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Strategic Intelligence

in Hong Kong

Maris G. Martinsons

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Warwick Business School
University of Warwick

STRATEGIC INTELLIGENCE IN HONG KONG

Summary

What would happen in Hong Kong after the 1997 transfer of its political sovereignty from the United Kingdom to the People's Republic of China? For organizational leaders in Hong Kong, this was more than an academic issue. As the handover approached, they faced an impending discontinuity in their environment.

Although the Chinese are renowned for their business success amidst environmental uncertainty, little is known about information management in Chinese organisations. Given that the ethnic Chinese constituted a vast majority of both the general population and organisational leaders in pre-handover Hong Kong, it was an attractive context for strategic intelligence research.

The study considered how Hong Kong Chinese chief executive officers (CEOs) perceived the pre-handover business environment, and how they acquired and used information about that environment. A multiple method design was employed to extend an existing body of management literature on environmental scanning. Eight case studies across four industries complemented a survey of 53 CEOs in the printing and securities industries.

The questionnaire was designed to determine 1) the levels of perceived uncertainty in six distinct sectors of the business environment, and 2) the environmental scanning conducted in response to the perceived uncertainty. Quantitative analysis revealed many similarities but also several significant differences from both previous studies in the West and between the two industries in Hong Kong.

The case studies examined how CEOs acquired and used information about the external environment as they attended to specific strategic issues. The cases provided empirical grounding for an explanatory theory of information management and indicated that the handover was not a uniform or even universal source of environmental uncertainty. Specific cultural, institutional, and competitive factors were found to influence the environmental perceptions, scanning behaviours and information management activities of Hong Kong Chinese chief executives.

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Summary

CHAPTER 1
STRATEGIC MANAGEMENT AND INTELLIGENCE

This dissertation presents an empirical study of how Chinese chief executives in pre-handover Hong Kong managed information about their external business environments. The focus of the study was on the environmental uncertainties perceived by these CEOs, and their acquisition and use of information in responding to those uncertainties and dealing with strategic issues.

The first chapter frames the topic of the study, by introducing the focal phenomenon, which is termed *strategic intelligence*, and outlining its role in strategic management and the decision making that is associated with its practice. The opening chapter also explores the current and potential role of information technology (IT) within this focus. The second chapter considers strategic intelligence in depth, by identifying the major concepts associated with this phenomenon, and reviewing and integrating the relevant literature. Chapter 3 discusses the context for the study - the neo-Confucian society and the open market economy of Hong Kong in the period leading up to its transfer of sovereignty from the United Kingdom to the People's Republic of China (PRC).

The framework for the research is presented in Chapter 4. First, the objectives, expected contribution, and key research questions are identified. Next, the research methods used to address the key questions and test specific hypotheses are outlined and justified. Finally, this chapter identifies and discusses the limitations of the study design.

The study employed multiple methods and consisted of two parts - a survey and case studies. The results from each part are presented in a separate chapter. Chapter 5 reports on the survey of 53 chief executive officers (CEOs) from the printing and securities industries. The results of the hypothesis testing revealed both similarities and differences compared to previous

studies and between the two industries. Chapter 6 reports on case studies of eight CEOs in four different industries. A critical incident technique was employed to examine how information about the external environment was acquired and used to identify and interpret strategic issues.

Chapter 7 integrates the two phases of the study and discusses the results. The findings from pre-handover Hong Kong are compared to those from previous investigations conducted elsewhere in order to highlight key issues and to reinform the literature. Chapter 8 draws conclusions from the results of the study, considers the implications for management theory and practice, and recommends specific areas for further research.

1.1 Introduction

The political sovereignty of Hong Kong was transferred from the United Kingdom to the People's Republic of China (PRC) on the 1st of July 1997. This was an unprecedented event, whereby an icon of capitalism was handed over to the world's last remaining major Communist regime. Since the Sino-British Joint Declaration was made public in 1984, the world knew that Hong Kong would have a new government in the middle of 1997. A Chinese government based in Beijing would replace a colonial administration ultimately responsible to the Queen of the United Kingdom of Great Britain and Northern Ireland.

"What would happen to Hong Kong after 1997?" was a natural question to ask. And it was asked by many people within the territory and outside of it. The impending handover of Hong Kong prompted heated discussion and assorted speculation all around the world. It also represented a unique and attractive research opportunity. For those managing organisations in Hong Kong, the political change in 1997 was expected to be a serious issue rather than merely a topic for academic debate. In the period before the handover, those heading up both private and public sector organisations in Hong Kong faced an impending discontinuity in their external environment. This study

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addressed two key questions: *What uncertainties did Hong Kong Chinese chief executives perceive to exist in the pre-handover environment?* and *What information did they acquire and use in response to the perceived uncertainties?*

Significantly, about 97 percent of the population in pre-handover Hong Kong was ethnic Chinese. Nearly all of the business establishments there were owned and operated by this ethnic group. Although Hong Kong was under British administration prior to July 1997, a growing majority of the public agencies there were also led by ethnic Chinese.

Chinese businesses are renowned for their success amidst environmental uncertainty, turbulence and even chaos (Engardio, 1991; Redding, 1990; Wang, 1991). Superior information about the business environment may help to explain this success. By sensing and understanding the implications of external changes on a timely basis, Chinese businesses may be able to thrive in a dynamic environment. However, little is known about how top managers in Chinese organisations manage information, or the role that information management plays in Chinese business success.

Pre-handover Hong Kong provided an attractive context for building upon an emerging body of Chinese management literature (see Fukuda, 1983; Ko, 1995; Martinsons & Hempel, 1995; Tricker, 1988; Redding, 1990; Westwood, 1997). This study examined the environmental perceptions and information sourcing patterns of Chinese chief executives at a time when an elevated level of external uncertainty was to be expected. More specifically, the focus was on the environmental uncertainty perceived by these top managers, and their acquisition and use of information about the external business environment in response to that uncertainty.

This dissertation extends a rich body of Western literature related to the area of environmental scanning (see Aguilar, 1967; Auster & Choo, 1993; Daft et al., 1988; Duncan, 1972; Hambrick, 1979) by studying this phenomenon in an important new context.

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It is also linked to a tradition of military and business *intelligence* that goes back to the writings of Chinese military leader Sun Zi[1] some 25 centuries ago (see Griffith, 1963).

This opening chapter briefly reviews the evolution of strategy and intelligence[2], contrasts different types of intelligence, and defines *strategic intelligence*. Then, the role of information in management is considered, while the nature of the decision making processes that are part of strategic management are examined. Finally, the degree of formalisation and systemisation of these processes as well as the application of IT are outlined.

1.2 The origins of strategy and intelligence

The concepts of strategy and intelligence both have military origins. The English word *strategy* is derived from the Greek *strategos*. *Strategos* first referred to the *role* of a general commanding an army, but later evolved to the *art* of the general, including the skills needed by a military leader (Evered, 1983). In recent times, strategy has referred to the art and science of conducting a military campaign on a broad scale (Dupuy & Dupuy, 1970). As societies developed over time, their leaders progressively studied and codified the essence of strategy. This led to the emergence of some coherent strategic principles.

One of the key principles related a sound strategy to good information about the opposing army and the environment. The gathering and use of intelligence would promote an awareness and understanding of the issues as well as the dangers and the opportunities that lay ahead. Military strategists could make use of timely and reliable intelligence to take evasive or aggressive actions, and raise their prospects of winning wars.

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[1] also *Sun Tzu* from the transliteration of the Cantonese dialect

[2] the term refers to the act of collecting key information as well as the collected information. *Intelligence*, in this context, does *not* refer to a measure of mental ability or the faculty of perceiving and comprehending meaning

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One of the first known efforts to record a theory of strategy is found in a reflective series of essays called *The Art of War*. These essays were written by Sun Zi, a noted Chinese military strategist who lived in the 4th century B.C. Significantly, the value of good intelligence was a central theme in *The Art of War*.

> "The enlightened sovereign and the wise general can conquer their enemies, and achieve things that are beyond the reach of ordinary men because of their foreknowledge ... know the enemy and know yourself, and in a hundred battles you will never be in peril" - Sun Zi, *The Art of War* (as translated in Sammon et al., 1984)

The concept of intelligence has dominated strategic thoughts and actions ever since Sun Zi. For example, a remarkably coordinated system of intelligence was critical to the devastating style of warfare practised by the 12th century Mongols that foreshadowed the *blitzkreig* strategies of 700 years later (Ransom, 1970). Meanwhile, in the latter part of 16th century, Sir Francis Walsingham, the Secretary of State for Queen Elisabeth, designed an extensive intelligence system that enabled England to defeat the Spanish Armada, and increase its stature as a major maritime power (see Deacon, 1969).

Prussia's militant king, Frederick the Great (1712-86) also stressed the necessity of military intelligence, and backed up his words with actions. He was willing to excuse and pardon those who were defeated in battle, but not those who were surprised in the effort. Frederick was also among the first leaders to see the need for special staff to collect and analyse intelligence (Dulles, 1965). Their dedicated efforts and accumulated expertise would ensure a thorough familiarity with the prospective battlefield, including its topographic details, and also enable an accurate and comparative assessment of not only the current opponent, but also the prospects of either side

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receiving assistance from other parties.

Shortly after Frederick the Great cultivated this form of
information gathering, Karl von Clausewitz (1780-1831), a
Prussian general, noted the difficulties of interpreting external
data in a timely fashion. In his military treatise, *On War*, Von
Clausewitz noted that unforeseen obstacles, which he termed the
'friction of war', could complicate the execution of strategy
(Collins, 1962). However, he added that these obstacles could
be overcome by coupling good intuition, based on experience, with
a strong personal will to win (Dulles, 1965). This implied that
military commanders needed to rely on their own judgment when
interpreting reported intelligence that may be contradictory,
false or of dubious quality.

Intelligence gathering intensified dramatically in the 1800s.
By the start of the 20th century, Europe was covered by a complex
network of espionage and counterintelligence networks (Ransom,
1965). Although these efforts had a military emphasis, political
concerns related to economic growth, social developments, and
diplomatic relations were being monitored with increasing
frequency. In Great Britain, the creation of the Intelligence
Branch at the War Office in 1873 was a crucial first step toward
the development of a modern intelligence organisation (Deacon,
1969). In the aftermath of the South African War, the
redesignation of the Intelligence Department as the Directorate
of Military Operations facilitated a closer relationship between
intelligence and strategic planning.

1.2.1 The emergence of business intelligence

Even as military and political intelligence systems became
progressively more sophisticated, the emergence of mercantilism
and its offspring, capitalism, had "transformed European commerce
into a powerful international force" (Sammon, 1984, p. 28). As
international trading houses in the 16th and 17th centuries moved
to exploit the wealth of the New World, Asia and Africa, they
sought out accurate information about distant places, persons,

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and institutions. This gave rise to non-political forms of intelligence. An early example was the timely knowledge about the results of key battles that enabled the Rothschild family to profit in the financial markets (see Sammon, 1984, pp. 29-30).

The government intelligence services of the major Western powers in the first half of the 20th century may be seen as role models for the powerful intelligence-driven corporations that now exist.

> "Although both the Allies and the Axis experienced significant intelligence failures during World War II, the highly-sophisticated, broad-based intelligence agencies that served the military and political leaders of both sides were relatively efficient, large-scale bureaucracies capable of collecting and integrating a wide-range of technical, scientific, military, economic, cultural and political data" (Sammon, 1984, p. 35).

With industrial and commercial competition becoming more intense and international during the 20th century, it was only natural that growing numbers of business leaders would embrace the concepts of strategy and intelligence. Strategic planning became "inextricably interwoven in the fabric of modern management" (Steiner, 1989). Strategic plans were needed to guide the complex logistics and sophisticated administrative structures of modern high-technology corporations over an extended time horizon. The development of these plans has almost invariably required the collection and processing of tremendous amounts of information about the external environment.

Multinational corporations now typically devote substantial resources to intelligence gathering and processing (see McGonagle & Vella, 1996; Sammon et al., 1984; Stanat, 1990 for examples). In Japan, economic intelligence gathering has been an official part of the national industrial policy since the late 1800s while the large Japanese trading firms (*sogo shosha*) have had business

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intelligence systems since shortly after the Second World War (Kahaner, 1996). Perhaps significantly, the Japanese word *joho* means both information and intelligence. This is consistent with the high intrinsic value placed on information in Japan (Meyer, 1988).

Governments and corporations throughout Europe have also moved to enhance their intelligence capabilities while the Central Intelligence Agency in the United States has stepped in to become an information provider for American business (Herring, 1992; Kahaner, 1996). The analysis of political risk in foreign countries has been of particular interest to Western multinationals. For example, McGonagle and Vella (1996, p.51) suggest that banks and oil companies concerned about the possible nationalization of their assets are highly motivated to ensure that they receive reliable early warning signals.

These types of initiatives imply that businesses around the world now compete on multiple dimensions, not just for the best customers, the best workers, and the best raw materials, but also for the best information. Intelligence may have the most value in high-technology industries, such as biotechnology, computers, pharmaceuticals, and telecommunications. These industries have large research budgets, short product development cycles, and small profit margins. Knowledge is *the* key resource while good information can make the difference between success and failure.

Despite the recent critiques of both the form and function of strategic plans (see Knights & Morgan, 1991; Mintzberg, 1994), there remains a general consensus that business performance can be improved by thinking ahead and planning for the future. Intelligence is now widely viewed as a critical input to this planning process. The collection and analysis of information about the external business environment is now a common activity in the modern business world. Many firms have even created formal intelligence systems (Huff, 1979; Gilad & Gilad, 1988; Kahaner, 1996).

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Sammon (1984, p. 35) suggests that "intelligence that had been synonymous with ... the espionage agent ... is now an unparalleled information resource, produced by legions of analysts". These intelligence bureaucracies may not be able to guarantee superior performance, but they do promote a well-informed approach to strategic decision making. To paraphrase Frederick the Great, firms may still lose on the business battlefield, but they have no excuse if they are surprised during the battle.

1.3 Defining different types of intelligence

Intelligence can be conceptualised as information about the external environment that is relevant to decision making. In fact, it is the first of three stages in a decision making model proposed by Herbert Simon (1960). This model is detailed later in this chapter. Many dictionaries, including the *Oxford Dictionary of Current English,* also use the word "intelligence" to represent the collection and filtering process associated of this information. Assorted books and journal articles have considered this topic and employed different adjectives or related terms to denote sub-sets of intelligence.

As a result, it is useful to build upon Choo (1994) in order to compare some of the most commonly-used terms: competitor intelligence, competitive intelligence, business intelligence, strategic issues management, and social intelligence.

The most specific of these, *competitor intelligence*, seeks

> "to develop a profile of the nature and success of the likely strategy changes each competitor might make, each competitor's probable response to the range of feasible strategic moves other firms could initiate, and each competitor's probable reaction to the array of industry changes and broader environmental shifts that might occur" (Porter, 1980, p. 47).

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Competitor intelligence is thus confined to the actions, behaviours and options of existing or potential competitors.

Competitive intelligence is a slightly broader concept. It refers to the analysis of competitors as well as the competitive conditions in particular industries and/or geographic markets. Michael Porter's seminal book on *Competitive Strategy* (1980) devotes eight of its sixteen chapters to competitive analysis techniques. More recently, Bernhardt (1994, p. 13) offers the following working definition for competitive intelligence: "an analytic process that transforms disaggregated competitor, industry and market data into actionable strategic knowledge".

Business intelligence has a considerably larger scope than either competitor or competitive intelligence. Market research, political risk assessment as well as competitive intelligence are among its many sub-areas. It is the function whose end product is processed information about the present and future business environment that is of interest to management (Greene, 1966, p. 2). In contrast to corporate espionage or industrial spying, business intelligence efforts seek public or semi-public information using legal and ethical means. Gilad and Gilad (1988, p. 6) have defined business intelligence as "the activity of monitoring the environment external to the firm for information that is relevant for the decision-making process in the company." This is very similar to the concept of *environmental scanning*.

Environmental scanning has been defined to include the acquisition and analysis of information about every sector of the environment that is relevant to the future of the organisation (Aguilar, 1967; Auster & Choo, 1994). Both business intelligence and environmental scanning not only cover competitors, suppliers and customers, but also political and regulatory factors; economic factors; social, demographic and cultural factors; and technological factors that *may* affect the organisation.

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Strategic issues management differs from the previous process-based concepts primarily in terms of its issues-based perspective. It evolved from the field of public affairs with the aim of helping to ensure the "future viability and well-being of the organisation" (Ewing, 1990, p. 19). Stanley (1985) emphasised the need for systematic scanning so as to anticipate five types of possible strategic issues: economic, social (public attitudes), political (government policy changes), technological (inventions or new techniques), and other (such as environmental, health and safety) issues. In the business context, Jane Dutton and her colleagues have considered how managers recognise and develop an understanding of strategic issues (see Dutton, Fahey & Narayan, 1983; Dutton & Duncan, 1987; Dutton, 1993).

Finally, *social intelligence* is the broadest in scope and approach. Rather than being relating to a single organisation, it is concerned with the capability of society and societal institutions to identify problems, collect relevant information about these problems, and ultimately to use this information (Dedijer & Jequier, 1987). For example, Ventura (1988) defines it as "the organized ability of a country, or any of its components, to adapt to the rapidly changing world by combining the acquisition, evaluation, and use of information with planned operations and activities".

The various forms of intelligence may be differentiated by comparing their time horizon and scope of data gathering. As shown in **Figure 1.1**, there is a significant overlap between competitor and competitive intelligence, and also between business intelligence and environmental scanning. On the scope dimension, competitor intelligence, competitive intelligence and issues management have a relatively narrow focus. All three concentrate on a particular competitive environment or issue.

On the time dimension, both competitor and competitive intelligence have a relatively short horizon, due to their focus on dynamic market factors. In contrast, strategic issues

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management has a longer horizon, because it engages in policy matters that have multiple stakeholders.

Figure 1. 1
Comparing Different Types of Intelligence Activities
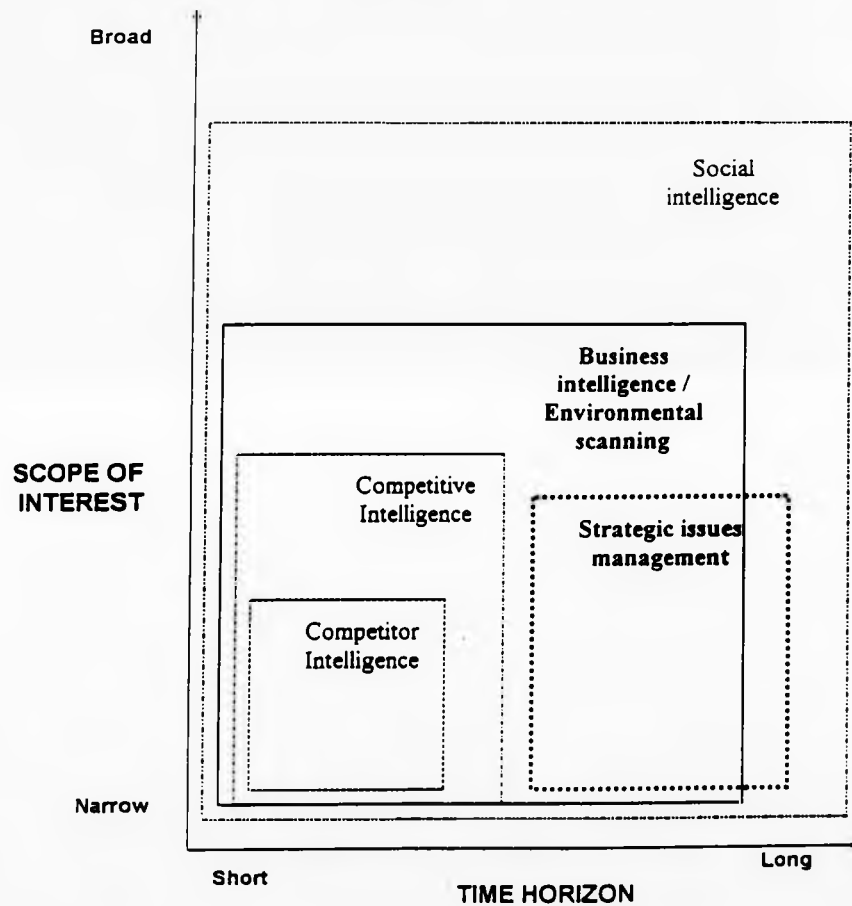
Based upon: Aguilar (1973); Bernhardt (1994); Choo (1994); Choo & Auster (1993); Ewing (1990); Gilad & Gilad (1986); Porter (1980); Ventura (1988).

This comparison suggests that the domains of business intelligence and environmental scanning are very similar. Both are concerned not only with the current business environment, but also with future possibilities and alternatives. This future orientation creates an overlap with the concept of scenario planning (see Foster, 1993; Wack, 1985).

Greene (1966, p. 3) has suggested that the end product of business intelligence is "processed information of interest to management about the present and future environment in which the business is operating". Therefore, it would seem that the two terms, business intelligence and environmental scanning, can be used more or less interchangeably. This dissertation will tend to employ the term environmental scanning in reference to the scholarly literature on the topic; business intelligence will tend to be used when considering both the process and product within the realm of the management practitioner.

Strategic intelligence can be conceptualised as the subset of business intelligence that is relevant to strategic management. It may be viewed as a major sub-set of the information management activities conducted by those at the top of the organisational hierarchy. Strategic intelligence aims to give the chief executive (and his top management team) a solid understanding of the business environment.

Ghoshal and Westney (1991) identified six uses of competitor analysis, as follows:
1. sensitisation - challenging existing assumptions to shake up the organisation
2. benchmarking - comparing the performance of the organisation against its competitors and best-in-class performers
3. legitimisation - persuading organisational members that a proposal is feasible and desirable
4. inspiration - triggering new ideas and motivating people to solve problems

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5.   planning - using the intelligence to craft intended
      courses of action and to support planning activities
6.   decision-making - contributing to specific operational
      and tactical decisions.

