secrecy. Except for general information on annual production, price (domestic only) and market sales of automobiles, more specific information on the industry is considered highly confidential, probably due to strategic or other reasons.

1.8 Significance of the Study

The present study is significant and can be justified in several ways. First, this study is the first of its kind that develops an ENO framework and uses this framework to examine empirical evidence across regions and to study the experience of the Malaysian economy, particularly its automobile industry. Second, this study also manages to incorporate entrepreneurial factors as real organisers in economic activities, through their roles in shaping economic organisations and in coordinating scarce resources to the optimal effects.

Third, in the era of global competition indicated by the conclusion of the Uruguay Round in 1994, the enforcement of the World Trade Organisation (WTO) in
January 1995 and the full implementation of the ASEAN Free Trade Area (AFTA) by 2003, it is quite impossible for a firm to compete internationally on the basis of the old competition (based on price mechanisms). Changing patterns in consumer taste have shortened a product's life span. At the same instance, technology is fast changing and costly to develop.

In the context of new competition, only networked firms would be able to incorporate the variations in consumer demand and technology and ultimately survive in competing with other firms outside the network. In other words, the present study provides a signal for firms to restructure or readapt their position by internalising the external environments to compete and survive in international marketplace. Firms which can adapt to meet international demand would benefit not only for themselves, but more importantly for the country they represent.

Fourth, especially for developing countries, any effort to promote such an ENO-type of economic activities is considerably valuable. Until recently, most developing countries were still dependent upon traditional resource-based industries which barely provided the platform for linkages among firms. Thus, new industrial activities which provide opportunities for networking among local firms or local-foreign firms should be encouraged, amongst others, through power-driven industrialisation. This study will display the forms and nature of ENOs and the factors that shape them in certain industries; hence enable policy-makers to consider such networks in their development planning.

Fifth, for those developing countries which have already promoted the mode of network organisation may need to modify their policy measures. However, this can only be done when they understand deeply the related problems as offered in the present
study. Vast knowledge of such organisations is required to be gathered from the experience of other countries, for a conclusive result to be obtained and later used in policy adjustments.

Lastly, for interested researchers, the findings of the present study may be used to accomplish possibly unfinished jobs. They may use it as a guide to explore some other cases and compare with one another so that a thorough understanding of the subject matter may be obtained later. They may also offer some alternatives to the present study to help enrich the literature. This proposition is derived from the fact that with the absence of the strengths and/or the weaknesses of previous or present studies, there is no point in undertaking future studies in the first place as there will indeed be no new information for future generations either!

1.9 Scope and Limitation

It is recognised that ENO may involve many parties, take many forms and appear in many aspects of life in any society. ENO also leads to work specialisation which can be observed from the perspective of division of labour and division of organisational obligation or tasks. It is therefore impossible for the present study to work in such a broad environment.

The present study thus confines its investigation to the second type of specialisation in the industrial sector because the nature of this economic activity provides a favourable ground for ENO establishments. Though some developed countries have experienced a deindustrialisation process over the last two decades, their manufacturing sector still contributes significantly to their national incomes. On the
contrary, most developing countries have now been experiencing the industrialisation process such that significant increases in industrial output in the share of their national incomes is achieved at the expense of the primary sector.

Of significance is the automobile manufacturing industry, since it has been given attention by various parties since its infancy, notably since the era of Fordism. Therefore, this study devotes special attention to this industry owing to the fact that it is a strategic and dynamic industry that increasingly attracts new participants. This study, however, does not intend to explore the case of developing countries comprehensively as addressed in other studies. It is sufficient for the present study to focus on the Malaysian automobile industry with a special reference to its sub-contracting arrangements.

Generally, the industry consists of two segments: one is up-stream activities (production) and the other is down-stream activities (distribution). The present study confines its examination to production-related activities as a strategy to deepen the analysis. The focus of investigation is on sub-contracting arrangements between automakers and their sub-contracting firms (sub-contractors) within the economy. In other words, the focus of the study is on the network relations among the firms located in Malaysia.

1.10 Organisation of Chapters

The present study is structurally organised into seven chapters. Chapter 2 undertakes the special task of developing a collective entrepreneurship framework "Entrepreneurial Network Organisation" by integrating the concepts of entrepreneurship
and network together into an organisational framework. The last part of the chapter explores the position of this new framework from the perspective of economic theory and development.

Chapter 3 compares the role and structure of entrepreneurial organisations of two regional economics, namely Asia and the West. This effort is made to establish the proposition that ENO is inclined to be an Asian model of capitalism. Basic arguments of the phenomenon go beyond the consideration of economic resources per se, because it is evident that social capital embedded in different societies of various regions shapes different forms of entrepreneurial organisations across them.

Chapter 4 explores ENO in the automobile industry, notably USA, Europe, Japan and Korea. Both its contribution to the economy and its distinctive configuration are explored to arrive at the conclusion of the significant impact of such an organisation to particular developed economies. Owing to its success, the Japanese model for automobile sub-contracting arrangements is discussed in great detail to provide a clear picture of the nature and working mechanism of such an ENO in the modern economy.