Each of these uses is also applicable to strategic intelligence.

The management literature suggests that chief executive scanning
can improve business performance, especially in complex
environments (see Daft et al., 1988; Hofer & Schendel, 1978;
Jaworski, 1996). For example, strategic intelligence can help
to overcome a classic paradox that confronts many business
leaders: maintaining central control and coordination while
promoting rapid and flexible responses by subgroups. The
evidence also suggests that good intelligence is related to a
greater satisfaction with planning, a better understanding of
market conditions, and increased profitability (Diffenbach, 1983;
Dollinger, 1985; Godiwalla et al., 1980; Lester & Waters, 1989).

So far, the evolution, uses and benefits of strategic
intelligence have been presented. The next section considers the
roles of information and intelligence in the general management
context, and particularly with respect to strategic management.

1.4 Information and management

"Information is the lifeblood of our company"
        - the motto of Mitsui Corporation (Japan)

Information may now be the lifeblood of many organisations and
their managers. Information is certainly an important resource
for almost every organisation, regardless of whether it is
engaged in religious, military, business or public service
activity. Organisations have even been conceptualised as
information-based systems in various streams of literature (see
Barnes, 1984; Beer, 1981; Daft & Lengel, 1986; Weick, 1979).

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More generally, information and knowledge are quickly supplanting labour and capital as the key resources in the post-industrial age, and creating shifts in economic and social power (see Bell, 1973; Toffler, 1980). Martin (1988, p. 2) has argued that "the prospects for social change and economic development depend increasingly upon information and its exploitation". In economic terms, information is no longer just an important factor of production, but a key enabler for the efficient and effective coordination and utilisation of other factors of production.

Information is central to organisational management activity. Managers collect, interpret and act upon information in order to gain a better understanding of their own organisation. They also use it to respond more effectively to external threats and opportunities. After his seminal study of managers, Henry Mintzberg (1973, pp. 71-72) concluded that although they have three primary roles (interpersonal, informational and decisional), "it is the informational roles that tie all managerial work together".

The two other primary roles identified by Mintzberg are directly related to information. Managers develop their interpersonal networks not just to influence others but also to gather and disseminate information (Kotter, 1982) while their decisions are inevitably based on information. Information supports different types of managerial decisions, and Mintzberg's typology of decisional roles which is detailed later in this chapter.

Advances in information technologies, growing interdependencies between local, national and regional economies, and tendencies toward greater transparency and accountability have all contributed to the rapid growth of data that is available in the public domain. In addition, organisations are likely to have access to a considerable volume of private information. As a result, a lack of data is declining problem for managers.

Instead, they face growing difficulties in isolating relevant and

important information from a constantly growing set of available data that is largely irrelevant or unnecessary (see Davenport, 1997; Koniger & Janowitz, 1995; Simpson & Prusak, 1995). Managers will have to be increasingly selective in filtering, analysing, and interpreting the information that comes their way. The most acute *information overload* problems are likely to exist at the senior executive or strategic management level of the organisation, as discussed in the next sub-section.

1.4.1 The role of information in strategic management

Strategic management has been defined as "the set of managerial decisions and actions that align an organisation with its external environment and thereby determine its long-run performance" (Hofer & Schendel, 1978). Although the practice of strategic management is usually concentrated at the top of the organisational hierarchy, its scope commonly spans the entire organisation *and* its environment (see Hambrick, 1982; Sutcliffe, 1994) and it tends to involve fairly unstructured and fragmented activities. Faced with a steady stream of emerging issues, senior executives will frequently shift their attention from one concern to another and rarely have the time to consider an issue in a comprehensive manner (see Stewart, 1967; Mintzberg, 1983).

The information to support these activities will be broad in scope, aggregated, forward-looking and externally-oriented. Top managers tend to make aperiodic but complex decisions that will have enormous consequences, in terms of both resource commitments and potential effects. These decisions tend to shape the future of the organisation by addressing effectiveness rather than efficiency issues and prompting a coordinated and integrated set of actions (see Hunger & Wheelen, 1997).

Data collected in the U.S. during the 1970s indicated that senior executives spent up to a quarter of their time monitoring (and interpreting) the external environment (Hambrick, 1981; Kefalas & Schoderbek, 1973). However, as a social phenomenon, the acquisition and use of information about the business environment

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is not likely to be governed by universal or invariant laws nor constrained merely by technical capabilities. Top managers with different backgrounds working in different industries and countries at different periods of time are expected to have different information seeking and processing behaviours.

Socio-economic factors and industry dynamics are known to distinctly shape the business environment (Hunger & Wheelen, 1997). Although managers may face the same external conditions, they are likely to perceive and interpret them in different ways, and take different actions (Starbuck, 1976). Sutcliffe (1994) argues that perceiving environmental information is very a complex process, because different sets of factors influence various environmental dimensions.

The acquisition and use of information by strategic decision makers has been the focus of more than two dozen reported studies since the early 1970s. Although much of this research has been conducted by management scholars, the information systems (IS) discipline has also become interested in this topic (see Ahituv et al., 1998; Davenport, 1997; Maier, Rainer & Snyder, 1997).

Despite this research interest, Boyd & Fulk (1994, pp. 12-13) contend that "little is really known about this critical scanning function, particularly how executives make choices about where and when to seek external information." Such a contention is very difficult to refute in the Chinese business context, because the limited scholarly knowledge on this subject comes from studies conducted in the West. Before looking at what is known about the specific area, it is appropriate to contextualise that review by examining the broader literature on strategic decision making and considering the role of information technology.

1.5 Strategic decision making

Strategic management is a comparatively new and overarching discipline with an intellectual framework that encompasses and seeks to integrate many functional business areas. Although it

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is problematic to define the word *strategic*, strategic decisions and actions may be considered as those that are intended to align the internal capabilities of an organisation with the external demands of its environment (Hax & Majluf, 1988). These capabilities may be considered in terms of relative strengths and weaknesses, while the demands may be seen as opportunities and threats. This gives rise to the S(trengths)-W(eaknesses)-O(pportunities)-T(hreats) framework (Andrews, 1971/1980).

Lorange (1980) identified the *integrative* and *adaptive* responsibilities of top managers. He mentioned that in addition to controlling and co-ordinating internal resources, they have to address external factors and respond to unfolding changes in the environment. Consequently, top managers must look outside their organisations in order to identify threats and opportunities, interpret potential problems, and implement major changes (Eisenhardt & Zbaracki, 1992; Hunger & Wheelen, 1997).

Strategy making (or strategy formulation) may be seen as one of three core elements of strategic management practice, along with strategy implementation and strategy evaluation (Hunger & Wheelen, 1997). Strategies are made or formulated in order to provide the organisation with "a sense of unity, direction and purpose, as well as facilitating the changes induced by its environment" (Hax & Majluf, 1988, p. 101). They can stabilise organisational behaviour and serve as a mediating force between the organisation and its environment (Mintzberg, 1979).

1.5.1 Traditional and emerging views of strategy making
The traditional view of strategy making emphasises the objective evaluation of knowledge as part of a highly rational process (Andrews, 1971/1980; Ansoff, 1965 and 1979). There appears to be an assumption that both the degree of confidence in and commitment to a strategic plan can be enhanced by formulating in a highly objective manner. As a result, the role of a human strategy maker with subjective values and world views has been downplayed and sometimes even ignored.

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Significantly, this traditional view of strategic management (or its predecessor, business policy) is evident in the planning, design, and positioning schools of thought identified by Mintzberg (1990). It accepts that top executives may differ in *how* they formulate a specific strategy, and even in *what* approach they select to interact with the environment. However, those advocating the traditional view have generally assumed that the environment is an objective entity rather than something subject to inherent differences in perception and interpretation.

According to Knights and Morgan (1991), these orthodox models of strategic management became popular because they could be used to explain successes and failures, they could be used to demonstrate managerial rationality, and they facilitated and legitimised the exercise of power. Unfortunately, the realities of strategy making are seldom as simple as these models imply. This has prompted criticism of traditional strategic management models (see Hamel & Prahalad, 1989) and strategic planning in particular (see Mintzberg, 1994).

There is a growing consensus that the nature of the strategy *making* process will depend on many factors, including the objectives, size, structure, culture, and management style of an organisation (see Araujo & Easton, 1996; Eisenhardt & Zbaracki, 1992; Martinsons, 1993). Mintzberg and Waters (1985) proposed a typology consisting of eight different approaches to strategy making, as listed in **Table 1.1**.

Mintzberg and Waters (1985) also found that strategy making, especially in dynamic environments, takes place in a less deliberate and a more emergent fashion than suggested by the traditional views of strategic planning and thinking (e.g. Andrews, 1971; Ansoff, 1965; Porter, 1980). Subsequently, Mintzberg (1990) identified ten different schools of thought on strategy making, each of which may be more or less appropriate, depending on the context.

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Table 1.1

Eight Approaches to Strategy Making

Type	Major features
Planned	Strategies originate in formal plans; precise intentions exist and are backed up by formal controls to ensure surprise-free implementation; strategies (are the) most deliberate
Entrepreneurial	Strategies originate in central vision; intentions exist as personal, unarticulated vision of a single leader, and so (are) adaptable to new opportunities; strategies (are) relatively deliberate but can emerge
Ideological	Strategies originate in shared beliefs; intentions exist as collective vision of all actors, controlled normatively through indoctrination and/or socialisation; strategies (are) rather deliberate
Umbrella	Strategies originate in constraints; leadership, in partial control of organisational boundaries, defines strategic boundaries; strategies partly deliberate, partly emergent and deliberately emergent
Process	Strategies originate in process; leadership controls process aspects of thinking, leaving content aspects to other actors; strategies partly deliberate, partly emergent (and, again, deliberately emergent)
Unconnected	Strategies originate in enclaves; actor(s) loosely coupled to rest of organisation produce(s) patterns in own actions; strategies organisationally emergent whether or not deliberate for actor(s)
Consensus	Strategies originate in consensus; through mutual adjustment, actors converge on patterns that become pervasive; strategies (are) rather emergent
Imposed	Strategies originate in environment; environment dictates patterns in actions either through direct imposition or through implicitly pre-empting or bounding organisational choice; strategies (are the) most emergent, although may be internalised by organisation and made deliberate

Extracted from Mintzberg and Waters (1985).

Given Mintzberg's earlier conclusion that managers are essentially "adaptive information-manipulators who prefer the live, concrete action" (Mintzberg, 1973, p. 33), it is not surprising that he recently argued against the entire practice of rational planning because he contends that it "tends to be

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incompatible with strategy making" (Mintzberg, 1994, p. 240).

Based upon his extensive field research in the United States, Quinn (1980) asserted that strategy making is fundamentally a dynamic learning process, being incremental and iterative in nature. He suggested that new ideas are rarely planned in detail or timetabled. Instead, a blend of formal analysis, behavioural techniques, and power politics leads the top manager toward "ends which initially are broadly conceived, but which are then constantly refined and reshaped as new information appears" (Quinn, 1980, p. 3). However, because it is difficult to disentangle the diachronic and synchronic aspects of this conceptualization, the issue of incommensurability does arise. Not surprisingly, Mintzberg and Waters (1985, p. 269) contended that "(m)ore research is required on the process of strategy formulation to complement the extensive work currently taking place on the content of strategies".

From another perspective, strategies may be refined and reshaped as top managers identify specific issues that require their attention. Efforts may focus on developing a good understanding of the issue as well as the implications of alternative actions that the organisation could take. This is consistent with the previously-presented definition of strategic issues management.

Both the process and issue perspectives suggest that strategy making involves a fairly continual and iterative sequence of cognition and evaluation of and response to signals and messages from both inside and outside the organisation. Indeed, the decisions made and actions taken at the top of an organisation often appear to be sparked by fundamental environmental change. Streams of unpatterned environmental events create uncertainty or equivocality, stimulate information processing, and lead to strategic adaptation (Hambrick, 1981, 1982; Culnan, 1983).

Recently reported studies (see Hulland & Kleinmutz, 1994; Rediker et al., 1993; Smith, 1992) further indicate that managers use

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various combinations of *analytic* (interactive decision-making, quantitative data collection, systematic scanning, comprehensive data integration) and *intuitive* (top-down decision-making, idea collection, ad-hoc scanning, piecemeal integration of data into planning) decision making approaches. As a result, it seems appropriate to supplement the rational-analytic view of strategy making with a subjective-intuitive conception that recognises the individual strategy maker as a centre-stage actor. The two views are contrasted in **Figure 1.2**.

Figure 1.2

Rational-analytic view

Subjective-intuitive view

Thinner lines represent potential feedback looping
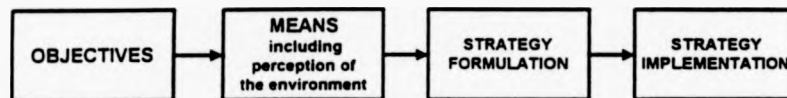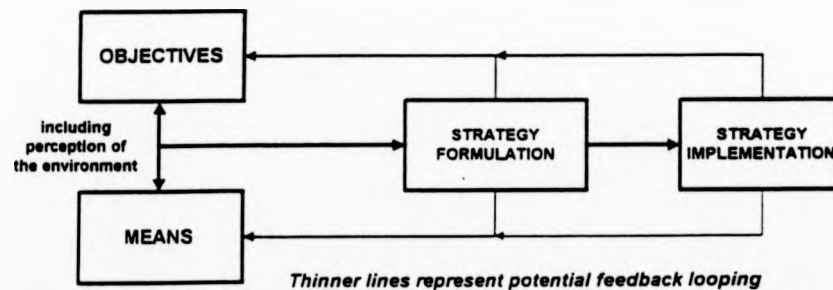
The subjective-intuitive view focuses on the interplay between objective factors and the subjective perceptions and values of strategy makers. It implies that a thorough understanding of the strategy making process is contingent on accounting for the cognitions, perceptions, beliefs, attitudes and resulting behaviours of the strategy maker.

In this view, the actions that an organisation takes in

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responding to its environment are more likely to depend on top management's subjective perceptions of the environment rather than on the rational analysis of objective indicators. Rumours, opinions and anecdotes may play a role alongside facts, statistics and news reports, and even the latter set may be subject to varied interpretation. Thus, a strategic choice is likely to depend greatly on the cognitive map(s) of reality held by those involved in the process.

Related to this, the rational view of decision making, as it has been applied in classical economics, has fallen out of favour in the contemporary organisational and management literature. There is a growing acknowledgment that the process is unavoidably limited by the information processing capacities of decision makers. The bounded rationality of managers (Simon, 1960) implies that they will attempt to *interpret* a complex environment and create a simplified mental model of it. Large volumes and steady streams of information lead to the creation and refinement of these models (see Johnson-Laird, 1973). Decisions are then made in terms of behavioural alternatives within a mental model.

1.6 Models of decision making

Decades ago, Herbert Simon (1960) proposed a decision making model that initially consisted of three stages - intelligence, design and choice - and was later modified to include a fourth stage - implementation. The interest here is squarely on the first stage of the model, where a decision maker gathers information about the environment, either intermittently or continuously, in order to identify and define the problem.

The applicability of this model to strategic management was confirmed by the work of Mintzberg, Raisinghani and Theoret (1976). Based upon their analysis of 25 strategic decision processes, they discerned three process phases. Problems or opportunities were recognised in an *identification phase*; alternative responses to those problems or opportunities were elaborated in a *development phase*; and a decision among those

alternatives was made in the *selection phase*. This is detailed in **Table 1.3**. Significantly, information is sought out and used during each phase, not just at the beginning or in a subset of activities.

Table 1.3

The Role of Information in Different Decision Phases

Decision Phase	Decision Routine	Role of Information
1 Identification	Recognise	To recognise the need for decision making.
		To recognise the situation as an opportunity, problem or crisis.
	Diagnose	To understand causes.
		To determine cause-effect relationships.
2 Development	Search	To search for ready-made or memorised solutions.
		To directly seek out alternatives.
	Design	To modify or custom- design a solution.
3 Selection	Screen	To eliminate infeasible or inappropriate alternatives.
	Evaluate/Choose	To choose an alternative by analysis, judgment, or bargaining.
	Authorise	To justify or explain the choice.

Extracted from Mintzberg et al. (1976).

Mintzberg and his colleagues (1976) identified three information routines: *exploration*, which involves the general scanning of information in order to recognise decision situations and build

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conceptual models; *investigation*, which involves the collection and analysis of specific information for problem diagnosis and the evaluation of alternatives; and *dissemination*, to let others know how the decision process is progressing.

Shrivastava and Grant (1985) acknowledged that these three phases and routines described the essential character of many strategic decisions, but they claimed that such a model failed to "distinguish the critical variations in the processes followed by different organisations" (p. 98). They went on to identify four prototypical patterns or models of strategic decision making. These were identified as: managerial autocracy, systemic bureaucracy, adaptive planning, and political expediency.

In the *managerial autocracy* model, "a single key manager was the primary decision making agent. The entire decision process revolved around his preferences and actions" (Shrivastava & Grant, 1985, p. 103). Very few competing views of the problem or alternative solutions were generated because the key manager's perceptions of the problem or situation were adopted uncritically by other members in the organisation. In the *systemic bureaucracy model*, the activities, information flows and interactions that made up the strategic decision-making process were determined largely by well-established organisational systems and clearly-defined rules.

Meanwhile, in an *adaptive planning model*, a long-range plan was formulated by a professional planning staff or senior managers, but it was modified to accommodate changed organisational and environmental conditions. Finally, with a *political expediency model*, coalitions of decision-makers within an organisation promoted their respective perspective of the problem as well as their proposed solution(s) as the only legitimate and accurate view. Conflicts were resolved through negotiations and choices made through committee decisions.

More recently, Lord and Maher (1990) proposed a taxonomy which

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includes four different models of decision making: rational, limited capacity, expert, and cybernetic. Each provides a substantially different explanation of how people process information. As shown in **Table 1.2**, each also implies a unique combination of information requirements, choice process, perceptual requirements as well as type and timing of process.

Table 1.2

Comparison of Four Decision-Making Models

Features	Rational	Limited Capacity	Expert	Cybernetic
Information requirements	Knowledge of expectancies and utilities for many alternatives	Knowledge of expectancies and utilities for a few alternatives	Highly selective use of schema-relevant information	Selective use of current data along with recall and evaluation of past actions
Choice process	Optimization by maximizing expected utility; evaluation of all alternatives	Simplification by heuristic evaluation procedures and termination when a satisfactory alternative is found	Recognition of good alternatives through automatic matching with information in long-term memory	Feedback-guided use of recognition and heuristic procedures
Perceptual requirements	Accurate perceptions of the environment based on surface features	Accurate perceptions of a limited environment based on surface features	Accurate perceptions of a limited environment based on meaning	Accurate perceptions of a limited environment and ability to shift perspectives over time
Type of process	Controlled, serial, analytic	Controlled or automatic use of heuristics; serial	Automatic, parallel	Learning, controlled automatic; serial
Timing of process	Prior to choice or behaviour	Prior to choice or behaviour	Prior or concurrent with choice or behaviour	Intermixed with choice or behaviour

Extracted from Lord and Maher (1990).

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Rational models assume that all relevant information is thoroughly processed in order to maximise a relevant outcome. In contrast, *limited capacity models* suggest that people process limited amounts of information in order to generate adequate but not optimal behaviours. Rather than assuming exhaustive processing, these models imply that processing will make use of heuristics or rules of thumb and continue until an acceptable alternative is identified.

Expert models assume that within a specific content domain, people make use of mental knowledge structures, or cognitive maps, that they have previously developed in order to help them process information. As Isenberg (1984) has found, experts are much better at recognizing meaningful patterns, and are also able to identify a set of effective solution heuristics, or rules of thumb, much faster than novices. As a result, they can quickly decide whether a situation is similar to one they have encountered before, comprehend familiar aspects of an event, and "often recognize immediately what novices require great effort to discover" (Lord & Maher, 1990, p. 14).

Like their rational counterparts, *cybernetic models* may be optimised in the long run, but result from "learning and adaptation, rather than by sophisticated processing before (either) choice or behaviour" (p. 15). Indeed, Hogarth (1981) has argued that such a dynamic perspective provides an alternative definition of rationality, based on *evolutionary adaptation* rather than *stable optimisation* procedures. The best way to solve a problem changes over time, and so it is important to understand how the problem and the context may have changed.

These cybernetic models are less effective when feedback is slow or if the courses of action pursued are costly to reverse (Steinbrunner, 1974). They are more appropriate for applications that "require accurate, fast and frequent feedback" (Lord & Maher, 1990, p. 16). "Cybernetic models would be applied over time through interaction with the context of interest.

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Experimentation would substitute for extensive prior knowledge or complex analysis" (ibid, p. 18).

Lord and Maher (1990) acknowledge that industrial/organisational psychologists and management researchers have implicitly adopted either the rational or limited capacity models of information processing. However, they suggest that the expert or cybernetic models may be more consistent with observed behaviour (ibid, p. 10). As a result, this taxonomy of decision making models would appear to be a useful analytic tool for studying how information is acquired and used at the strategic management level.

1.6.1 Strategic issue diagnosis

Meanwhile, Jane Dutton and her colleagues responded to a call for more sophisticated process-oriented treatments of strategy formulation (see Hofer & Schendel, 1978) by proposing the idea of *strategic issue diagnosis*. Dutton, Fahay and Narayanan (1983) introduced this term to represent the triggering and interpretation of strategic issues, which are emerging developments, trends or events that have the potential to significantly affect organisational performance (Ansoff, 1980; King, 1982). The diagnosis of these issues is seen as "primarily an individual cognitive process that is particularly important for managers in the 'upper echelons' of management" (Dutton, 1993, p. 341).