Chapter 5 demonstrates the industrially-driven development of the Malaysian economy. Policy emphasis on heavy industries has paved the way for the development of its automobile industry. It is argued that power coercion (the role of the state-institutional environments) plays a significant role in shaping the patterns of ENOs in the industry since the inception of the Heavy Industrial Policy and the establishment of HICOM in the early 1980s. Local content policy has consolidated power as a social
capital to force the industry to undertake a special form of network. This chapter also reviews the promotional efforts of the government to foster ENO establishments in the national economy and the automobile industry as well as the real performance of this organisational form.

Chapter 6 devotes exclusively to the present position of the Malaysian automobile industry and its sub-contracting arrangements. Using extensively both secondary and primary data, this chapter examines the overall performance and characteristics of the Malaysian automobile industry and its sub-contracting arrangements. The emphasis of the discussion will be on the patterns, trends and performances of auto sub-contracting arrangements between automakers and sub-contractors.

Chapter 7 summarises the major findings of the study, provides some key conclusions and offers alternatives to economic players and policy makers. Some successful cases elsewhere could be learned from to formulate industrial policy for further growth. They also furnish some guidelines to those interested in the present study as the basis for future research.
Endnotes

1 The revival of interest in the study of economic development, or what Meier (1995) called modern
development economics is traceable in the late 1940s, concomitant with the political independence of
emerging countries of Asia, Africa, and the Caribbean (also Papanel 1962).
2 Heterodox economists also worked in the capitalist construct. Karl Marx (1818-1883) through his
"Das Kapital" himself was much influenced by the Ricardian systems.
3 His belief is contained in An Inquiry into the Nature and Causes of the Wealth of Nations (1776)
which is generally known as The Wealth of Nations (see Landreth and Colander 1994).
4 The traditional tactical purposes refer to coalitions between multinational corporations and firms of
host countries to gain market access or to transfer technology passively to the region in which the
collaborative firms avoid competition directly, whilst the strategic aims involve a widespread
cooperation among competitors to compete worldwide.
5 Prior to this, the notable development was only in two fields of applied sciences—physics and
chemistry.
6 To make the system work, it has to have two components: one is computers, and the other is
communication infrastructure. These two components enable the participants to share an application,
e.g., a program for making reservations or for ordering supplies. The system is typically developed
by facilitators, that is, the organizations who are specialized in the field (see Cash and Kosinsky 1985
for more detail).
7 Opposite to this paradigm is known as the Fordism era, the epoch dominated by American
manufacturers by the turn of 20th century when Henry Ford (1863-1947) pioneered the American
automobile industry by setting up the first moving assembly line in 1913. Since then, the Fordism
paradigm had a great association with industrial production worldwide and used as a generalized model
or symbol of manufacturing productions (Dumais, Landry & Pasin 1997, Hirst and Zeitlin 1992,
Industrial productivity in the U.S. declined quite substantially and continued to drop in the period of
1973-1982 due to several factors such as the technological innovation and investment, over-regulation,
and especially after the 1973 oil shock. Stiffer competition from foreign manufacturers, who sought to
flexible specialization, aggravated the situation.
8 Self-moving machine was introduced to detect abnormalities in the process of production. The
machine is able to stop automatically before any deteriorated products are produced. In this context,
Ohio features the Toyota assembly line as a self-working system (automation), in contrast with the
9 The cards are normally put in a rectangular vinyl envelope.
10 The question of whether or not economy and society are separable, has been discussed at length by
many scholars. They are interested in viewing economic related activities from the vantage point of
social actions. Among others were Smelser (1976) and Huppe (1976). Granovetter (1985),
11 Redding (1991) asserts that there has been a tendency to merge the insights of many disciplines in
recent studies. More importantly, these new inter-, or multi-disciplinary approaches are accepted by
core disciplines such as economics, sociology, and organizational studies.
12 On the one side, it differs from the other two disciplines: anthropology and psychology but shares
some subject matters on the other side. Harkavy (1996) defines anthropology as the study of the
origins, evolution, and development of human beings and their various cultures and societies (p.54)
and identifies psychology as originally a branch of philosophy dealing with the mind, and then the
science of mind. Now, he considers it in a more general context: the science of behaviour which is
closely related with medicine, psychiatry, and sociology. Sociology shares its subject matter with
anthropology, which traditionally focuses on small, relatively isolated societies, and with social
psychology where the emphasis is on the study of subgroup behaviour.
13 One thing that should be remembered is that there is a lack of one dominant tradition in sociology.
Following Smelser & Swedberg (1994), diverse sociological approaches and schools differ from and
even compete with one another; thus affects the explanation in the context of economic sociology.
But, as usual, if such disagreements are entertained, the original objectives of any studies would be
diverted and the study would never be completed. Only those who are interested in sociological study should examine in depth those arguments.

Smelser (1976) expounds his definitional context in two key questions that are typically posed by economic sociologists. The first is microscopic, which permits economic sociologists to settle two related problems: one is pertinent to the question of how economic activities are structured into roles and collectiveness, by what values they are legitimised, and by what norms and sanctions they are regulated; and the other is related to within of an economic organisation such as a firm, which is about the influence of the status system, power and authority relations, deviances, and cliques and coalitions on economic activities of the firm. The second is macroscopic, which assigns economic sociologists to deal with the question of defining sociological variables in the economic context on the one hand, and in non-economic context on the other. For instance, “what sort of political conflict is generated by the economic arrangements in different societies? What kinds of class systems emerge in different kinds of economic systems?” (p. 2).

These two types of specialisation can be found in Friedman (1983) and Stielt (1994).