Since a strategic issue does not *arrive* in a nice, pre-packaged format, Dutton and Duncan (1987) model its diagnosis as an iterative and cyclical process that involves two major phases - activation and interpretation. The diagnosis process is activated when the top manager *recognises* an emerging development, trend or event that is potentially relevant to his or her organisation's strategy. Some organisations have created formal systems that put these issues on the strategic management agenda (King, 1982). In other organisations, strategic issues surface as a result of more intuitive and informal mechanisms that Mintzberg et al. (1976) labelled as *action thresholds*.

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Once the strategic issue has been recognised, the top manager will endeavour to *understand* or *interpret* it. According to Dutton and Duncan (1987, p. 283-286), he or she will engage in attempts to interpret two aspects of the issue - its *urgency* and its *feasibility*. Issue urgency refers to the perceived time pressure to take action as well as the perceived cost of not taking action with respect to the issue (Miller, 1982). Meanwhile, issue feasibility includes two sub-dimensions - 1) *perceived understanding* - the degree to which the means for resolving the issue are understood, and 2) *perceived capability* - the degree to which the means for resolving the issue are available and accessible.

Both anecdotal reports and personal experience suggest that such orderly representations of stages or phases belie the chaotic nature of managerial decision making. These simple models also fail to account for the social and political contexts in which even autocratic decision-makers tend to operate. However, the Dutton and Duncan (1987) model is useful because it highlights the difference between the information (and sources) that prompt initial recognition of a strategic issue and other information (and sources) are used later to understand or interpret that same issue.

Isenberg (1984) provides another perspective on how top managers address strategic issues and make decisions. He contended that "it is hard to pinpoint if or when they (senior managers) make decisions about major issues on their own" (p. 88) and subsequently concluded that top managers "frequently bypass rigorous analytical planning altogether, particularly when they face difficult, novel or extremely entangled problems" (p. 90). Their reliance on intuition and inspiration may be attributed to a common self-perception that they are a visionary `guiding light' and/or 'dynamic brain' for their organisation.

In reviewing the literature on strategic decision making, Eisenhardt and Zbaracki (1992, p. 18) conclude that "it is clear

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that people are rational, but only boundedly so, that power wins battles of choice, and that chance affects the course of strategic decision making. It is also clear that a synthesis of bounded rationality and political perspectives provides a compelling description of strategic decision making." They add that strategic decision makers "satisfice rather than optimise, rarely engage in (a) comprehensive search, and often discover their goals in the process of searching" (ibid, p. 22). Following from this and the work of Rohrbaugh (1979; 1983), it would seem that the effectiveness of decisions at the strategic management level, however they are made, will depend greatly on timely, reliable and relevant information about the environment.

1.6.2 Managerial decision roles

Mintzberg (1973) proposed a model of the managerial *use of information* that includes information acquired from the external environment. In his conceptualisation, the interpersonal roles of the manager provide access and exposure to information from an assortment of both external and internal information sources. The manager in the informational role of *monitor* "continually seeks and receives information from a variety of sources in order to develop a thorough understanding of the organisation and its environment" (Mintzberg, 1973, p. 97).

This access to information combined with positional authority enables a manager to perform four decisional roles. As an *entrepreneur*, the manager initiates improvement projects such as new lines of business or joint ventures that exploit an opportunity or solve a problem. As a *resource allocator*, the manager controls the distribution of all forms of organisational resources through, for example, budget allocation and setting of targets. As *disturbance handler*, the manager deals with unexpected but important events. Finally, as *negotiator*, the manager engages in major negotiations with other organisations or individuals.

Information about environmental conditions, developments and

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trends is likely to be useful for each of the four decisional roles. As discussed in the next section, the acquisition of such information has been the object of both prescriptive and descriptive writing.

1.7 Strategic intelligence systems

As the external business environment becomes more dynamic, complex and turbulent, it becomes more difficult to forecast the outcomes of specific actions or events based on expected probabilities. Inaccurate, incomplete or outdated information also becomes more likely (Eisenhardt, 1989). Shifting sets of competitors, technologies, and business rules make it more difficult to plan fruitful actions or imitate the success of others, and easier to make strategic mistakes or miss strategic windows of opportunity. While quick reactions and frequent adaptations to change can lead to dysfunctional and even hysterical behaviour, their absence at appropriate times can also impair the long-term performance of an organisation.

Following from this, the failure to monitor and act upon information about the external business environment in an effective manner can constitute a large bottleneck to organisational health and development. Morgan (1992) makes the analogy to the visual system of a fly, which provides a comprehensive and sensitive view of its surroundings. He contends that the success of an organisation will depend largely on its early detection of subtle changes that are reshaping its environment as well as its ability to cope with emerging threats and opportunities. This suggests that the ability to perceive and response to weak and early environmental signals can provide an information-based competitive advantage.

A specific focus on intelligence gathering may also demonstrate an organisation's scope of interest to external parties. For example, Murphy (1989) suggests that it could be used to pre-empt unwanted competition, and signal the importance of a particular technology to potential suppliers or the importance of their

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patronage to targeted customers.

However, comprehensive information gathering is far from universal ideal. For example, Donald Schön (1983) noted that the only way to know about an event with certainty is to rely upon one (and only one) informant - possibly oneself at the risk of self-delusion. This is consistent with the expert type of decision making (Lord & Maher, 1990) and also favours bounded rationality, so that decision makers are not overwhelmed by excessive information (see Simon, 1960).

1.7.1 Intelligence system prescriptions

Despite Schön's perspective, the massive amount of available external data and the growing complexity of strategic decisions have prompted calls to formalise and systematise business intelligence activities. Formal scanning systems were advocated in seminal works on corporate strategy (Ansoff, 1965) and competitive strategy (Porter, 1980). In fact, Porter (1980) asserted that an organised mechanism to facilitate sophisticated competitor analysis is needed and even diagrammed a systems framework for competitor intelligence (p. 73).

Anne Huff (1979) proposed a 'strategic intelligence system' (SIS) that would provide a continual stream of intelligence to top-level decision makers. She defines this intelligence as information that is refined through integration, evaluation, and selective reporting. "Most intelligence production involves collecting and correlating large quantities of small details to answer questions raised by strategic choices" (Huff, 1979, p. 188). She specified the following areas of SIS design:
- identifying and planning the intelligence effort,
- deciding what information to collect, and collecting it,
- integrating and analysing the information, and
- reporting and disseminating the resulting intelligence.

At the front end, *questioning procedures* would be used to identify both the information that is needed and *the* collection

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procedures to be used. The author built upon this design to outline a prescriptive framework for managing strategic intelligence (Martinsons, 1994). This outline responded to an growing need for a more informed understanding of managerial processes (and an implied interest to make the behaviour of managers more predictable for IS designers).

In this regard, Davenport (1993) suggested that organisations be considered in terms of both *operational* processes, that result in products or services valued by external or internal customers, and *managerial* processes that plan and control the business operations. He argued that while managerial processes typically consume a major proportion of organisational resources, they rarely deliver explicit outputs, and remain poorly understood.

Davenport (1993) insisted that there was little agreement on what constitutes a successful managerial outcome or, in fact how an outcome can be measured. He has argued "for a greater degree of structure in managerial work" (p. 275), even though he recognised that the creative and intuitive nature of these processes will make them the most difficult to document and redesign (p. 303). This difficulty is expected to be most acute for the upper echelons of management.

Nevertheless, based on an implicit need to make efficient and effective use of available resources, top managers may be encouraged to be "thoughtfully selective" in their data collection and information usage. Unnecessary data and confusing information can lead to not only wasted resources, but also to paralysis by analysis, poor decisions, and general frustration.

In order to avoid such a waste of resources, prescriptions based on sound theory or empirical studies would be helpful. This was the author's intention when he identified the following characteristics of a successful intelligence effort: clear objectives, the active involvement of both managers and those interfacing with the environment, the use of both personal and

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informal sources, and well-defined scope boundaries (Martinsons, 1994). Earlier, peer networking, incentives for instituting a strong 'sense and report' culture, and formal reliance on designated corporate monitors were listed as important factors (Lenz & Engeldow, 1986). Subsequent research may be expected to refine current models and frameworks, improve our understanding of how strategic intelligence should and can be *managed*, and enable better prescriptive advice for practitioners.

However, it must be noted that Waterman (1988) argued against sophisticated prescriptions in this area because:

- competitors are not easy to identify;
- business is not necessarily a zero-sum game, firms may compete fiercely at one level even as they help each other at another level; and
- managers of competing firms are human rather than dumb or superhuman, and so their behaviour is difficult to predict.

More generally, the dynamic nature of competition raises serious questions about the value of static models. Even if flexible models could be designed and implemented, the existence of a well-defined approach to strategy making, if not actually strategic planning, would still remain a prerequisite for the effective use of a formalised environmental scanning system.

Nevertheless, a better understanding of top managers and their activities, and specifically how they collect data and process information, would enable beneficial redesigns of managerial work and the development of appropriate information systems. In selective cases, radical process innovation or business process re-engineering (BPR) using IT as an enabler may be appropriate to dramatically improve key measures of business performance. Even where such re-engineering proves to be overly ambitious, top management performance could be improved through the application of computer-based information systems (CBIS).

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1.7.2 Intelligence systems design

As technological advances and business conditions increase the incentives for applying IT to the work of top managers (see Gray, 1993; Watson et al., 1991), a new type of CBIS has emerged. Rockart and Treacy (1982) coined the term "executive information systems" (EIS) to describe them. An EIS can be considered as a tool for internal monitoring and communication as well as environmental scanning and decision-making. Leidner and Elam (1993) found that an EIS can increase the speed of problem identification, the speed of the decision-making process and the extent of decision-making analysis.

Nevertheless, Galliers (1991) cautions that a well-defined objective and quality design are necessary but certainly not sufficient conditions for the success of such a system. The intrinsic interest and involvement of top managers as well as their understanding of IT are among the key success factors for a strategic-level information system. Of course, the implementation of such a system also raises the issues of subversion and avoidance by those entering or processing data that will be used by management decision-makers.

King (1978) was among the first to comment on the difficulties in developing CBIS to meet the information needs of senior executives. He noted that because those needs are contingent on how the business environment is perceived, the system must be flexible enough to accommodate uncertainty rather than being based on habit or stable patterns. In contrast, traditional management information systems (MIS) provide pre-specified information at pre-specified intervals. Even decision-support systems (DSS) largely serve lower-level managers and staff professionals who deal with more narrow and structured problems.

Not surprisingly, the successful development of intelligence systems for top managers continues to be problematic (Kahaner, 1996; McGonagle & Vella, 1996). Although the systematic monitoring, analysis and prediction of the environment has been

commonly prescribed (see Huff, 1979; Martinsons, 1994), there are significant differences in the intelligence 'systems' of individual firms. These differences may be attributed to several factors, including: the perceived complexity and turbulence of the environment; the culture and resources of the organisation; and the philosophies and styles of individual managers.

Since an IS may be formal or informal, standardised or ad-hoc, structured or subjective, its design should fit the implementation context (see Angell & Smithson, 1991; King, 1978; Tricker, 1993). Some managers may receive intelligence as a by-product of other data consolidation efforts, others may have identified key indicators that they want to monitor, and still others may have requested specific information. Even the last approach has its shortcomings, since it reflects what managers want rather than what might help them. The two may be quite different.

Consequently, a good understanding of both the perceived business environment and the end-user(s) appears to be a prerequisite for developing an effective intelligence system. For example, it is unlikely that an intelligence system created for the chief executive of a public listed company in London will be suitable for a family business patriarch in Hong Kong.

A key issue in designing an EIS is determining top management's information requirements. Although this step is part of the development process for most types of information systems, the task is more complex and subjective for an EIS (see Watson et al., 1991). It may be possible to support many of the information needs that strategic-level managers have with these so-called executive information systems (EIS). However, with organisations being thrust from relatively stable and simple environments to more turbulent and complex ones (see D'Aveni, 1994), such a possibility requires an understanding of how top managers will act in a variety of circumstances.

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1.7.3 Intelligence systems in action

Sophisticated enterprise-wide intelligence systems are now known to exist in many Japanese and Western firms. For example, Mitsubishi has more than 13,000 employees in its 200 overseas offices, and they collect more than 30,000 pieces of business and competitive information *each day*. This data is filtered, analysed, and interpreted. The resulting intelligence is disseminated to all the member companies in the Mitsubishi *keiretsu* (business group).

Studies reported by Keegan (1973), Kennedy (1984), Preble et al. (1988), and Subramanian et al. (1993) indicate that U.S.-based multinational corporations have also stepped up their environmental analysis efforts since the 1970s. Many of them institutionalised global environmental scanning functions after the Iranian revolution of 1979-1980, and their intelligence activities have become progressively more sophisticated since that time. For example, El Sawy and Pauchant (1988) found that growing numbers of U.S. firms were using strategic planning (perhaps more correctly *strategy making*) methods that relied heavily on intensive intelligence gathering. Many of these firms continuously monitored the environment for discrete signals and evidence of trends that could affect their business while searching for information related to specific strategic issues.

Meanwhile, a professional group, the Society of Competitor Intelligence Professionals, was established in 1986. Since then, it has grown steadily from its U.S. base to over 3,000 members by 1995 and affiliates in many parts of the world (Kahaner, 1996). This society reports that nearly 20 per cent of larger companies now have a full-scale, formalised intelligence system while the figure for smaller firms is approaching 10 percent (quoted in Kahaner, 1996, p. 23).

Despite the emergence of an international society of intelligence professionals, there continue to be significant differences in prevailing practices. For example, Kahaner (1996, p. 35) has

suggested that American and Japanese firms differ in terms of their environmental scanning emphasis. The Japanese tend to focus on technical developments and the technological prowess of competitors while their American counterparts concentrate on monitoring economic factors as well as the financial health of key competitors. These types of differences suggest a need to understand the practice of environmental scanning in a variety of contexts, and the reasons behind observed differences.

1.8 Chapter Summary and a Look Ahead

This chapter has introduced the phenomenon of strategic intelligence and considered its role in strategic management. Several models and typologies relevant to strategic decision making were introduced before the current and potential use of strategic intelligence systems was considered. A well-established body of literature has traced the evolution of environmental scanning in U.S.-based firms and examined specific aspects of this topic. In addition, anecdotal accounts indicate that intelligence gathering is a core business activity in Japan.

In contrast, very little is known about the use of intelligence systems or even the strategic management activities of Chinese businesses (notable exceptions include Redding, 1990; Tricker, 1994; Warrington, 1982; Westwood, 1997). The author perceived this as a significant gap in the management literature and was keen to observe, describe, and explain how information about the external business environment was acquired and used by ethnic Chinese chief executives. As mentioned earlier, pre-handover Hong Kong represented an attractive context for such an investigation.

Before the methods and results of the study are reported in Chapters 4 through 6, the concepts and literature relevant to both the focal phenomenon, are reviewed in Chapter 2, and the key contextual factors in Hong Kong are discussed in Chapter 3.

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CHAPTER 2
STRATEGIC INTELLIGENCE: CONCEPTS AND STUDIES

As defined in Chapter 1, strategic intelligence is information about the external environment that is used in strategic management. The opening chapter discussed the nature of strategic decision making and considered the role of information in that process. It was argued that information is a key resource for the modern organisation and that assorted forms of strategic intelligence systems, which commonly employ IT, can support strategic decision making.

This chapter builds upon that general discussion by reviewing the theoretical and empirical literature related to environmental scanning. First, the relationship between the organisation and its external environment is discussed. Then, the theme of acquiring and using information in response to environmental uncertainty is developed, with the attributes and sources of that information being considered in detail. A literature review leads to the development of a model that underpinned the Hong Kong-based study which is the subject of this dissertation.

2.1 Organisations and environments

The discipline of strategic management has been a relative newcomer in terms of studying the relationship between the organisation and its environment. This topic has been a major focus of study in organisation theory (OT) for at least half a century. Significantly, the primary focus and unit of analysis for organisational theorists has been the organisation whereas strategic management scholars have paid comparatively more attention to the cognitions and actions of individual managers.

In the past, an organisation was commonly theorised to be like a fortress, with distinct limits to its domains of activity and influence (see Aguilar, 1967; Duncan, 1972). The effectiveness of an organisation was seen to depend largely on its ability to insulate its operations from the outside world, and thereby

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concentrate on improving its internal form and function. Organisations were counted upon not only to produce the goods and services needed by society, but also to preserve and protect the structures and values that underpinned it. It was also commonly believed that organisations, especially larger ones, controlled their own destinies. Following from this, many of the pioneering organisational studies adopted a *closed systems* perspective.

The representation of an organisation as a stable and clearly bounded entity, consisting of a collection of people and having a set of statutory property rights, has become a relic of a bygone era. Few contemporary organisations can be realistically considered as either static or circumscribed by well-defined boundaries. Instead, the free movement of materials, energy, information and even people between the organisation and its environment is common. Meanwhile, the organisation itself tends to evolve continually as part of a larger ecological system.

As a result, organisations may be seen as complex and open systems that share many features with biological systems (Morgan, 1986). Based on a view that organisations interact constantly with their external environment, and are intertwined with it, organisational studies now tend to adopt an *open systems* perspective. Nevertheless, the appropriate application of systems thinking to organisational analysis remains subject to debate (see Checkland, 1994; Galliers et al., 1997).

While the traditional view of strategic management stressed the importance of analysing the external environment as part of a planning process, organisational theorists were busy developing contingency theories that linked the effectiveness of a particular organisational form to the nature of its environmental context (see Aldrich & Mindlin, 1979; Araujo & Easton, 1996). Consequently, managers have been encouraged to learn about and adapt to an ever-changing environment (Nonaka, 1991). Organisational performance may thus depend on the ability to process information about the external environment and make

appropriate responses.

The external environment has been viewed as not only a source of resources and ecological variation, but also as a source of information (see Aldrich & Mindlin, 1978; Downey, Hellreigel & Slocum, 1975; Duncan, 1972; Pfeffer & Salancik, 1978). Dill (1958) was among the first to treat the environment as a source of information for the organisation and its managers. He suggested that the assortment of people, objects and other organisations in the external environment emit a continuous stream of signals and messages. These signals and messages may be strong or weak (difficult to detect), clear or confusing (difficult to analyse or interpret), factual or erroneous (not indicative of an actual change).

Arrow (1964) proposed a theory of information and control whereby these external signals and messages could prompt modifications in managerial perceptions and lead to changes in organisational structures, systems and processes. Organisational decisions and actions would thus follow from the analysis and interpretation of these signals and messages. They can also lead to the generation and transmission of additional signals and messages. Such an *information processing* perspective assumes that information not only motivates managerial thinking and problem-solving, but is also an input *and* output in the process.

2.1.1 Information processing perspectives
Two distinctive orientations appear to exist within the information processing perspective (Choo, 1994). The first considers an organisation to be a rational decision making system (Cyert & March, 1963/1992). The bounded rationality and similar cognitive limitations of managers were mentioned in Chapter 1. This leads them to construct simple models of the real world, and then pursue a course of action that *satisfices*, or is perceived as "good enough" (Simon, 1976). As a result, the task of organising is to design an environment that promotes rational behaviour. The structure of an organisation tends to control the

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premises upon which decisions are made, rather than controlling the actual decisions (Simon, 1976, p. 223).

Organisations first set their goals, then search for alternative ways to achieve them, and finally select a course of action. With this orientation, information serves to reduce or avoid uncertainty. It may also be perceived as an energy or a force that both stimulates and is stimulated by management activity (see Arrow, 1964). A manager recognising a problem would search for information in order to first understand the problem, and then to solve it. The search for information thus continues until a solution is found or a decision is made.

A second orientation within the information processing perspective considers the organisation to be a loosely-coupled social system. Individuals create or *enact* the environment to which an organisation then adapts (Weick, 1979; Weick & Daft, 1983). Following from this, organisations are designed to promote a shared understanding of the environment and to facilitate actions on the basis of this shared understanding. From this orientation, actions may even precede goal-setting, and then be interpreted afterwards.

With this orientation, information seeking aims to reduce or resolve equivocality. Managers will search for information about the external environment in order to enact an environment, and then attend to that enacted environment. Daft and Weick (1984, p. 286) suggest that managers "wade into the ocean of events that surround the organisation and actively try to make sense of them." Organisational participants selectively attend to and act upon these events. Organisations will vary in terms of how much they actively search for information about their external environment, but they will follow a general pattern of scanning, interpretation, and learning (Daft & Weick, 1984; Huff, 1979).

Much of the existing OT literature identifies the decision making and interpretation orientations as rivals. However, they could

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complement each other in terms of understanding how managers seek out and use information (see Choo, 1991; March, 1988). A rational and systematic decision making process may be more appropriate for solving problems if the circumstances permit the issues to be clearly identified. In contrast, enactment and interpretation may be more useful when either the issues or the available information are ambiguous.

The information processing perspective has given rise to an emerging stream of research that has tried to examine how managers in an organisational context acquire and use information about the external environment. This research stream has been characterised by a diversity of theoretical and empirical approaches. According to Dess and Rasheed (1991, p. 701), this could be "a strength in the sense that different perspectives provide alternative and richer insights than would have been possible if a uniform perspective had been adopted, but an extreme degree of theoretical and empirical diversity can also hinder the development of cumulative theory and research".

The sections that follow review this *environmental scanning literature,* and focus specifically on the following aspects: the characteristics of the external environment; the acquisition by managers of information about the external environment; and the characteristics and sources of information. Constructs from this body of literature along with some of the more general concepts considered in Chapter 1 were incorporated into a model that could guide the design of an empirical research study.

2.2 The external environment

Starbuck (1976, p. 1069) contends that reality is distorted by assuming that "organizations can be sharply distinguished from their environments". Nevertheless, the environment may be most simply conceived of including all the entities and factors outside of the organisation that could affect its performance or even its survival. Duncan (1972, p. 314) defined *the environment* as "the totality of physical and social factors that are taken

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directly into consideration in the decision-making behaviour of individuals inside the organisation." His research instrument implied five distinct environmental *sectors*: customers, suppliers, competitors, socio-political considerations, and technological considerations.

Subsequent researchers have also found it helpful to sub-divide the external environment. Dill (1958) distinguished between an inner and an outer context while Bourgeois (1980) and Daft et al. (1988) were among others conceptualising an environment with two layers. An inner *task or industry layer* closest to the organisation typically includes sectors that have *direct* transactions with the organisation, such as competitors, customers, and resource suppliers. As shown in **Figure 2.1**, this inner layer closely resembles the competitive forces model developed by Porter (1980) while an outer *general or remote layer* includes sectors that only affect the enterprise indirectly.

Figure 2.1

**A Two Layer, Six Sector Framework
of the External Environment**

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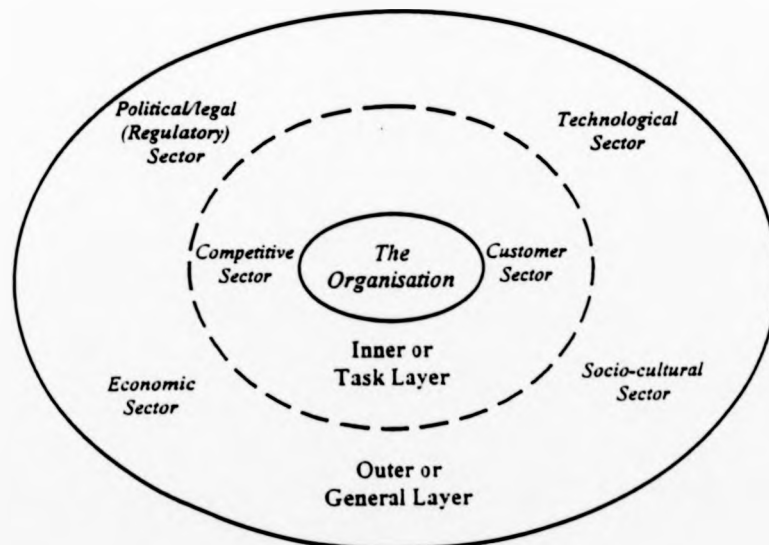
An early conceptualisation of the outer layer or *macroenvironment* appears in the PEST model developed by Kenneth Andrews (1971) and his colleagues at the Harvard Business School. This model divides the outer layer of the environment into the political, economic, socio-cultural, and technological sectors. This model, has been widely used in the strategic management literature. For example, Fahey and Narayanan (1986) distinguished between a micro environment that comprised the social, economic, political, and technological sectors, and a task/industry environment that included the customer and competitor sectors.

Empirical studies such as Daft et al. (1988), Sawyerr (1993) and Auster & Choo (1993) have also employed a two layer framework of the environment, with two or three task sectors (customers, competitive, and resource suppliers) and four general sectors: economic, political/legal (regulatory), technological and socio-cultural. For example, Daft et al. (1988, pp. 137-138) defined six sectors in the external business environment as follows:

> **Customer sector** refers to those companies or individuals that purchase the products made by the respondent's firm, and includes companies that acquire the products for resale, as well as final customers.
>
> **Competition sector** includes rival companies, products, and competitive tactics: companies that make substitute products; products that compete with the respondent firm's products; and competitive actions between the respondent's firm and other companies in the same industry.
>
> **Technological sector** includes the development of new production and service techniques and methods, innovation in materials and products, and trends in research and science.
>
> **Regulatory sector** includes national, regional or local legislation and regulations, community policies, and political developments at all levels of government.

Economic sector includes factors such as stock markets, rate of inflation, trade balances, public sector budgets, interest rates, unemployment, and economic growth rates.

Socio-cultural sector comprises social values in the general population, the work ethic, and demographic trends such as an increasing number of women in the work force.

Although a static representation of the environment prevails in the literature, Bourgeois (1980) implies that the sectors included each of the two layers would vary across firms, industries, and countries. For example, technology could be part of the task environment for a computer manufacturing firm but not for a retailer. Meanwhile, the regulatory sector may be part of the task environment for both electric utilities and banks, because of their frequent interactions with government agencies, but constitute part of the remote layer for other service organisations. A study covering more than one industry could examine such a contingent perspective of the environment.

2.2.1 Environmental uncertainty

No single approach to conceptualising or measuring the environment has been generally accepted (see Sharfman & Dean, 1991; Dess & Rasheed, 1991). Assorted variables, many with overlapping operationalisations, have been introduced to represent different salient characteristics of the environment. This has made it difficult to compare results across studies. Nevertheless, there is a long-established consensus (see Cyert & March, 1963/1992; Thompson, 1967; Weick, 1969) that making sense of the environment is a fundamental task of the manager.

Related to this, a commonly investigated environmental variable is uncertainty. It can arise from a lack of information about a given situation or the inability to predict accurately either future environmental conditions or the outcomes of specific organisational choices (see Cyert & March, 1963; Duncan, 1972). Under ideal conditions, an organisation is able to obtain all the inputs it requires when it requires them. In addition, it is

able to predict the demand for its outputs. However, anything less than perfect dependability for either its supply of resources or its forecasted demand for outputs would create environmental uncertainty.

Environmental uncertainty can be considered in terms of objective and perceptual measures. There has been some debate about the extent to which the environmental uncertainty perceived by managers is the result of the absolute conditions or those perceived by an individual (see Bourgeois, 1980; Starbuck, 1976), but the latter perspective now appears to be generally accepted.

Weick (1969) was among the first to argue that there is no such thing as an objective environment; it results from the parts of the external information flow that are "enacted" through attention and belief. Churchman (1971) and others have concurred with this view, suggesting that different people would be unlikely to interpret a given situation in the same way, because they have different beliefs and values. Duncan (1972, p. 325) also contended that the characteristics of organisational environments are "dependent on the perceptions of the organisational members and thus vary in their incidence to the extent that individuals differ in their perceptions".

Milliken (1987, p. 136) built upon this work in order to define environmental uncertainty as "an individual's perceived inability to predict (an organisation's environment) accurately" due to a "lack of information about specific actors and events" or "an inability to discriminate between relevant and irrelevant data". She went on to identify three types of environmental uncertainty: effect, response, and state.

Effect uncertainty is an inability to predict the effect of future environmental conditions on the organisation. *Response* uncertainty is an inability to predict the likely consequences of a given organisational action. *State* uncertainty occurs when observers perceive that the environment itself is unpredictable.

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This third type of uncertainty may be due to specific characteristics of the environment and/or the observer. It arises from an inability to understand the relationships between components of the environment *or* an inability to predict changes in those components. Milliken (1987) acknowledged that the importance of perception makes it appropriate to think of state uncertainty as *perceived environmental uncertainty*.

2.3 Managerial responses to environmental uncertainty

When the *same* environmental attributes are perceived *differently* by decision-makers, their responses will also differ. In their study of top executives in a dozen leading U.S. corporations, Donaldson and Lorsch (1983, p. 79) observed that "Among the corporate managers in each of the companies we found a distinctive system of beliefs. These interrelated beliefs act as a filter through which management perceives the realities facing it as a firm." Earlier, Dill (1958, p. 443) identified the cognitions of organisational participants as an intervening link between environmental 'stimuli' and overt 'responses'.

Daft and Weick (1984, p. 293) explained that

> "one of the widely held tenets in organizational theory is that the external environment will influence organisation structure and design ... But that relationship can be manifested only if participants within the organisation sense and interpret the environment and respond to it. Almost all outcomes in terms of organisation structure and design ... depend on the interpretation of problems or opportunities by key decision makers."

Related to this, March (1988) distinguished two ways of choosing among alternatives. With *rational calculation*, the decision maker must collect relevant information in order to evaluate and choose among alternatives in terms of their expected consequences according to his or her own preferences. Rational calculation may be contrasted with *learning from experience*, where decision

makers choose among alternatives based upon rules developed over time. Guidance for future actions is sought by looking towards the past. With this approach, much of the information should exist in a confined space, either in the decision maker's own mind, if he or she has been in a similar situation before, or else with someone else who has the appropriate experience.

The two perspectives articulated by March (1988) may be seen as a subset of the four model taxonomy presented by Lord and Maher (1990) and discussed in Chapter 1. Such a taxonomy implies that organisational researchers must be alert to the different ways that a decision can be made and the role that selective cognitive perception plays in the decision making process. There is also an implication that suggestion that environmental uncertainty be studied in terms of perceptual measures.

Perceived environmental uncertainty may be expected to condition the intelligence phase (and perhaps also the design phase) of the Simon (1960) decision making process model that was presented in Chapter 1. However, the roles of equivocality and *undecidability* can not be ignored (see Yasai-Ardekani, 1986). Whereas uncertainty arises in the absence of information, equivocality occurs when there are multiple and conflicting interpretations of a given situation (Daft & Lengel, 1986). The external environment may yield signals that are simply not unambiguous enough to prompt an organisational response. Moreover, even if the received signals are unequivocal, the future may be beyond the influence (let alone control) of the observer, and hence inherently undecidable.

Duncan (1972) drew on earlier theorists such as Emery and Trist (1965) and Terreberry (1968) in order to decompose environmental uncertainty into two independent dimensions, *complexity* and *rate of change* (or dynamism). These two dimensions have been widely used in many subsequent studies. Complexity, along with similar constructs that have been termed *routineity* (Emery & Trist, 1965), *heterogeneity* (Aldrich, 1979) and *diversity* (Mintzberg,

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1979), refers to the scope and depth of knowledge that is required to understand the external events, development and trends that are relevant to the organisation (Child, 1972; Sharfman & Dean, 1991). Meanwhile, dynamism, which has also been termed *instability* (Emery & Trist, 1965), *variability* (Child, 1972) and *turbulence* (Aldrich, 1979), refers to the frequency of unpredictable environmental changes.

Decision makers perceiving their environment to be complex and dynamic, with many rapidly-changing factors, would experience the highest levels of environmental uncertainty while simple and stable environments are associated with the lowest levels of environmental uncertainty (Daft & Weick, 1984; Duncan, 1972). Grover, Prekumar & Segars (1993) verified this relationship using an experiment-based research design.

Perceived environmental uncertainty (PEU), by itself, may not stimulate the acquisition of additional information. Daft and Weick (1984, pp. 287-288) suggested that decision makers would only be expected to seek out more information about aspects of the environment that they consider to be important. Consequently, the combination of perceived *uncertainty* and *importance* create what Daft et al. (1988, p. 125) define as *strategic uncertainty* for top managers. They constructed and applied a score for the perceived strategic uncertainty (PSU) variable using the following formula:

$$PSU = I * PEU = I * (C + R),$$

where   PSU = perceived strategic uncertainty
         I = perceived sector importance
         PEU = C + R = perceived environmental uncertainty
         C = perceived sector complexity
         R = perceived sector rate of change

Daft et al. (1988) employed five-point Likert scales to measure the importance, complexity, and rate of change of each sector. A sample of chief executives in the United States was asked to

assess simultaneously all the task and general sectors. This enabled the researchers to compare and distinguish the salient characteristics among them. Auster & Choo (1993) and Sawyerr (1993) used the same approach to measure PSU in their subsequent studies of Canadian and Nigerian managers, respectively.

2.4 Information Acquisition

Various *modes* of intelligence may be used to acquire information about the external environment. Managers may scan the environment directly or learn from others, and have different scanning *frequencies* for different environmental sectors. Both intelligence gathering and dissemination may range from irregular (searches and periodic reports, respectively) to continuous (monitoring and real-time delivery, respectively), depending on the perceived information needs (Fahey et al., 1981).

In a variation on the Mintzberg et al. (1976) model that was considered in Chapter 1, a strategic intelligence effort may take the form of reactive surveillance or proactive searching (Aguilar, 1967; Cyert & March, 1963/1992). A *reactive search* is stimulated by a specific problem (or issue) and directed towards obtaining information for a particular purpose. In contrast, *proactive scanning* is exploratory in nature, rather than being directed towards a particular problem (Aguilar, 1967). This mode of intelligence gathering would be useful to recognise decision situations and build mental models during the initial phases of strategic decision making (see Mintzberg et al., 1976).

Aguilar (1967) differentiated between four styles of environmental scanning: undirected viewing, conditioned viewing, informal search, and formal search. In *undirected viewing*, the manager is exposed to information without having identified a specific purpose or information need. Undirected viewing typically alerts a manager that something has happened and that there is more to be learned about a situation. For example, the manager may converse with business associates during a social gathering. In conditioned viewing, the manager is exposed to

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information about selected areas and is ready to assess the significance of the information as it is encountered. For example, the manager may browse through specific publications that report regularly on topics of interest.

During an *informal search*, the manager actively looks for information to address a specific issue. For example, a manager who checks the results of a new pricing policy may be said to be engaging in a relatively limited and unstructured effort. Finally, with a formal search, the manager makes a deliberate or planned effort to obtain specific information or information about a specific issue. For example, a manager may systematically gather information about a potential new market. Jain (1984) has complemented this distinction by proposing a typology of four environmental scanning modes ranging from primitive through ad-hoc and reactive to proactive.

As the external environment becomes more turbulent and complex, it can be argued that managers face fuzzier problems. The need to address a steady stream of ill-defined problems will challenge the cognitive capacity of most managers. As a result, their use of scanning relative to searching may be expected to increase. In a relatively stable environment, scanning may be an unstructured process in which information is sourced through informal sources. However, higher levels of environmental uncertainty will tend to formalise and structure the scanning effort, and increase the reliance on impersonal sources and the processing of acquired information (Gilad & Gilad, 1988; Jain, 1984; McGonagle & Vella, 1996).

The studies based on data collected in the 1970s suggested that top managers gained much of their information through irregular scanning (Fahey et al., 1981; Hambrick, 1981; Mintzberg, 1973). In contrast, El Sawy (1985) found that American chief executive officers (CEOs) were very systematic in their environmental scanning, using a limited number of mostly personal information sources. More recently, Eisenhardt (1989) reported that as

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environmental changes accelerated, effective executive teams 'structured' their environments through more thorough and consistent analytic processes. Senior executives in her sample of small U.S.-based computer firms made far more use of real-time information than forecast information. This seems to imply a reliance on selected personal and electronic sources.

The situational dimension of perceived environmental uncertainty has been a consistently good predictor of the amount of scanning that a chief executive conducts (Aguilar, 1967; Hambrick, 1982; Keegan, 1974; O'Reilly, 1982). More recent studies have indicated that if the perceived importance of an environmental sector is included as an additional variable, and multiplied by PEU to create a perceived strategic uncertainty (PSU) measure, the latter is an even better predictor of the amount of scanning that is conducted (see Auster & Choo, 1993; Daft et al., 1988).

Consistent with this perspective, Boyd (1989) reported that the perceived importance of environmental developments had a large impact on the amount of scanning. However, Boyd (1989, p. 95) concluded that "perceived importance is itself the most important predictor of scanning activity." This phenomenon was found to persist even when a situation is changing quite slowly and the manager already had a considerable amount of information about the issue of interest. Related to this, El Sawy and Pauchant (1988) identified three ways of bounding the environmental scope:

1) limiting the number of information sources used
2) limiting the type of environmental signals and messages that are monitored, and
3) limiting the number of issues that are tracked.

Alternatively, managers may cope by 1) developing a simplified representation of the problem, reducing it to its most salient characteristics, and/or 2) applying procedures or heuristics that have worked before. The objective becomes a *satisficing* rather than optimising course of action (Simon, 1976).

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2.4.1 Information seeking issues

Information has both an instrumental and a symbolic value (Larkey & Sproull, 1994). From an instrumental perspective, information may be acquired in order to reduce environmental uncertainty or equivocality, enable better decisions to be made, and thereby improve some measures of performance. Higher levels of environmental uncertainty and volatility have been found to increase the intensity of information seeking by managers in the U.S. (Culnan, 1983; Daft et al., 1988; Eisenhardt, 1988).

Significantly, Blandin and Brown (1977) suggest that the interaction between environmental uncertainty and information seeking may be bidirectional. Initially, information may be sought in an attempt to reduce the uncertainty surrounding a strategic choice. However, as new information is acquired, additional uncertainties from previously unforeseen aspects of an issue (or even different issues) may arise, and prompt further investigation. This suggests a dynamic linkage between environmental uncertainty and information seeking.

Information also has a symbolic value partly due to "its cultural importance as a symbol of status or reassurance" (Larkey & Sproull, 1994, p. 3). As a result, managers may buy or trade more information than prescribed by economic considerations because they want to enhance their own image or 'play it safe'. They could also attend to information that is irrelevant to the issues at hand or the decision that they are making.

Nevertheless, information acquisition activities are expected to be driven largely by identified information needs, and aimed at addressing those needs. The needs are likely to be both contingent and dynamic, emerging from issues, uncertainties and ambiguities that are associated with a particular problem or situation. The needed information may be about the organisation or its external environment. The typical organisation today accumulates a large volume of information about its internal operations and resources. This information will shape an

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individual's perceptions of the surroundings and also contribute to organisational learning (Garvin, 1993; Nonaka, 1991).

Much of this information is collected in order to follow accepted rules or procedures and to meet stipulated requirements. Government regulations and organisational policies as well as standard operating procedures and general accounting practices will shape internal data collection and processing.

In addition, an organisation will commonly have concerns about many aspects of its external environment. Managers may want information to answer questions (what is happening out there?) or to help solve problems (what can we do about this?). As a result, their information seeking efforts are likely to range from a pure knowledge orientation at one extreme to a pure action orientation at the other. In the latter case, they may search for *rules of thumb* or heuristics, or even entire solutions that they can copy (March, 1991, p. 112).

Information acquisition efforts are likely to be constrained by cognitive capacities and time pressures at the individual level and resource constraints at the organisational level (see Cyert & March, 1963/1992). The organisational capacity to absorb new information can be enhanced in different ways. These include introducing a systematic process, involving additional people inside and/or outside the organisation in that process, relying on specialist knowledge, and making use of IT.

However, the limited attention spans and cognitive capacities of managers ultimately make it both undesirable and impossible to be well-informed about every one of these concerns. As a result, it is critical to specify what information is required. Incoming streams of data can be filtered more effectively if the priority of different environmental sectors has been established and if specific issues of concern have been identified ahead of time.

Managers can choose from among many different types and sources

of information as well as different methods and channels to acquire that information. Their preferences and choices may depend on the environmental issues or sectors that have been identified as priorities. Related to this, MacMullin and Taylor (1984, p.98) argued that problem types can act as surrogates for areas of interest, and proposed 11 problem dimensions that can help to identify information needs (see **Table 2.1**).

Table 2.1

Problem Dimensions and Information Needs

	Problem Dimensions	Typical Information Needs
1.	Design	Options, alternatives, ranges
	Discovery	Small, detailed sets of data
2.	Well-structured	Hard, quantitative data
	Ill-structured	Probabilistic or qualitative data
3.	Simple	Path to goal state
	Complex	Ways and means to simplify the problem
4.	Specific goals	Goal operationalisation and measurement
	Amorphous goals	Preferences and directions
5.	Initial state understood	Clarify unclear aspects of initial state
	Initial state not understood	Define initial state with soft data
6.	Assumptions agreed upon	Information to help define problems
	Assumptions not agreed upon	Worldviews and definitions of terms
7.	Assumptions explicit	Range of options, frames for analysis
	Assumptions implicit	Information to make assumptions explicit
8.	Familiar pattern	Procedural, historical information
	New pattern	Substantive, future-oriented information
9.	High degree of risk	Cost-effective search
	Low degree of risk	Best available information
10.	Amenable to empirical analysis	Objective, aggregated data
	Not amenable to empirical analysis	Experts' opinions, forecasts, scenarios
11.	Internal imposition	Clarification of internal goals, objectives
	External imposition	Focus on the external environment

Adapted from MacMullin & Taylor (1984).

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More generally, the outcome of a particular decision making process is likely to be shaped by both the type of information that is acquired and the information sources that are used to gather it (Das, 1986; Keegan, 1974). This makes it important to understand the perceptions and preferences of managers with respect to different types and sources of information.

2.5 Information Characteristics and Sources

The benefits of information are widely recognised to be both user-specific and context-specific. Related to this, Simpson and Prusak (1995, p. 414) suggest that the value of information "can only be measured in terms of the benefit obtained from its use", but conclude that this is very difficult to put into practice.

Nevertheless, many different dimensions can be used to characterise information. The most commonly mentioned in the recent literature include: accuracy (error-free transmission), comprehensiveness (completeness of coverage for a specific topic or issue), timeliness (lack of delay in transmission), and validity (accompanying signals that suggest the soundness or otherwise of the message). Although the characteristics of information *per se* are not central to this dissertation, readers are referred to Simpson and Prusak (1995) for a useful framework that includes five major elements - truth, guidance, scarcity, accessibility, and weight.

Managers can receive information in various forms. *Hard information* (alternatively termed factual or objective information) commonly takes the form of computer-generated or written numbers, texts, and graphs. It is most effective for conveying well-understood messages and standard data measurements (Daft & Lengel, 1986). However, increased uncertainty and rapid change make it more difficult to acquire timely and reliable hard data (Weick, 1985). In contrast, *soft information* (also known as impressionistic or speculative information) includes impressions, opinions, feelings, gossip, interpretations and predictions. It can supplement hard information in order to

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increase depth and understanding. Direct contacts with other people are the most common source of soft information.

A range of communication channels and media may be used to convey messages or signals to the user (Stamper, 1974). *Media* refer to the mechanisms, such as meetings, telephone calls and memos, selected to transfer information from a source to a receiver, who is commonly the decision maker. These media have been categorised using at least two closely related concepts: *social presence* and *information richness*. Short, Williams and Christie (1978) suggested that characteristics such as sociability, personalness and sensitivity affect the extent to which communicators perceive each other to be psychologically present. Media with a low social presence, such as printed documents, are most appropriate for providing factual information while those with a high social presence, such as face-to-face interaction, will be most appropriate for delicate negotiations.

Meanwhile, Daft and Lengel (1984) proposed the concept of *information richness*, which they defined as the capacity of a communication to change or provide understanding within a given time period. Richness is seen to depend upon the variety of cues and the speed of feedback that a given communication provides. Face-to-face communications are thus very rich because they enable the use of multiple cues (verbal and non-verbal) and encourage immediate feedback. Computer printouts and similar reports are less rich because they lack these capabilities.

When faced with ambiguous messages about unclear situations, including those involving the external environment, top managers may favour information rich media. In his seminal study, Mintzberg (1973) found that managers had a strong preference for information that was both timely and rich in content. This is consistent with Churchman (1971), who portrayed people as knowledge producers who frequently test their interpretations of a given situation through dialogue and debate with other people.

2.5.1 Information sources

Managers may select from among various information sources. A wide assortment of classification schemes have been proposed and used in the literature. A commonly used scheme (see Aguilar, 1967; Auster & Choo, 1993; Culnan, 1983; Daft et al., 1988) has delineated personal (informal) sources from impersonal (formal) sources, and internal sources from those external to the decision maker's organisation. Both external and personal sources of information are held to become progressively more important as one ascends the management hierarchy (see Aguilar, 1967; El Sawy, 1985). A classification of information sources that builds upon the conceptualisations of Culnan (1983), Auster and Choo (1993), and Sawyerr (1993) is shown in **Table 2.2**.

Table 2.2

A Classification of Information Sources

	Personal (informal)	Impersonal (formal)
Internal	Superiors/mentors/peers Subordinates/employees	Internal documents Electronic services
External	Customers Competitors Business associates	Government and regulators Industry/trade associations/events Public mass media

There has been considerable debate about the relative value of different information inputs to the strategic decision making process (see Fahey et al., 1981; Rhyne, 1985). Impersonal sources are useful largely because of the capability to systematically condense a broad set of information into an understandable and presentable form that shows external trends and shocks. Facts about discrete events can typically be collected and disseminated using these formal sources and communication media. Applications of IT, such as executive information systems and scanning systems, are an example of an impersonal source. Despite their omnipresence in modern

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business, a unique set of personal contacts may be useful for certain types of intelligence gathering.

Personal sources may be more consistent with informal and aperiodic scanning. Rather than getting a daily newspaper or a weekly industry report, managers will contact their peers or receive updates from their subordinates. These personal updates will come when circumstances rather than pre-programmed frequencies dictate.

Personal sources can also provide a better view of context-specific and intangible aspects of the external environment that would be filtered out by more formal media (Culnan, 1983; Weick, 1985). For example, computer-generated printouts are unlikely to be as *meaningful* as face-to-face communications (Auster & Choo, 1993). Richer media enable weaker and more subtle signals to be detected and tend to leave the user to do his or her own analysis, interpretation, and drawing of conclusions from the details provided (Daft & Lengel, 1986). As a result, written and personal sources may be provide complementary benefits. Weak signals from personal sources could be augmented by data from more formal sources and vice versa (Daft & Weick, 1984).

Internal intelligence may come from organisational documents (e.g. memos, circulars, reports) or discussions with employees. For example, boundary personnel, such as salespeople and purchasing agents, can pass on information from their regular contact with customers and suppliers, respectively. The use of such a lateral intelligence network challenges "the image of the CEO as the organisation's primary interpreter of, and ambassador to the external world" (Huff, 1979, p. 191). However, it does offer the benefits of "many organisational eyes and ears open to external signals" (Stanat, 1990), and can be an effective means of getting timely and reliable data about the task environment.

External personal sources include discussions and meetings with those outside the firm, including customers, business associates,

and government officials. Meanwhile, commercial and government publications are among the external impersonal sources. Computer-based data with the organisation and external electronic information services are also of growing importance.

Top managers are likely to be well-connected within their local business community and thus have access to many personal sources of information beyond their own organisation. As the level of strategic uncertainty increases, they may be expected to rely more on direct contacts with a few trusted sources. Such direct contact would provide them with data that is not diluted or distorted by passing through intermediaries (Daft et al., 1988).

Studies conducted decades ago consistently found that personal sources (and particularly subordinates and customers) were more important than impersonal ones (Aguilar, 1967; Kobrin et al., 1980), but produced ambiguous evidence with respect to the relative importance of external and internal sources (Keegan, 1974; Kobrin et al., 1980). Kotter (1982) also reported that successful general managers relied more on information from people rather than other sources.

An information sourcing study conducted by Jones and McLeod (1986) reported more specific results. Senior executives most frequently obtained and most highly valued information from their first- and second-level subordinates. Only 43 percent of these executives looked outside their own organisation for information.

Similarly, Auster & Choo (1993) identified internal and personal sources as the most frequently used by CEOs in the Canadian telecommunications and publishing industries, but they also noted the frequent usage of printed materials, such as newspapers, economic reports, and government documents. Similarly, Gates (1990) found that the chief academic officers of community colleges in Pennsylvania relied largely on personal sources within the organisation and small number of impersonal (often written) sources outside it.

Meanwhile, Ghoshal (1988) found that for Korean chief executives, business associates were the most common source of information about the inner or task layer while printed sources in the public domain were used most often for information about the general or outer layer. This suggests that while executives use multiple and complementary sources to scan the environment, they preferred more timely and information rich sources when their focus was on market-related, dynamic or equivocal sectors of the environment.

The perceived characteristics of different information sources could help to explain the ambiguity of the reported results. Information sources vary on at least two independent dimensions: *accessibility* and *quality* (see Culnan, 1982; O'Reilly, 1982). Accessibility has been operationalised as the physical proximity of the source or the time, effort and cost needed to access it. Meanwhile, the key dimensions of quality include relevance, reliability, accuracy, quantity and timeliness (Auster and Choo, 1993; Culnan, 1983). The use of an information source should be related to its perceived accessibility and its perceived quality.

Based on the work of Culnan (1983), O'Reilly (1982) and Auster & Choo (1993), the *perceived accessibility* of an information source can be operationalised as the amount of effort needed to locate a source, and then to get the needed information from that source. Two questions have been commonly used to measure the *perceived accessibility* of a source:

1. How much of your time and effort is needed to approach, contact or locate each information source?

2. After contacting or locating the source, how easy is it to get the desired information from that source?

Based on the theoretical definitions of Zmud (1978) and the empirical findings of O'Reilly (1982) and Auster & Choo (1993), the *perceived quality* of an information source may be operationalised as the perceived relevance and reliability of the

information provided by the source. Two questions have been commonly used to measure the *perceived quality* of a source:

1. How relevant is the information from each source about the environment? (relevant information has been defined as information that is needed and useful with respect to the goals and activities of the responding firm)

2. How reliable is the information from each source about the environment? (information is reliable when it is authoritative, dependable and personally trusted by the recipient).

Auster & Choo (1993) were the first to find that information source selection was based more on quality than accessibility. Their results contradicted previous reports from studies of R&D managers (Blandin & Brown, 1977) and welfare agency workers (O'Reilly, 1982) which indicated that perceived accessibility rather than perceived quality had the greater influence on the frequency with which an information source was used. This raises the possibility of situational factors contributing to the relative roles of quality and accessibility and/or a growing emphasis on the perceived quality of an information source. Remarkably, Culnan (1983) earlier found that information source selection was not simply a function of perceived accessibility, but that the complexity of the task determined the relative importance of accessibility as a factor in the use of a source.

The key concepts and relationships presented so far in this chapter along with Mintzberg's decisional roles, which were outlined in Chapter 1, may be incorporated into a general model of environmental scanning. This general model, depicted in **Figure 2.2**, was used a basis for designing a specific research model for the study of strategic intelligence in Hong Kong. The specific research model is presented in Chapter 4 and is based on the research context considered in Chapter 3 as well as the research framework discussed in Chapter 4.

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2.6 Environmental scanning studies

The strategic management and organisation theory literatures include dozens of reported studies that have considered many different aspects of the relationship between the organisation and its environment. More directly relevant to the topic of interest, Aguilar (1967) initiated the empirical study of how top managers learn about the external environment. The title of that report, *Scanning the Business Environment*, helped to popularise the term "environmental scanning".

In Chapter 1, environmental scanning or business intelligence activities were identified as an integral part of strategic decision making. These activities include searching for particular information as well as simply being *exposed* to information that *could* impact the organisation. In a study conducted for the British Library, Lester and Waters (1989, p. 3) defined *environmental scanning* as "the management process of using environmental information in decision making". Their conceptualisation included three activities:

1) the acquisition of data about the external environment;
2) the analysis and interpretation of that data; and
3) the use of this processed information in strategic decision making.

This definition implies that environmental scanning includes both looking *for* information and looking *at* information. Earlier, Rouse and Rouse (1984) defined *human information seeking* as the process of identifying and choosing among alternative information sources. Information seeking can thus be considered as embedded in larger processes such as decision making, problem solving or resource allocation. Information needs are thus determined largely by the specific nature of the process. Since the methods and criteria for the selection or rejection of information in the scanning process also vary over time and depend on earlier results, it may be seen as a special case of information seeking.

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There was a steady flow of reported studies covering different and often multiple aspects of environmental scanning/business intelligence from the pioneering work of Aguilar (1967) up until 1993[1]. **Tables 2.3 and 2.4** provide a chronological summary of the U.S.-based and non U.S.-based studies.

Table 2.3

U.S.-based Environmental Scanning/Business Intelligence Studies

Author(s)	Setting/Method	Focus/Finding(s)
Aguilar (1967)	Multi-method exploratory study of executives in U.S. corporations	Environmental scanning is an important management activity Personal sources are more important than impersonal ones
Keegan (1974)	Interviewed 50 MNC executives	Little systematic scanning is done External sources are more important than internal ones
Fahey & King (1978)	Interviewed 12 senior executives	Only two of 12 firms had formal intelligence systems
Hambrick (1979)	Studied 195 executives of colleges, hospitals and insurance firms	Studied the amount, extent and focus of scanning activities
Kobrin et al. (1980)	Survey of 500 multinational firms	Internal sources are more important than external ones Personal sources are more important than impersonal ones
Fahey et al. (1981)	Interviewed 36 senior executives	Corporate scanning is unsophisticated
Stubbart (1982)	Extended work of Fahey & King (1978) via executive interviews	Prescriptive scanning literature overstates benefits, understates risks
Lewis (1982)	Studied *smaller* ($100 million/year revenue) firms	Studied sector importance, acquisition methods and source productivity
Culnan (1983)	Surveyed 362 professionals in 2 firms	Positive link between accessibility and use of information sources

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[1] The absence of reported studies of environmental scanning by CEOs since 1994 could reflect the maturity of this research stream in the West or a temporary hiatus.

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Kennedy (1984)	Interviewed 61 MNC executives	Increased scanning and more use of qualitative data after Iran crisis
Jain (1984)	Surveyed 186 *Fortune 500* firms	Over 70% used primitive scanning
Dollinger (1985)	Surveyed 73 U.S. entrepreneurs	Positive link between environmental contact frequency and performance
Smeltzer et al. (1988)	Semi-structured interviews with 88 small business leaders	Small business owners/managers scan regularly, primarily using external publications
Daft, Sormunen & Parks (1988)	Studied 50 small and medium manufacturing firms in Texas	Relationship between perceived environmental uncertainty and scanning behaviour
Preble et al. (1988)	Studied 95 U.S.-based MNCs	Scanning systems sophistication Relative importance of environmental variables and information sources
Visudtibhan (1989)	Studied U.S.-based MNCs	Organisation-wide environmental information processing systems
Ghoshal & Westney (1991)	General Motors, Eastman Kodak and British Petroleum	Examination of the formal competitor analysis systems at the three firms
Jennings & Lumpkin (1993)	Interviewed 44 CEOS of Texan savings and loan firms	Explored relationship between scanning activities and Porter's generic strategies
Subramanian et al. (1993)	Survey of 101 *Fortune 500* firms	About 60% (mostly prospectors) used advanced scanning systems, which were related to higher profits and higher growth

Table 2.4

Major non U.S.-based Environmental Scanning/Business Intelligence Studies

Author(s)	Setting/Method	Focus/Finding(s)
Ghoshal (1987)	Studied 6 **South Korean** *chaebols*	High degree of scanning isomorphism
Lester & Waters (1989)	Studied 7 large **British** companies	Decentralised and bottom-up scanning was common Great interest in and considerable use of on-line sources
Desai & Bawden (1993)	Survey of competitive intelligence in the **British** pharmaceutical industry	Emphasis on extraction from written sources Limited use of personal sources

Sawyerr (1993)	Surveyed 44 CEOs in **Nigerian** manufacturing firms	Comparison with U.S. studies found economic and political sectors to be most important
Lasserre (1993)	Surveyed the **Asian operations** of 167 **European-based** MNCs	Concluded that outsiders will find it very difficult to really understand Asian business environments
Auster & Choo (1993)	Surveyed 207 CEOs of 2 industires in **Canada**	Found quality to be a better predictor of information source usage than accessibility

The preceding tables indicate that a large majority of reported environmental scanning studies have been done in the United States. In fact, even three of the six non-U.S. studies are based on data collected in the United Kingdom and Canada, countries that share an Anglo-Saxon cultural heritage with the U.S. and also have relatively stable and well-developed economic environments.

The samples of senior executives in these studies have been drawn almost exclusively from public sector organisations or manufacturing sector firms that the authors have defined as *large* or *medium and large*. The research on both smaller organisations and service sector firms is limited. Lewis (1982) did explore the importance of five environmental sectors, the frequency of use for six information acquisition methods and the productivity of eleven common information sources in *smaller* firms, but even these had annual revenues of at least U.S. $100 million. Such a revenue stream would be characteristic of a *large*, or perhaps even *very large* enterprise in the Hong Kong Chinese business context (see for example Yeung et al., 1995a,b).

Meanwhile, Smeltzer et al. (1988) found that most *small* business owners/managers in the U.S. (those heading up firms with annual revenues of less than US$ 100 million) perceived their environments to be stable. Nevertheless, they conducted regular environmental scanning by reading publications and listening to friends and family. In a study with a wider scope, Dollinger (1985) concluded that entrepreneurs devote a great deal of time to environmental scanning activities, and that the extent of their contact with the environment is positively correlated with firm performance.

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In addition to the concepts and relationships considered so far, and specifically included in the research model, a review of the empirical literature also reveals some study of both the strategy-scanning relationship and the performance implications of scanning.

2.6.1 Scanning, strategy and performance

Hambrick (1979, 1982) analysed the effects of two strategy-related factors on scanning: the strategy adopted by the organisation and the nature of the industry to which the organisation belongs. Based on a survey of executives from the top three management levels of organisations in three industries (higher education, health care, and life insurance), he found that the Miles and Snow (1978) typology alone was not a good predictor of the type or amount of scanning conducted, but that the industry did affect the content of what was scanned. Hospitals stressed the scanning of the *engineering environment*, insurance companies stressed the *entrepreneurial environment*, and colleges had a mixed emphasis.

Subsequently, Jennings et al. (1992) and Subramanian et al. (1993) also studied the impact of strategic factors on environmental scanning. Jennings et al. (1992) differentiated business-level strategy according to the generic classification of Porter (1980). The data from their sample of savings and loan firms indicated that those following a differentiation strategy tended to focus their scanning activity on opportunities for growth and the customer sector. In contrast, those following a cost leadership strategy tended to concentrate their scanning on competitive threats and tracked competitors' policies and tactics.

Subramanian et al. (1993) followed Hambrick (1979, 1982) by examining the relationship between organisational strategy, as classified according to the Miles and Snow (1978) typology, and the focus of the chief executive's environmental scanning. Applying the scanning system classification of Jain (1984), they found that most of the Fortune 500 manufacturing firms they sampled had reactive or proactive scanning systems. Firms following prospector strategies had the most advanced scanning systems (either reactive or proactive), followed by analysers, and then defenders (many with *ad hoc* scanning systems).

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The authors suggested that the limited product-market domains of the defenders reduced their external information needs relative to those of prospectors, whose focus on exploiting opportunities resulted in constantly changing product-market domains. Unlike Hambrick's earlier work, both Jennings et al. (1992) and Subramanian et al. (1993) found a strong relationship between organisational strategy and environmental scanning, although the direction of causation remained unclear.

Meanwhile, a meta-review indicated that the performance of both small and large firms is hurt by high levels of perceived environmental uncertainty (Bourgeois, 1985). Specific studies have also related better business performance to distinctive patterns of strategic intelligence (see Daft et al., 1988; Dollinger, 1985). However, these results may be attributed to a higher level of organisational slack, which in turn enables a different scanning pattern. Simply stated, top managers in high-performing firms may be able to look for opportunities across a broad horizon even as their counterparts in lower-performing firms fight fires (Daft et al., 1988). The question of causality between scanning behaviour and organisational performance has not been addressed.

2.7 Gaps in the Environmental Scanning Literature

Despite the growing numbers of environmental scanning studies in the early 1980s, Mintzberg and Waters (1985, p. 269) still contended that "(m)ore research is required on the process of strategy formulation to complement the extensive work currently taking place on the content of strategies". More recently, Schwenk & Dalton (1991) and Shrivastava & Lim (1989) have identified the need for more investigation in the area of environmental analysis while Walsh (1995) has encouraged an increased focus on the less visible aspects of strategic management, and specifically mentioned information scanning and interpretation.

The gaps in the environmental scanning literature remain particularly acute for non-Western settings. Most of what is known about these contexts comes from the work of Ghoshal (1987), who found scanning isomorphism among six South Korean *chaebols*, and Sawyerr (1993), who studied Nigerian manufacturing firms.

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CHAPTER 3
THE RESEARCH CONTEXT

Almost all of the management literature reviewed in Chapter 2 comes from the United Kingdom, the United States, and Canada. These countries share an Anglo linguistic and cultural heritage. In contrast, the data for this dissertation was collected in Hong Kong, where a very different societal culture has prevailed even after more than a century of British administration. This makes it important to consider explicitly the research context.

This chapter begins by introducing the concept of culture. The impact of society-level culture on management theory and practice is then discussed, with specific reference to strategic management. A comparison of the Anglo and Chinese cultures precedes an outline of the Chinese management philosophies and practices that have been found to predominate in Hong Kong.

The latter part of this chapter profiles Hong Kong in terms of its history and institutional framework. Economic and political development are reviewed while the distinguishing characteristics of its economic policies and business enterprises are highlighted.

3.1 Culture

Culture has been difficult to define, let alone examine, either by itself or in terms of its relationship to management practices (Kedia & Bhagat, 1988). Decades ago, anthropologist Margaret Mead (1953) defined culture as "shared patterns of behaviour" in reporting her research of native rituals in Samoa. This implied that observing behaviour would be sufficient to study culture. However, there has been a subsequent recognition that it is also critical to understand the meaning behind the behaviour that is observed. Schneider and Barsoux (1997, p. 19) contend that "the same behavior can have different meanings and different behaviors can have the same meaning".

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Culture may thus be considered an integrated and complex set of interrelated and potentially interactive patterns that come together to characterize a group of people, and give it a unique social identity (Deutsch, 1973). Hall (1976) contends that "there is not one aspect of human life that is not touched and altered by culture" (p. 16) and adds that "it is frequently the most obvious and taken for granted and therefore least studied aspects of culture that influence behavior in the deepest and most subtle ways" (p. 17).

It is generally accepted that culture is socially acquired rather than genetically (or logically) transmitted. It is thus comprised of learned rather than innate attributes. Kluckhohn and Strodbeck (1961) viewed culture as a shared and commonly-held body of general beliefs and values that define desirable and undesirable behaviours within a society. They, together with Hall (1976), have asserted that these beliefs and values dictate the way people think, behave, solve problems, make decisions, plan and lay out their homes and cities, and even organize their economic, political and transportation systems. Others have described culture as what humans have created in order to manage their environment (Malinkowski, 1944; Markus and Kitayama, 1991).

Although a precise definition for culture remains contentious, the varied conceptualizations commonly converge on a few principles. These include: it is shared by two or more people; it is defined by patterns of values, attitudes, and behaviours; and it can be characterised by a variety of indicators. These indicators encompass external adaptation (relationships with the environment), internal integration (relationship to other people), and linking assumptions in terms of language, space, and time (Schein, 1985; Schneider & Barsoux, 1997).

The relationship between people and their environment is mediated (and perhaps even shaped) by culture along with other factors, such as resource availability, climate and geography, that are subject to limited control by humans (Triandis, 1972). It has

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been argued that the environment is affected by and affects culture, potentially reinforcing, shaping or even changing radically the manifestations of cultural patterns (Hall & Hall, 1990). For example, the scarcity of a critical resource could stimulate changes in behaviours (rioting) and social institutions (the overthrow of an incumbent government) that would not have occurred in other circumstances (Boddewyn, 1970). As a result, it should be recognised that particular behaviours may be due not only to the group membership of the people concerned, but also due to their environmental circumstances.

Culture thus emerges as a latent and hypothetical construct characterised by "its forms and patterns, the interrelation of these into an organisation, and the way these parts, and the whole, work or function as a group of human beings lies under them" (Kroeber, 1952, p. 136). Although the construct is inherently complex, it is possible to label many different aspects or dimensions of it. A large body of literature on culture has identified and considered these dimensions (see Hall & Hall, 1990; Hofstede, 1980; Kluckholn & Strodtbeck, 1961; Schneider & Barsoux, 1997).

Significantly, these cultural dimensions exist at different levels of analysis. They include values, cognitive structures, and behaviours at the individual level; structures and rituals at the organisational level; and artifacts and attributes at the national or societal level. For example, the relative preference for making money or having leisure time (assuming that they are mutually exclusive) will vary from person to person, the workday routine will reflect most directly the culture of an organisation, while the degree of public compassion for the jobless will vary from society to society.

As "a collective programming of the mind which distinguishes one category or people from another" (Hofstede, 1980, p. 25), culture at the societal level may be expected to exert a significant influence on strategic management and information management

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practices. In his seminal study of about 116,000 IBM employees in over 60 countries, Hofstede found that societal culture explained 49 percent of differences in work-related values. This was far greater than the proportions explained by professional role, age, or gender. Despite the assorted criticisms of Hofstede's study (see House et al., 1997 for an example), it is generally agreed that the societal culture has a major influence on work-related values and attitudes as well as the management behaviours and practices that prevail in a particular work venue.

3.2 Culture's Consequences for Management

Businesses from developed countries are increasingly marketing their products to, and setting up operations in less developed countries. This has led to growing numbers of interactions between individuals from different societies, both within an organisation and outside of it. The effectiveness of these inter-cultural interactions depends upon the sensitivity of both sides. With the growing need for people who think differently to act together (Hofstede, 1980), it is important to understand the key aspects of different cultures and their impacts. The success of an organisation or even an entire economy can depend upon recognising and accounting for cultural diversity.

With the globalisation of business activity and the key role of Anglo-based multinational corporations, the transferability of management theories from Anglo-dominated societies to other contexts has also become an important issue. Significantly, DiBella (1993) found that the cultural setting affects both the process and product of management practices.

Lammers and Hickson (1979) have warned that empirical studies that attempt to test either the culture-bound or culture-free thesis must overcome substantial obstacles that arise from their inherent complexity. Nevertheless, developments in recent decades such as the success of Japan have "alerted the largely Western world of management theory to the need for an understanding of alternative organisational principles" (Redding,

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1990, p. 236). Lee (1987) and Hofstede (1983) are among many who argue that management knowledge could be significantly advanced by challenging Western perspectives - in terms of both their assumptions and norms.

Very few cross-cultural studies have examined the impact of cognitive aspects on the practice of strategic management. However, Kiggundu, Jorgensen and Hafsi (1983) did find that several conventional theories related to the technical core of the organisation were transferable from their Anglo-Saxon origins to other societies and countries. In contrast, there were serious difficulties in the cross-cultural and international transfer of theories that related the organisation and its external environment.

This observation undermines the assumption of universal best practices. For example, while many now argue that organisations require flatter structures and more flexibility to cope with environment threats and conditions of economic adversity, an alternative prescription based on centralisation and stronger cost controls may also have some validity (Schneider & Barsoux, 1997). Kiggundu et al. (1983) imply that context-specific factors will significantly influence the practice of strategic management, and particularly environmental scanning. However, their work leaves open the question of whether the difficulties arise from cultural, institutional or other unidentified factors.

As a result, it would be useful to go beyond this general level and incorporate one or more cultural or institutional dimensions into specific models or theories in order to explain observed differences between selected groups. The field of cross-cultural management has emerged from efforts to develop some of these models, theories and explanations. Although its broad scope precludes a comprehensive review here, a growing debate about the convergence of cultural values is outlined while the impact of cultural factors on strategic management and decision making is examined.

3.2.1 Cultural convergence or divergence?

The field of cross-cultural management contains diverse positions on when management values and practices become similar. Kerr (1946) theorised that the technological imperative of industrialisation leads to a convergence in social institutions and values. This *convergence hypothesis*, subsequently extended by Harbison & Myers (1959) and Farmer & Richman (1965), predicts that management practices will converge as different places attain a common stage of economic development. This assumes that modern management practices are readily transferable, and that individuals will modify their attitudes and behaviours in response to changing environmental conditions.

In contrast, Hofstede (1980; 1993) and others contend that societal culture not only exerts a major influence on management theory and practice, but also that it is highly resistant to change. As a result, fundamental differences in organisational management are expected to persist long after political, economic and technological conditions have converged. The lack of uniformity in management practice in the developed world tends to support this perspective.

Nevertheless, some suggest that management practices have converged at certain levels, but remain divergent at others (see Negandhi, 1983; Webber, 1969). A common argument is that the universality of technology and education will lead to similar human-work and firm-environment relationships, but interpersonal relationships will continue to differ because of cultural influences.

Child (1981) reviewed a large number of comparative management studies and concluded that management practices across nations are moving toward convergence at the organisational level (e.g., structure and technology) but continue to differ at the personal level (e.g., attitudes and behaviours). More recently, Adler (1997) has insisted that even multinational firms should *not* introduce universal management practices. Instead, she suggests

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that they should standardise the aspects of organisation that can be *and* should be similar (production, technology), and *manage* the remaining differences.

Since information management involves both technology and people, it may straddle the line between convergence and divergence. Escobar (1995) and Werther (1996) are among those who argue that the Internet and similar technologies have unleashed powerful forces that are quickly leading to a single information-based society with a globally-uniform culture. This perspective, which has received strong support in the U.S., implies that the concept of societal-level culture is rapidly becoming obsolete.

In sharp contrast, Huntington (1993) contends that culture is quickly replacing ideology and economics as the dominant source of contrast and conflict in the modern world. He acknowledges that Western culture has permeated the rest of the world at "a superficial level" that includes commercial logos and media images. However, he contends that "at a more basic level ... Western concepts differ fundamentally from those prevalent in other civilizations" (ibid, p. 40).

Shaw (1990) concurs with this divergence perspective, and suggests that intercultural business problems stem largely from differences in the way information about other people's behaviour is managed. As a result, it is unclear whether information management practices have been standardised by the universality of cyberspace or if they are among the lingering differences suggested by Adler (1997).

As a more global economy and society do emerge, it seems critical not only to identify the similarities and differences in managerial attitudes and behaviours around the world, but also to understand the reasons behind the differences. Previous cross-cultural research in the area of information management has been limited largely to Western countries while the designs have constrained theory-building. Some studies have identified

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country-based differences with respect to both perceptions and practices (see Martinsons, 1994; Watson et al., 1997), but a cumulative analysis of their largely descriptive statistics leads to few unequivocal conclusions.

3.2.2 Strategic management across cultures

As mentioned in Chapter 1, many of the classic frameworks and models in strategic management prescribed a rational and analytic approach based upon a functionalist and instrumental perspective (see Mintzberg, 1994; Smircich & Stubbart, 1985). There was an assumption that the organisation and its environment are objective realities that will be perceived and analysed in similar ways by every *rational* manager.

However, the discussion in the first two chapters suggests that many factors including the bounded rationality and cognitive perceptions of managers, the uncertainties inherent in the external environment, and the political realities within an organisation or business network will affect how a strategic decision is made. For example, Mintzberg (1994) suggests that a strategy may emerge over time rather than be explicitly formulated and implemented because managers have a limited ability to control their environment and thus realise their intentions simply by taking actions when they become necessary.

Culture can also have an important influence on strategic management, in terms of affecting how managers see different things (even in the same environment), how they subjectively create and enact different realities, and how they act in different ways (Schneider & DeMeyer, 1991). For example, assumptions about uncertainty and control may determine how much strategic planning is done as well as what information about the external environment is acquired, and how it is used.

Other aspects of strategic decision making will also be culturally affected. "Who makes the decision, who is involved in the process, and where decisions are made reflect different

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cultural assumptions" (Schneider & Barsoux, 1997, p. 97). Assumptions about time and change could influence how strategic decisions are made (and how quickly they are made) while the preferred levels of formalisation, centralisation and hierarchy will help to determine the extent of participation in those decision making processes. For example, less centralised and more participative decision making may be expected in societies that are less hierarchical and more group-oriented.

Nevertheless, even the same degree of subordinate participation in decision making may be based on very different rationales. Schneider and Barsoux (1997, p. 99) suggest that participation in some countries (like the United States) may be used to integrate different perspectives and preserve the rights of the individual to decide on their own future, in others (like Japan) it may be used to preserve group harmony and relationships, while in still others (like Sweden) it may be used to promote social welfare. This illustrates the importance of going beyond the Mead (1953) definition of culture, and examining not only the behaviours but also the explanations for those behaviours.

Culture is thus expected to significantly impact strategy making in terms of both contrasting behaviour and contrasting rationales for the same behaviour. At least one European-based study provides empirical support for this contention (Schneider, 1989). Remarkably though, there has been little investigation of the organisation-environment interface outside of Western Europe and North America. As organisations expand their operations and enter new markets, international comparisons will be useful not only to identify similarities and differences between business processes in specific contexts, but also to explain them.

Sawyerr (1993, p. 297) has specifically noted the lack of comparative studies in the area of environmental scanning and recommended further investigation of the "differences between developing nations ... and between developing and developed nations." These differences may be due to political, economic

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and cultural factors, among others.

The study reported here was conducted in Hong Kong, where the population is overwhelmingly Chinese and the dominant culture may be termed Confucian Chinese. As a result, it is appropriate to consider the contextual factors that might be expected to influence the results. The next section compares the Anglo and Chinese cultures and then outlines specifically the nature of Chinese management. A later section profiles the social, economic and political development of Hong Kong and identifies its distinguishing institutional characteristics.

3.3 Comparing the Anglo and Chinese Cultures

Based on a wealth of evidence from a variety of academic disciplines, it is now commonly accepted that there are fundamental differences between societies. Huntington (1993) contrasts different civilisations while Hofstede and Bond (1988) identify a divide between Eastern and Western civilisations.

Within the business literature, Ronen and Shenkar (1985) pointed out the vast differences between the *Anglo* and *Far Eastern* cultural clusters, Tricker (1988) and Martinsons (1991) have considered their implications for information management and IT application, respectively, while Martinsons and Hempel (1995) are among those who have examined Chinese management systems from a cross-cultural perspective.

It is acknowledged that there are substantial intra-cultural variations in both Anglo and Chinese societies. Neither the residents within the United Kingdom, the United States, the People's Republic of China or even those in a political territory like Hong Kong represent a sociological monolith. However, the empirical evidence indicates that these intra-cultural differences are much smaller than the inter-cultural difference between West and East, or between Anglo and Chinese societies (see Hofstede, 1980; Martinsons & Hempel, 1995). As a result, it seems appropriate to focus on the differences between the

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Anglo and Chinese cultures at this point, and set aside the smaller intra-cultural variations for the time being.

3.3.1 The Hofstede Study

Hofstede (1980) identified four independent dimensions that could be used to differentiate one country or society from another. These work-related values were: power distance, individualism/collectivism, uncertainty avoidance, and masculinity/femininity. Power distance refers to the degree to which power is distributed among members of a society. Individualism versus collectivism describes the way that individuals define themselves in relation to others in their society. Uncertainty avoidance signifies the attitudes towards risk and uncertainty that prevail in a society. Masculinity/femininity refers to the balance between the tough and tender attributes found in a society.

Hofstede (1980) was unable to collect data from the People's Republic of China (because IBM did not have business operations there at the time of his study), but his sampling did include three places where the *Overseas Chinese*, immigrants from mainland China, were the dominant population group - Hong Kong, Singapore, and Taiwan. Hofstede's results identified stark differences between the prevailing work-related values of the three Chinese-dominated societies and the values of Anglo societies. **Table 3.1** shows the values on the four dimensions for the Anglo and Chinese clusters.

To be specific, Hofstede's results suggested that the societal culture of Hong Kong was quite similar to that in both Singapore and Taiwan; all three places scored comparatively high on power distance, low on individualism, and mid-range in masculinity. Their starkest contrast with the Anglo cluster (which included Australia, Canada, Great Britain and the United States) was on the power distance and individualism dimensions, as illustrated in **Figure 3.1**.

Table 3. 1

Work-Related Values

	Power Distance	Uncertainty Avoidance	Individualism/ Collectivism	Masculinity/ Femininity
Anglo cluster				
Australia	36	51	90	61
Canada	39	48	80	52
Great Britain	35	35	89	66
United States	40	46	91	62
Chinese cluster				
Hong Kong	68	29	25	57
Singapore	74	8	20	48
Taiwan	58	69	17	45

Extracted from Hofstede (1980).

Figure 3.1

**Contrasting the Anglo and Chinese Clusters
on Power Distance and Individualism**

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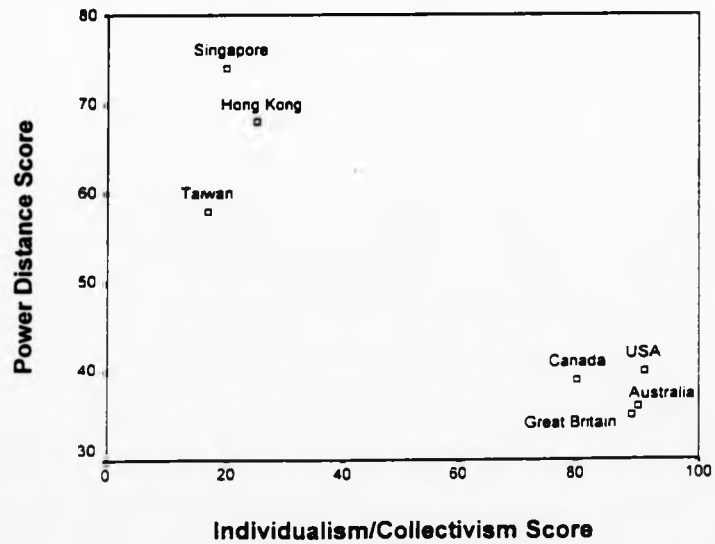
Hong Kong and Singapore also had two of the lowest scores on the uncertainty avoidance dimension. This implies that the Chinese-dominated city-states will have less structured organisations with few specialists or rules. However, the two city-states differ markedly in a fifth attribute, which Hofstede and Bond (1988) initially termed Confucian dynamism, and is now widely known as long-term orientation. Hong Kong was found to score the highest among the 20 economies around the Pacific Rim on this fifth dimension (with a score of 96) while Singapore ranked third, with a score of 88 (see Hofstede & Bond, 1988).

Subsequent studies suggest that despite substantial differences in political and economic systems, the values in the People's Republic of China largely resemble those found in Hong Kong, Singapore and Taiwan (Bond, 1987; Earley, 1989; Huo & Randall, 1991; Shenkar & Ronen, 1987). A protracted period of centralised bureaucratic rule, whereby the state dominated civil society, is likely to have homogenised the values of both the Chinese who left the mainland and those who have stayed behind (Lau & Kuan, 1988).

Hofstede's original study was conducted some two decades ago and even the Confucian dynamism scores are based on data from the mid-1980s. In the interim, Hong Kong and other places in the Far East have undergone tremendous development and change. For example, Hong Kong only emerged as a leading international business centre in the 1980s. Nevertheless, the results of more recent studies, such as the comparison of the United Kingdom and Hong Kong reported by Lowe (1995), are consistent with Hofstede's findings, and thereby offer support for the continued divergence between Anglo and Chinese cultural values.

This continued divergence can be attributed to sharply contrasting philosophical, economic, and historical differences between the Anglo societies on the Atlantic Rim and the Chinese societies in Asia (see Hofstede & Bond, 1988; Hsu, 1981; Martinsons & Hempel, 1995). The perceptions, attitudes and

behaviours of the two cultural groups have been strongly influenced by their respective religions and philosophies.

Western ethical values, which prevail in Anglo societies such as Canada, the U.K. and the U.S., stem largely from Judeo-Christian religion and Greek philosophy, while those of the Chinese are rooted in a neo-Confucian tradition that incorporates Buddhism and Taoism (Fung, 1948; Hofstede & Bond, 1988; Hsu, 1981).

Western religion and philosophy have promoted a focus on absolute standards, and preferences for contracting, freedom of expression, fairness and equal opportunity, and precision and accuracy (Carlin & Strong, 1995). Explicit social contracts, in the form of rules and laws, have been developed to govern society. Based on the principles of democracy, individuals or their direct representatives are involved in both creating and approving written laws, which are then elaborated and used by court judges, and enforced by police.

The cumulative evidence indicates that people living in Anglo societies are comparatively informal, direct, individualistic and competitive. They have also placed a comparatively high value on short-term results, voluntary association, progress and youth, while believing strongly in their ability to control nature. For example, the legal system inherited from the British as well as its frontier and immigration experiences have been cited as the major influences shaping the values of Americans (Grist, 1994; Hsu, 1981; Lawrence, 1990).

3.4 Confucianism and Chinese Culture

Western thought, including Christianity, has had a limited influence on Chinese culture (Carlin & Strong, 1995; Ma, 1988b; Tu, 1996). Instead, the teachings of Confucius help to explain many of the cultural characteristics of Chinese societies. Bond and Hwang (1986, p. 214) insist that he commands "centre stage in almost all approaches to Chinese social behaviour" while Redding (1990, p. 2) considers Confucianism to be "the most

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apposite single-word label" for the values governing the social behaviour of the Overseas Chinese. Strictly speaking, Confucianism is not a religion, but rather a doctrine of life that promotes social well-being. The Analects of Kung Fu Ze, called Confucius by Western missionaries, serve as a guide to morality and the proper exercise of political power.

According to Hofstede and Bond (1988), Confucian teaching includes four key principles:

1. Social stability based on five unequal relationships between people. These "wu lun" are ruler/subject, father/son, older brother/younger brother, husband/wife and older friend/younger friend (also teacher/student). These relationships are based on mutual and complementary obligations; the senior partner provides protection and consideration in return for the respect and obedience of the junior partner.

2. Family as the essence of social organisation. A person is foremost a member of a family rather than an individual, and he/she has a responsibility to maintain harmony. Social relations should always be conducted to preserve the "face" (dignity, self-respect and prestige) of all involved.

3. Human benevolence in treating others as one would want to be treated. Although this does not extend as far as the Christian doctrine of loving thy enemies, the criticism of others in the in-group is frowned upon in contrast to its perception as a therapy in Western cultures.

4. Everyday virtue. This includes continually trying to acquire new skills and knowledge, working hard, not spending more than necessary, being patient and persevering.

As seen from these principles, Confucianism encourages both a deep affection for kin and the maintenance of asymmetrical interpersonal relationships (such as the *wu lun*). It also stresses the need to balance relationships at the individual, family and social level with virtues such as *li* (respect, social propriety and order), *jen* (kindness and benevolence towards others), *hsiao* (filial piety), and *chung* (loyalty to principles).

As a result, the Chinese have traditionally maintained social order through a harmony-within-hierarchy arrangement rather than a coherent system of law enforcement (Bond & Hwang, 1986). A hierarchical order of status and roles "was founded on the criterion of moral cultivation, with knowledge as either of secondary importance or the direct reflection of moral achievement". Hierarchical relationships between people and codes of behaviour for each role were included in the early Confucian idea of social order.

The values, preoccupations and processes of Chinese societies have also been shaped by a succession of strong central governments (in both the Imperial and Communist eras), the prevalence of subsistence agriculture, and long periods of isolation from the outside world (Fung, 1948; Hsu, 1981; Martinsons & Hempel, 1995). This has led to a circumstantial orientation and the *rule by man* that may be contrasted with the legalistic orientation and the *rule of law* that prevail in Anglo societies (Hsu, 1981; Martinsons & Hempel, 1995; Tu, 1996).

Lau and Kuan (1988, pp. 5-6) suggest that the principles legitimising the authority of the Chinese government "can be subsumed under the notion of Mandate of Heaven. [They rationalised] the continued rule of those who could preserve social and cosmic harmony as well as promote the well-being of its subjects. The power of the traditional government was supreme and unchecked until the situation was so serious that peasant rebellions toppled it and made way for its replacement". More recently, the role of the state as a *paterfamilias* has been

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taken up by both Chinese political and business leaders.

As a result, the Chinese score much higher on both power distance and collectivism than do those sampled in Anglo countries. This implies a greater concern with in-group welfare (rather than self-interest), greater acceptance of unequal power distributions (and social hierarchies), and higher levels of cooperation within the in-group. The Chinese place less emphasis on immediate outcomes, have more respect for ancestors and those in authority, and concentrate on maintaining harmony with nature rather than exerting control over it (Hsu, 1981; Hofstede & Bond, 1988). Bond and Hwang (1986, p. 213) contend that "the Chinese preoccupation with social order" mirrors "the Western preoccupation with individual freedom."

The Chinese emphasise the importance of obligations and duties that promote conformity, collective solidarity, and obedience while downplaying assertiveness and creativity. Interpersonal relations stress integrity and dignity instead of the Anglo focus on openness and spontaneity. Their *non-religious* socialisation also highlights the inherent duality and contradiction of many situations and leads to very pragmatic perspectives (Bond, 1986).

3.4.1 Cultural influences on Chinese business

The economic development of East Asia has increased international interest in its predominant neo-Confucian culture. Before the recent financial crisis across the region, it was even hypothesised that the cultural inheritance had been a comparative business advantage for East Asia under the global market conditions of recent decades (Kahn, 1979; Hofstede & Bond, 1988).

According to Redding (1992), the Western multinational, the Western-state influenced firm and the Chinese family business are among the five major and distinct *recipes* for achieving business and economic success. Each emerged in a different context, reflecting the ways in which societies coordinate economic behaviour.

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The Chinese family business (CFB) has been the primary force behind economic growth and capitalism of East Asia with the exception of Japan and South Korea (Whitley, 1991; Redding, 1990). It can be seen as a product of its culture, with its key characteristics following from the principles of neo-Confucianism (see for example Ko, 1995; Martinsons & Hempel, 1995). Indeed, Redding (1990) drew an analogy to the link made by Max Weber (1985) between 17th century Protestantism and the behaviour of Western European capitalists. Weber (1951) had suggested that Confucianism failed to promote the kind of entrepreneurial behaviour required in the early stages of capitalism.

In contrast, Redding (1990) argued that the moral basis of entrepreneurial behaviour could be found in the Confucian ethic as well as in the Protestant ethic. He further identified three defining characteristics of neo-Confucian or Chinese capitalism as: paternalism - the importance of the family and the father figure at the centre; personalism - a reliance on interpersonal bonding as the basis of transaction; and insecurity - a sense of uncertainty which fosters hard work, the urge to accumulate wealth, and a will to maintain control. Relationships that blur the boundary between business and social activities have also been the norm.

These characteristics are partly the consequence of Chinese immigrants coming to a colonial setting like Hong Kong (and previously Indonesia, Malaysia, the Philippines, and Singapore as well). Most of these newcomers were largely ignorant of the laws in the strange new land and were unable to either read or speak its official language(s). As a result, they would rely greatly on kinship institutions and informal networks for social and business support, as a defense against harsh and hostile treatment by the host society (Chan & Chiang, 1994).

The start-up enterprises of these Chinese overseas typically represented an effort to seize opportunity niches that were under-served or abandoned by major business groups. Many of them

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established co-ethnic partnerships, especially among family or kin members, in order to share the financial risk. Ethnic resources would also tend to provide much of the labour supply, with informal family and kin networks being used to recruit, supply and replenish labour for the immigrant business owner.

Family and kinship labour would be comparatively cheap, reliable, resourceful and loyal because social obligations would invariably come before employer-employee relations, and make the latter subject to social control of the family/kin network. Such labour would also be very resilient and flexible, a critical attribute in the early stages of a business, when the demand for labour may be highly variable and unpredictable.

3.5 Chinese Leadership and Management

The high power distance in Chinese societies results in very centralised organisations (especially in terms of decision-making) with a directive style of management (Whitley, 1991). Tricker (1994) suggested that this centralisation extends to corporate governance, with boards of directors in Overseas Chinese enterprises playing a comparatively minor role.

At the operational level, Chinese employees expect the organisation to look after them (like a family member) and in return demonstrate their loyalty to the organisation and deference to their boss. This enables and promotes an autocratic and paternalistic leadership style with little bureaucratic regulation (Westwood, 1997). Consequently, followers are far more likely to participate in preliminary discussions than in the subsequent decision-making process, and there is a tendency to avoid a public conflict that may result in a loss of face.

Fukuda (1983) has contrasted the Chinese pattern of leadership with that of the Japanese. He states that the leaders of Japanese organisations act as coordinators to achieve their group goals. They not only admit dependence on their subordinates but use this situation to maintain group harmony. Conversely, the

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Chinese pattern of leadership emphasises a rational commitment to leaders, but **no** admitted dependence on subordinates **nor** emphasis on maintaining group harmony.

3.5.1 Chinese thinking and decision making

Watson and Buede (1987) also suggest that the Chinese have a different mode of decision-making; the fatalistic legacy of their philosophies provides a stark contrast to the Western humanist tradition. The Chinese are said to perceive the world to be based on a network of relationships (see for example Bond, 1986). This tends to make them socially-oriented and situation-centred rather than individually-oriented or self-centred (Hsu, 1981).

Tricker (1988, p. 40) asserted that in order to fully understand the Chinese, Westerners must recognise that they possess "a different [set] of coordinates as well as a different scale of values." This implies that an *etic* approach (see Mead, 1953), whereby a group or society is studied and understood on its *own* terms rather than those imposed by outsiders, would be useful.

Nevertheless, the Chinese way of thinking has been described as utilitarian and pragmatic (Nakamura, 1960), making them highly sensitive to outside conflicts and inconsistencies. They prefer subjective and synthetic decisions and have a reduced need for internal planning as a result of their hierarchical structures. "Non-Westernized Chinese thinking can be characterized as intuitive, moving from experience via contemplation to understanding" (Tricker, 1988, p. 39).

Hofstede and Bond (1986) contend that science benefits from analytic Western-style thinking, whereby truth emerges from facts and figures. In contrast, management and government are based on the art of synthesis, which is more consistent with Eastern thought. They suggest that the rapid development of Confucian societies in the recent past was enabled by an ability to put Western analytically-derived technologies into practice using their synthetic abilities. More recently, Mintzberg (1994) has

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claimed that there is a basic incompatibility between analytic planning and synthetic strategy making.

Eastern religion and philosophy, as represented by Confucianism, Hinduism, Buddhism, Taoism and Shintoism, sees human truth as partial, whereas the Christian, Muslim and Judaic religions are very much concerned with a Universal Truth (Hofstede & Bond, 1988, Hsu, 1981). Eastern societies emphasise virtue and practical ethics, and leave room for feelings, intuition and spirituality, but do not attempt to resolve the issue of truth.

3.5.2 Chinese information management

Tricker (1988) considered the cultural aspects of information based on the characteristics and culture of Chinese business techniques. He noted that the classical paradigms of the information systems (IS) literature are rooted in Western thought. However, the transformation process by which an agent acquires and interprets information is culturally significant and may even be culturally dependent. He concludes that cultural factors have a part in IS research and information resource management, especially when there are international, cross-cultural dimensions. More recently, Martinsons & Westwood (1997) highlighted some of the characteristics which contrast Western and Chinese societies in order to explain the distinctive patterns of MIS use found in Chinese businesses.

There is a prevailing view, but probably not a general consensus, that the Western reductionist, empirical and quantitative approach to problem-solving is more appropriate for computer-based decision support systems than its Chinese counterpart (see Martinsons, 1991; Zhang & Angell, 1989). The former acknowledges that uncertainty is hard to eliminate, but does not preclude its reduction. As a result, "a great deal of effort has been devoted to modelling decision processes, environments and even judgments [as with expert systems]. An analytic process of decomposition and recomposition [with quantitative methods to imply objectivity] has been emphasised" (Zhang & Angell, 1989, p. 15).

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It has been argued that the Chinese are comparatively more flexible in dealing with uncertainty (see Hofstede, 1980; Redding, 1990). Perhaps the deepest insight from Taoism is a profound awareness that change and transformation are both inevitable and universal. With less initiative to act independently and a lower perceived capacity to influence events, there may be a reduced need to gather information and assess possible outcomes (Boisot, 1987; Martinsons & Westwood, 1997).

Following from this, a weaker link between the level of perceived environmental uncertainty and the level of information sourcing or environmental scanning activity would be expected. Moreover, transplanting Western decision technologies, without appropriate adaptation, is also likely to "mislead rather than effectively guide Chinese decision-makers" (Zhang & Angell, 1989, p. 4).

These perspectives are also relevant to the reported study. As mentioned in Chapter 2, it has been argued that top managers will seek out more information in response to perceived environmental uncertainty (Daft et al., 1988). The common link between uncertainty and the lack of information about specific events and relationships implies that additional information will invariably provide a better basis for predicting the future. Management information systems claim to make needed information more accessible and easier to understand, while decision support systems make it possible to perform more effective information analysis (Zhang & Angell, 1989, p. 6).

The literature reviewed here suggests that assorted cultural factors will have a significant impact on strategic management activities and decision making in general. The neo-Confucian cultural heritage of the Japanese and Chinese also helps to explain their distinctive management systems (see Redding, 1990; Whitley, 1991). Similarly, the Confucian-based Chinese culture that prevails in Hong Kong would be expected to have a significant effect on the strategic intelligence activities conducted there. However, institutional factors also exert an

influence. As a result, the sections that follow consider the economic, social, and political development of Hong Kong.

3.6 Economic Development in Hong Kong

Hong Kong represents a remarkable economic story as well as a unique political situation. As a British colony before July 1997, Hong Kong was perceived by numerous observers to be "a borrowed place on borrowed time." Nevertheless, its favourable business environment and strategic location, at the crossroads of Asia and adjacent to mainland China, attracted businesspeople from all over the world and allowed many local enterprises to flourish. The modern concrete and glass jungle that surrounds Victoria Harbour attests to the economic success of Hong Kong.

The global importance of Hong Kong also far exceeds that to be expected for a place with less than 7 million people living on a small fraction of its 1000 square kilometres. Its rapid development has been cited to show the merits of a *laissez faire* economic policy (see E. Chen, 1995). As a polycentric city with global connections and a critical economic dependence on services, Hong Kong is not only a bellwether for the world's most populous country (Martinsons et al., 1997), but also a vanguard of the post-industrial age (Hall, 1997; Martinsons, 1993).

Hong Kong was the first economy in the developing world to be ranked among the world's ten largest trading communities, and it has maintained that elite status since 1991 (Government Information Centre, 1997). Hong Kong became a major player in the global economy despite its rather humble circumstances in the 1800s. Even as the British progressively gained sovereignty over Hong Kong in the 19th century, the wisdom of the acquisition was seriously questioned; one foreign secretary, Lord Palmerston, dismissed it as "a barren rock with hardly a house upon it!".

Both the history and destiny of Hong Kong are highly interdependent with those of mainland China. From the early 1800s until the middle of this century, the territory served as

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a staging post for trade between China and the West. However, the Communist takeover of mainland China in 1949 (and the Korean War) led the United States and the United Nations to impose embargoes on China trade. These effectively suspended Hong Kong's role as an entrepot even as a flood of refugees from Communist China rapidly boosted its population during the 1950s.

This large immigrant group included many entrepreneurs from Shanghai; their capital and expertise enabled the industrialisation of Hong Kong. Its initial manufacturing outputs were textiles and clothing, but by 1960 this product line had been extended to include plastic, toys and leather goods. Over the next two decades, Hong Kong thrived on its industrial base, with new outputs including printing materials, metal goods, machinery, timepieces, and electronic goods. Many local producers initially subcontracted work from a few large retailers in the United States and Western Europe. These business relationships were later extended, creating a global market of branded goods produced in Hong Kong.

Regional economic development steadily raised the prominence of sectors such as financial services, transportation and telecommunications while increasing tourism led to the emergence of the hospitality and retailing trades. By the late 1970s, Hong Kong was a thriving and diversified export-driven economy. However, the enactment of an Open Door Policy by the PRC sparked further restructuring. Hong Kong re-emerged as *the* gateway between China and the outside world, and its economic focus shifted from light industry to services.

3.6.1 Economic transformation
Hong Kong's economic transformation is evident from the changing contributions of different sectors to its gross domestic product (GDP). The most notable dynamic has been the continuously declining role of manufacturing. Its share of GDP dropped from 34 percent in 1970 to 11 percent in 1995 while employment fell from 47 percent to 21 percent of the total labour force. The

contribution of the services sector rose from 60 percent in 1970 to 83 percent in 1995 while its share of employees grew from 41 percent to 72 percent (Government Information Centre, 1997). Financial services, insurance, real estate and business services has been a particularly vibrant sub-sector. It has grown at an average annual rate of more than 20 percent since 1985, and by 1995 it accounted for 28 percent of total gross domestic product in Hong Kong (Government Information Centre, 1997).

Much of this economic shift can be related to the rising cost of doing business in Hong Kong. The inability of land and labour supply to meet demand has led to rapidly escalating rental prices and wage rates. These have enriched property developers and speculators while allowing the overall standard of living in Hong Kong to rise rapidly. However, they have also prompted many local enterprises to relocate their labour-intensive work. Between 1981 and 1996, about two-thirds of all Hong Kong manufacturing firms set up plants in southern China. By 1997, over 30,000 Hong Kong-owned factories were employing about five million people in Guangdong Province (Government Information Centre, 1997; Sung, 1997). Remarkably, most of the value added to goods *produced by Hong Kong* now comes from the mainland (Magnier, 1993; Redding, 1994).

Leading service providers in Hong Kong have also moved their back-offices northwards, across the border into mainland China. At the same time, several venture capitalists have established "software factories" in Guangdong province, often with the co-operation of the national government of the PRC or its provincial counterpart.

Despite the limited amount of production taking place in Hong Kong during recent years, the economy remained buoyant throughout the political handover period. A business-as-usual posture and a U.S. dollar-linked currency enabled it to remain remarkably stable during the Asian financial crisis in 1997. Thousands of multinational firms have maintained their regional headquarters

in Hong Kong, primarily because it is seen as *the* best base for China business. Sung (1997, p.3) asserts that Hong Kong "has been able to reap most of the blessings that come from being in close contact with a large, low-income population while avoiding most of the curses generally associated with such a relationship".

3.6.2 Business in Hong Kong

Redding (1990) and Warrington (1982) are among those reporting that explicit or long range business planning is rare in Hong Kong. This characteristic may be attributed to a favourable business environment, a stable legal system, and the precarious political situation in pre-handover Hong Kong. However, the predominance of small and simply organised enterprises, which is consistent with a neo-Confucian cultural heritage, is arguably the most important explanatory factor.

Small firms tend to have simple structures and strong autocratic leaders (Mintzberg, 1983) and this is very evident in Hong Kong. A low degree of organisational specialisation and limited administrative resources make it necessary to concentrate decision-making. This process often takes place informally, in the mind of the leader. Smaller firms with their limited resources are more likely to adjust to, rather than influence changes in environmental conditions. They are able to make incremental strategic changes in lieu of broad and long-range decisions (Quinn, 1980). Small businesses also tend to focus on personal relationships and cooperation, especially in turbulent markets. Personal contacts are likely to be based on mutual need, trust and affiliation (Smeltzer et al., 1988; White, 1986).

The Hong Kong economy is dominated by small, family-owned enterprises. According to recent statistics, Hong Kong only had about 60 organisations with over 1000 employees (Hong Kong Government, 1997). About 98 percent of the nearly 500,000 registered establishments had less than 50 workers and most had fewer than 10 full-time staff!

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Niche strategies and a reliance on both *Chinese management systems* and sub-contracting gave them the flexibility and resilience to thrive in dynamic markets (Martinsons & Hempel, 1995; Siu & Martin, 1992; Sit & Wong, 1989). However, these same characteristics impair both organisational growth and the use of advanced technologies (see Lau & Snell, 1996; Redding, 1994).

3.6.3 Infrastructural support for development

The recent evolution of the Hong Kong economy has dramatically increased its levels of trade and transshipment activity. With exported and re-exported goods annually worth more than US$ 20,000 per person, Hong Kong has been the world's top trading economy on an earnings-per-capita basis (Hong Kong Government, 1996). Local businesses have geographically dispersed their operations, created wider webs of business relationships, and expanded their product ranges. This has complicated management control and coordination requirements in Hong Kong. Thus, the progressive development of a comprehensive transportation and communications infrastructure may be seen as a critical enabler for the economic modernisation of Hong Kong.

Hong Kong has capitalised on its fine, natural, deep-water harbour and strategic location to rank as the world's busiest container seaport since the early 1990s (Government Information Centre, 1997). Its air passenger and cargo loads also rank high on a global scale. A massive public works project to realise the Hong Kong Government's Port and Airport Development Strategy (PADS) is to further enhance these facilities. Hong Kong also has extensive road and railway links and cost-effective public transportation systems. Recent or current projects aim to improve its physical links to the rest of the PRC.

Hong Kong had the world's first fully digitised telephone system entirely connected via optical fibre cables and implemented the first mobile telephone network operating underground - in the cross-harbour tunnels and underground mass transit railway. In the mid-1990s, it was among the world's ten busiest international

telephone traffic hubs and had one of the highest numbers of cellular phones and pagers per capita (Petrazzini & Ure, 1997).

The emergence of Hong Kong as a major hub for financial and commercial services would have been impossible without such a comprehensive telecommunications infrastructure. The pervasive adoption of basic office technologies has also been critical (see Burn & Martinsons, 1997). IT is routinely used to provide innovative services such as remote booking and ordering services as well as telephone banking, electronic funds transfer and smartcard transactions for retail purchases and transportation fares. Nearly all large- and medium-sized organisations in both the private and public sectors have raised productivity and service levels by using IT (Burn et al., 1993; Burn & Martinsons, 1997). The IT penetration rates are particularly high in the financial services, transportation, communication, and wholesaling industries (Tye & Chau, 1997).

Despite the presence of a few pioneering information systems (see Burn & Szeto, 1997; Loebbecke & Blanning, 1997; Martinsons, 1997; Martinsons & Hosley, 1992), Hong Kong remains surprisingly weak in the managerial and transformational application of information technologies (see Martinsons, 1994; Tye & Chau, 1995; Yeung et al., 1995a,b). The implementation of inter-organisational systems such as electronic commerce has also lagged behind places such as Singapore (see Burn & Martinsons, 1997; . This has raised concerns about the economic competitiveness of Hong Kong, especially since many firms have left only a managerial "brain" there after moving their operational "body" to mainland China.

The remarkable progress and transformation of the Hong Kong economy has required more than just a strong supporting infrastructure. It has also been critical to develop good relationships with overseas markets and investors. Perhaps the most important relationship has been that with mainland China, which has called for a high degree of flexibility and pragmatism.

3.7 The Relationship with China

Prior to the political handover in 1997, Hong Kong had to consider the interests of the PRC - its northern neighbour, future political master and awakening economic giant - when dealing with nearly every significant political, social or economic issue. The set of agreements under which Hong Kong became a British colony were not recognised by the post-1949 Communist Chinese regime. Nevertheless, the PRC has provided the colony with critical supplies of food, water and energy. The very existence of Hong Kong as a capitalist haven was thus dependent on the benevolence of mainland China.

Pre-handover Hong Kong was "a part of China that happens, for the time being, to be administered by someone else. Hong Kong is Chinese not only geographically, but also ethnically, culturally and often emotionally ... separated from China only by the artifice of political arrangements" (Youngson, 1983, p. 1). Despite being administered by the British for more than 150 years, the vast majority of its population has always been ethnic Chinese. Mass migrations from the southern and coastal provinces of China brought successive waves of Chinese to the territory. In the 20th century, these groups have fled political turmoil in the 1930s, war in the 1940s, and Communism since the 1950s.

3.7.1 Chinese business characteristics

The vast majority of Hong Kong residents were born in mainland China or are direct descendants of those who were. The Cantonese dialect of Chinese, which originated in Guangdong province on the mainland, is an official language of Hong Kong alongside English. Not surprisingly, Martinsons and Hempel (1995, p. 2) suggest that "Beneath a business veneer which resembles that found in the West, there is a deeply-rooted and different social culture." Although Hong Kong is an international business centre, it can be seen to have added Western ideas onto a Chinese foundation rather than really mixing the two cultures.

In fact, Hong Kong is the epicentre of several concentric Chinese

business circles (see Hicks, 1987; Siu & Martin, 1992). The innermost of these includes Taiwan, Macau, and Guangdong province in the PRC while another encompasses Southeast Asia and all of mainland China. The southern Chinese have historically had a peripheral role in state politics. With family welfare as the top priority, they have been among the world's most successful traders and business people.

Nowhere has this been more evident than in Hong Kong. Hofer (1993, p. 68) has even claimed that the territory "exists only for commercial reasons. Everything else in life ... is secondary to the business of earning profits". The remarkable progress made by Hong Kong since the 1950s supports a classical view that economic development can be achieved if a government practises non-intervention. Similar to the three other East Asian *dragons* (Singapore, South Korea and Taiwan), it has adopted liberal trade and taxation policies, controlled foreign exchange rates and allowed unrestricted capital flows in order to encourage rapid economic development (Lasserre, 1981).

Based on a strong belief in free trade and private investment, the Hong Kong Government has maintained a *positive non-interventionist* policy, and confined its economic functions "to the provision of a viable political and physical infrastructure" (Lau & Kuen, 1988, p. 24). These functions of the state have included pegging the local currency the U.S. dollar, controlling the land supply through periodic auctions, and owning both a massive housing stock and the major local transportation providers. Nevertheless, the supply and demand of all but the most basic goods and service has be determined primarily by market forces. Such a policy has arguably enhanced "Hong Kong's capacity for breathtaking change" (see Chetham, 1997, p. 27 for evidence to support this claim).

Even compared to market-based economies such as the United States and the United Kingdom, Hong Kong has had less government regulation that interferes with or controls business activities.

A hackneyed adage suggests that in Hong Kong, an enterprise can
be established in the morning, made operational by lunch, and
become profitable by dinner.

3.7.2 Economic volatility in an open economy

Perhaps paradoxically, the largely non-interventionist British
colonial administration gave Hong Kong a high degree of political
stability in the 150 years before 1997. However, as a fairly
small and very open economy, Hong Kong has been (and will
continue to be) prone to developments in neighbouring economies
and overseas export markets. Han Su-yin (quoted in Hofer, 1993,
p. 68) suggests that although "squeezed between giant antagonists
crunching huge bones of contention ... (it) has achieved an
existence which is baffling, infuriating, incomprehensible, and
works splendidly - on borrowed time in a borrowed place".

Despite a solid legal system and a stable political framework,
Hong Kong has also experienced a comparatively large number of
internal shocks. These have included banking crises in 1965 and
1984-85, social unrest spilling over from the Culture Revolution
in the PRC during the late 1960s and early 1970s (including the
1966 Star Ferry riots), a stock market crash in 1973 (with a 55
percent fall in value), a currency trauma in 1983, closures of
the stock and futures exchanges in 1987, and a pervasive sense
of pessimism after the June 1989 Tiananmen Square massacre.

In the years between the signing of the Sino-British Joint
Declaration in 1984 and the formal transfer of political
sovereignty in 1997, there were wild swings in local confidence.
The lowest point came after the Tiananmen Square massacre, when
the stock market (which is perhaps the best barometer of business
and social sentiment) collapsed and there was a significant
'brain drain' (emigration of professionals).

Conversely, in 1992 and especially 1993, the dramatic growth of
global interest in China created a whirlwind of economic activity
in Hong Kong. Many of the emigrants returned (often with

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'insurance' - a foreign passport) and thousands of others came
to the territory looking for part of the action. The value of
the stock market nearly tripled within a single twelve month
period. Recent evidence of the environmental volatility in Hong
Kong is provided by *Fortune* magazine, which featured a June 1995
cover story entitled "Death of Hong Kong" only seven months after
proclaiming it to be the world's *best* city for business.

Annual growth rates in Hong Kong have experienced a "switch-back
of almost violent turbulence" (Redding, 1994, p. 73) for several
decades, but unemployment never emerged as a significant problem
during the era of British rule. The Hong Kong Chinese business
community has exhibited a remarkable capacity to adapt to
environmental change. As the PRC assumed the political
sovereignty of Hong Kong from Britain, this attribute was being
tested severely once again.

3.8 Post-Handover Hong Kong

Based upon the Sino-British Joint Declaration, the Hong Kong
Special Administrative Region (SAR) is to enjoy a high degree of
autonomy. Its current social and economic systems are to be
maintained until 2047 under a "one country, two systems" concept.
Nevertheless, there are many reasons for concern as an icon of
capitalism comes under the political control of the world's last
major Communist government.

The national government in Beijing can choose to utilise, to
learn from, to adapt or even to destroy the Hong Kong model.
However, the Chinese leadership is unlikely to simply ignore
their newly (re-)acquired territory. Whether it is the economic
"golden goose" for China or the social and political "renegade" in
the country, Hong Kong is likely to attract a disproportionately
large amount of interest from both domestic and foreign parties
for many years to come.

Hong Kong could now serve as a role model for the rest of the
PRC, demonstrating that Chinese businesses can function

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effectively in an open, market-based economy where there is little state intervention or interference. It may also provide a model for the Chinese management of information, especially if ethnic Hong Kong Chinese chief executives are found to acquire and use information differently from their Western counterparts.

3.9 Closing Comments on Context

This chapter has highlighted the cultural and institutional factors that shape the research context for the study. It is suggested that the basic character of business and society in Hong Kong reflects the dominance of the ethnic Chinese in the local population and their neo-Confucian cultural heritage. Meanwhile, the territory's institutional framework has been strongly influenced by decades of British administration, an openness to the global market economy, and a chronic need for Hong Kong's business and political elite to consider the interests of mainland China. This leaves open the question of how the pattern of strategic intelligence in pre-handover Hong Kong will compare to that observed previously in Anglo cultures.

The next chapter presents the framework that was used to address this question and related ones while also outlining the research philosophy of the author. Subsequent chapters report and discuss the results of the study, and thus enable conclusions and implications to be drawn from them.

Chapter 4
THE RESEARCH FRAMEWORK

This chapter presents the framework for the research. It is divided into six sections. The first identifies the focus, objectives, and intended contribution of the study. The second outlines the major research questions and areas of interest. The third presents the author's research philosophy and provides the rationale for employing both a larger-scale survey and a smaller number of case studies. The fourth and fifth sections detail the process of data collection and analysis for the survey and the case studies, respectively. The assumptions and limitations of the methodology are discussed in a sixth section.

4.1 Research Focus, Objectives and Contribution

The focus of the study was on a key element of strategic management - the acquisition and use of information about the external business environment. Chapter 1 introduced the topic of strategic intelligence while Chapter 2 demnstrated that it has been a popular subject for scholarly study in recent decades. There is now a fairly rich body of environmental scanning literature, but nearly all the reported studies have been conducted in Western settings. The major studies reported before the late 1980s used data drawn from organisations that were almost exclusively based in the United States. More recently, studies conducted in Canada, Korea, Nigeria, and the United Kingdom have been published.

The general purpose of this study was to extend the existing body of environmental scanning literature by observing, describing and (to the extent possible) developing explanations for the strategic intelligence patterns in a distinctive context. As Carroll and Johnson (1990, p.11) contend, it is important to research not only "how decisions are made in terms of the information used, (and) the way information is combined, ... but also the situational effects on decision making".

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Some 25 centuries after Sun Zi first documented its importance to military strategy, the context for the strategic intelligence phenomenon returned to Chinese organisations. However, this time the data were collected in Hong Kong, on the eve of its political transfer from the United Kingdom to the People's Republic of China. The aim of the study was to find out how Hong Kong Chinese chief executives perceived the pre-handover environment and how they sourced information in order to recognise, understand and address strategic issues.

Carroll and Johnson (1990, p. 14) suggest that research may be conducted to examine a particular decision, a particular type of decision, a particular decision maker, or aspects of the decision process in general. Based upon this typology, the study looked at a particular group of decision makers (ethnic Chinese chief executives in Hong Kong) and a particular type of decision, the sourcing of information about the external environment in the context of strategy making or strategic issue diagnosis.

The primary research objective was to systematically observe, describe, and illustrate the acquisition and use of information about the external environment by Chinese chief executives in pre-handover Hong Kong in order to develop explanatory theory. Chinese businesses have been renowned for their ability to succeed amidst environmental uncertainty (Ko, 1995; Redding, 1990). This reputation prompted an interest in how ethnic Chinese CEOs in different economic sectors - goods-producing as well as service-providing and private as well as public - perceived the pre-handover Hong Kong business environment, and how they scanned their environments in response to perceptions of uncertainty as well as strategic needs.

The secondary research objective was to compare and contrast the results from Hong Kong with previously reported studies of environmental scanning in other contexts. This work is believed to be the first to consider strategic intelligence activities in the heart of Asia and by ethnic Chinese managers. Consequently,

an appropriate research design would enable 1) meaningful comparisons with many previously-reported environmental scanning studies, and 2) the development of explanations for any differences that were observed.

These comparisons and explanations were expected to build upon and advance cross-cultural knowledge in the fields of strategic management and information management. The research thus implicitly sought to examine the applicability of Western (and primarily Anglo-American) management theories and practices in a predominantly Chinese cultural environment. Given the perspective presented in Chapter 3, there were reasons to believe that this study of Chinese chief excutives in pre-handover Hong Kong would uncover both behaviours and rationales for behaviours that were different from those of managers in countries with an Anglo cultural heritage.

The research goals were descriptive and explanatory rather than prescriptive. The primary aim was *not* to prescribe how managers in Hong Kong or elsewhere *should* engage in strategic intelligence activities. The study was expected to contribute significantly to our knowledge and understanding of how information about the business environment is collected and used by top managers, especially when facing an impending environmental discontinuity. The conclusions and implications drawn from the results are likely to interest at least three groups: organisational designers, management practitioners, and IS specialists.

With respect to the first of these groups, Daft et al. (1988, p. 137) suggest that "gradually unravelling the sequence of activities associated with interpretation of the environment and strategic responses may provide a stronger normative basis for saying how firms can be designed to increase company performance in light of strategic or environmental contingencies". This is in line with the information processing perspective considered in Chapter 2.

Meanwhile, growing numbers of organisational leaders all over the world may be expected to face the same fast pace, turbulence and information richness that characterised pre-handover Hong Kong. Many of these strategic management practitioners are likely to be interested in the environmental perceptions and information sourcing behaviours found in this study. Their interest would stem largely from a desire to benchmark their own activities. However, a few managers, even non-Hong Kong ones, may want to go further. They may not copy the observed patterns, but may use them to better understand the behaviours (and underlying rationales for the behaviours) of potential adversaries or collaborators. As Chinese businesses extend their impact internationally, such a knowledge base will become progressively more valuable to non-Chinese management practitioners.

The focus on information also leads to the issue discussed at the end of Chapter 1 - how can information technology be applied to support strategic management activities. The findings and inferences about the degree and nature of current and potential computerisation of strategic intelligence activities will be relevant to the vendors, sponsors, designers and users of IT products, such as EIS and related decision support tools, as well as those providing information-based services. By understanding the hows and whys of environmental scanning by Hong Kong Chinese CEOs, they should be able to offer products and services that are better suited to their intended customers and end-users.

4.2 Research Questions (and Areas of Interest)

Top managers are known to have limited data collection and information processing capabilities while even the largest organisations have finite amounts of available resources. As a result, every chief executive must make strategic choices, both in terms of the *process* that will be used to develop strategies and the *content* of those strategies. During the strategy making (or formulation) phase, the key questions include: what is happening in the external environment? what issues merit strategic management attention? what information sources will

be most useful to understand the external environment? what information sources should be tapped in order to gain a better understanding of a specific strategic issue?

The constrained capabilities and resources of managers and organisations together with the endless stream of happenings in the external environment and wide variety of alternative information sources give rise to a very long list of potential research questions. Based on the literature reviews presented in the first three chapters, and the time and resources available for this study, a decision was made to address the following major questions:

What uncertainties in the external business environment were perceived by Chinese chief executive officers (CEOs) in pre-handover Hong Kong?

What sources were used by these CEOs to acquire information about the external business environment?

What perceived characteristics of these sources influence their degree of use?

A subsidiary question, related specifically to the political handover, was:

To what extent was the impending change of political sovereignty a strategic consideration for Hong Kong Chinese CEOs?

Associated with this, the study considered the following:

Perceived strategic uncertainty (PSU) in the pre-handover Hong Kong environment, and the following specific variables:
- the <u>perceived uncertainty</u> of different environmental sectors
    the <u>complexity</u> of different sectors
    the <u>rate of change</u> of different sectors
- the <u>importance</u> of different environmental sectors

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[based on Daft et al, 1988]

Sources used by Hong Kong Chinese CEOs to acquire information about the external environment
- the frequency of use of different information sources external vs. internal, personal vs. impersonal
- the influence of educational level on information source use
- the sources used in different decision-making roles
- the sources used for specific strategic issues

Relative importance of accessibility and quality in the selection of an information source
- perceived quality of different information sources
- perceived accessibility of different information sources

Information source use during strategic issue diagnosis
- the general approach to strategy making
- strategic issues addressed in pre-handover Hong Kong
- use of information sources during different diagnostic phases

As suggested by the model presented in Chapter 2, assorted relationships between perceived environmental characteristics, environmental scanning activity, information source characteristics as well as the educational level and decisional roles of the managers could have been selected for investigation. The current and potential role of computer-based information systems in the strategic intelligence activities of Hong Kong Chinese CEOs could also have been explored in various ways.

Before identifying the specific hypotheses that were formulated, and detailing the methods that were used both to test these hypotheses and to study related aspects of the focal phenomenon, the author's philosophy on research design will be outlined.

4.3 Research Philosophy

A *research design* refers to the overall structure and orientation of an investigation (Bryman, 1989). It is the arrangement of the

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conditions associated with the research process in a manner that aims to combine *relevance to the purpose* of the study with an *economy* in procedure (Sellitz et al., 1976).

A research design serves as the blueprint for the collection, measurement and analysis of data (Phillips, 1971). In contrast, research methods are the operational techniques used to gather the data and to process it. In recent years, the tremendous advances in statistical techniques and information technology have spawned an increase in quantitative research studies. Instead of merely following this herd instinct, careful consideration was given to the design and methods that would best suit the research questions and areas of interest identified in the previous section.

A rigorous methodology is an important attribute in a substantial research project. Such a methodology will include a system of explicit rules and procedures upon which the research is based, and against which claims for knowledge as a result of it can be evaluated. By definition, *scientific* knowledge is provable by both reason and observation, a scientific methodology must address both these issues in terms of logical validity and empirical verification.

A scientific methodology will also facilitate communications between scientists, including social scientists. It serves as a set of rules for reasoning whereby facts can be evaluated in order to draw inferences. It amounts to the use of logical structures and appropriate procedures for observation and verification (Nachmias & Nachmias, 1989). The use of such a methodology helps to ensure adherence to a logical reasoning process. Since theories can be established or verified only on logical grounds, they must be corroborated with or verified by empirical evidence.

Scientific research has been widely characterised as involving a systematic sequence of *observation*, *description*, *explanation*,

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and *prediction*. However, in the social sciences, which is commonly defined to include management studies, the first parts of the sequence have attracted the most attention. Countless numbers of descriptive studies have been reported in working papers and presented at conferences. Research that provides explanations and predictions has been less common, perhaps because this type of research is not as easy.

There is no universally-accepted scientific methodology. Scientists "have not yet settled among themselves on a single model of what science is" (Lee, 1989). Moreover, science is rarely free of error and/or bias. Gould (1980) has stated that "Science is not an objective, truth-directed machine, but a quintessentially human activity, affected by passions, hopes and cultural biases. Cultural traditions of thought strongly influence scientific theories". According to Max Born (1950), "There is no philosophical high-road in science with epistemological sign-posts. No, we are in a jungle and find our way by trial and error, building our road behind us as we proceed. We do not find sign-posts at cross-roads, but our own scouts erect them to help the rest".

Nevertheless, the choice of a research *method* must consider the *purpose of the research* and the *nature of the phenomena* to be investigated (Galliers, 1992; Gay & Diehl, 1996; Yin, 1994). Morgan & Smircich (1980) have argued that with a subjective approach, the basic epistemological stance is to obtain phenomenological insight, whereas an objective approach seeks to construct a positivist science.

The general purpose of the reported study was not only to observe and objectively describe the strategic intelligence patterns of Hong Kong Chinese organisations, but also to begin developing a subjective understanding of this management phenomenon. Moreover, it is noted that the focal phenomenon **a)** can not be studied outside of its normal setting, **b)** is only partly amenable to quantification, and **c)** its social context is essential to this

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work, and must be explicitly considered. These conditions together with the pioneering nature of this phenomenon in the Chinese business cultural context make it appropriate to use both *arms-length* and *close-up* methods of data collection (Marshall & Rossman, 1989; Yin, 1994).

In order to answer the aforementioned questions, the study aimed to go beyond the observation, description and analysis of Hong Kong Chinese chief executive scanning, to include interpretation and explanation. Much time and effort were spent designing the study (and countless colleagues around the world were consulted during the process) because the design was perceived to be a fundamental basis for assessing the ultimate credibility of the results that are reported. Also, since a Ph.D. is primarily an apprenticeship in research, it was considered important to demonstrate an understanding of, and competency in, multiple methods.

Two very different methods were selected to collect and analyse the data in this study. It was believed that the methods could complement each other in terms of advancing knowledge of a focal phenomenon in a specific context. Consequently, the research was designed to include both a cross-section of quantitative data from a larger-sized sample of CEOs *and* a wider range of more in-depth data from a smaller number of these informants. The statistical analysis of cross-sectional survey data would enable the testing of specific hypotheses that had received empirical support in the Western management literature (reviewed in Chapter 2) or that were suggested largely by the nature of Hong Kong business and society outlined in Chapter 3. Complementary to this, the collection, analysis and interpretation of selective contextual data was expected to enable more meaningful insights and explanations and thereby promote a deeper understanding of strategic intelligence in the Hong Kong Chinese business context.

The subsections that follow discuss the two methods used in this study and provide a rationale for their selection.

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4.3.1 Survey research

"Traditional survey research usually serves as a methodology of verification rather than discovery" (Gable, 1994, p. 114). Surveys seek to confirm relationships that are hypothesised to be common across a population, and thereby enable general statements to be made about the object of study. Gable (1994, p. 114) argued that they "can accurately document the norm, identify extreme outcomes and delineate associations between variables in a sample". The ability to report general (but static) patterns and characteristics would enable specific hypotheses to be tested in a particular context.

Unfortunately, the use of a closed survey instrument "buys 'objectivity' and testability at the cost of deeper understanding" (Gable, 1994, p. 114). The rationale for specific patterns of strategic intelligence may be expected to depend significantly on its context. As mentioned in Chapter 3, it is important to go beyond observations (or responses to questionnaires) and search for the meaning behind and beneath the activities (Schneider & Barsoux, 1997, p. 20).

The value of a survey to study the focal phenomenon may thus be enhanced by using it in conjunction with other qualitative research methods. Attewell and Rule (1991, p. 367) are among those who have noted the complementarity between survey and fieldwork approaches. The robustness of research results is likely to be increased through the use of multiple methods. As a result, a sole reliance on survey-based research was deemed to be inappropriate for this study, particularly given the author's belief in the benefits of methodological pluralism.

The aforementioned research objectives would require not only a survey, but also a complementary approach that could provide a deeper understanding of how information is used by Hong Kong Chinese chief executives in the diagnosis of specific strategic issues, and the rationales that led to specific patterns of strategic intelligence acvitivity. This led to the selection of

a *case study* approach to complement a survey. The desire to probe deeply into the processes and mechanisms of strategic intelligence favoured this combination of methods while the compact urban context facilitated it.

4.3.2 Case studies

The case study is an approach or research strategy (not a method *per se*) that seeks to understand the problem being investigated, and provides the opportunity to ask penetrating questions and to capture the richness of behaviour at the individual, group or societal level. Yin (1984, p. 2) states that "a case study from a research strategy point of view may be defined as an empirical enquiry that investigates a contemporary phenomenon within its real life context, when the boundaries between phenomenon and its context are not clearly evident, and in which multiple sources of evidence are used. It is particularly valuable in answering who, why and how questions in management research".

Meanwhile, Hartley (1994, pp. 208-209) defines a case study as "a detailed investigation ... with a view to providing an analysis of the context and processes involved in the phenomenon under study". It may be considered an umbrella term for a number of different research methods that focus on a specific activity, instance or event. The methods that may be used in a case study include: direct and indirect participant observation, document reviews, content analysis, semi-structured interviews, and repertory grid analysis (Hartley, 1994; Yin, 1984).

A defining feature of case research is its *ideographic* approach. The primary goal is "to understand the case itself; only later might there be efforts to generalise from the case to broader principles" (Carroll & Johnson, 1990, p.38). This is in contrast to *nomothetic* approaches, that seek to discover and test general principles or laws that apply across cases, and downplay the importance of an individual case.

Smith (1989, p. 62) comments that "although the use of case

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studies can lead to charges of anecdotalism, for many research topics within management, this method is clearly the most appropriate". The thorough and careful study of real-life cases can enable the study of interactions between different variables or events. The case study allows the investigator to concentrate on specific instances in an attempt to identify interactive processes that may be significant if not crucial, but transparent to larger-scale surveys. As a result, case studies will provide a richer picture than most other possible research approaches.

The case study can focus on the description of a process, or a sequence of events in its nature setting. Such a study of individual or group behaviour makes it possible "to ascertain the number and variety of traits, qualities and habits, combined in a particular instance" (Remenyi, 1990, p. 47). Nevertheless, Snell (1996) cautions about the need "to carefully sift, weight and analyse all the data" in order to increase objectivity.

The depth of enquiry possible through case studies is significantly greater than with surveys. For example, although attempts have been made to ascertain perceptions and attitudes by means of questionnaires, the results have typically been unsatisfactory (see Kvale, 1996; Smith, 1989). It is difficult to do justice to an attitude or perception by ticking *Yes* or *No*, or even selecting a rating between *1* and *5*.

The case study can go beyond this superficial analysis and consider the responses, the variations in responses among respondents, and the reasons behind these variations. For example, respondents who are asked to rate the uncertainty level of the environment can offer explanations and caveats for their scores. This additional information is clearly advantageous in explaining the responses and observations.

The case study follows the logic of the scientific experiment rather than the logic of the survey. Thus, it is not necessary (or feasible) to replicate a case study many times. The case

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study is not designed to measure the frequency of occurrence for specific events, but rather to lend support for, or enable the development of theoretical propositions (Yin, 1989). The contribution to knowledge made by a case study is more important than its strict ability to be generalised. Following from this, a case study may be considered to be a valid form of research for advancing our understanding of a phenomenon in a specific context, provided that it is carried out systematically.

Used in isolation, case studies offer a high level of data integrity but a low level of data currency (Yin, 1989). Data integrity refers to an amalgam of internal validity and reliability. Currency refers to the capability of generalising results, or external validity. For example, in-depth interviews enable the researcher to interact with an informant and to collect *rich* data such as the reasons behind unconventional or seemingly imitative behaviours. Unfortunately, time and resource constraints typically limit the quantity of such interviews.

Benbasat et al. (1987, p. 370) identified the following strengths of case study research: 1) the researcher can study an artifact, a technology or a phenomenon in a natural setting, learn about the state of the art, and generate theories from practice; 2) the method allows the researcher to understand the nature and complexity of the process taking place, and 3) valuable insights can be gained into new topics emerging in young and dynamic fields such as strategic management and information management.

Case studies may be based on qualitative or quantitative methods or a combination of the two. Purely qualitative research has its own weaknesses: 1) the inability to manipulate independent variables, 2) the risk of improper interpretation, and 3) the lack of power to randomise (Kerlinger, 1986, p. 348). Nevertheless, it has been noted that logical inferences are possible, since in terms of epistemology, they are quite independent of statistical inferences (Smith, 1989).

It is also naive to assert that any form of research will be without bias. Even in the pure sciences, the bias of the researcher is reflected in the study focus, the chosen experiment, and the process used to conduct the experiment. Case studies of human behaviour can never be perfectly objective due to the biases of both the supplier and recipient of the data. Bias may be introduced both when data is captured from different data sources (especially other people), and when the data is interpreted after it has been written down.

There are at least three difficulties in obtaining unbiased testimonials from observers (Chan & Chiang, 1994; Gordon, 1981):
1. the difficulties of accurately remembering past events,
2. the difficulties in disclosing personal feelings
3. the difficulties in revealing data that might reflect poorly on themselves or colleagues.

The reliance on more than one source of evidence, often termed *triangulation*, can help to reduce bias. This, in turn, can improve the validity and the reliability of the research. A synthesis of multiple perspectives and different data sources can moderate the inherent weaknesses of the case study strategy, and make it a more powerful approach.

Within the case study design, it is possible to use indirect and/or direct research approaches. Only an indirect approach is relevant to determine managerial perceptions and attitudes. However, either approach may be used to study how managers acquire information about their business environments. The indirect methods have traditionally been more popular. They essentially consist of asking the manager to estimate the time spent on various activities, and outline the general nature of those activities. This has been done through the administration of a questionnaire or a brief interview with the manager.

These indirect methods are fast, require less time (and hence cost), and are typically more amenable to statistical analysis,

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because a large number of managers can be sampled. A major problem with the findings from indirect methods is their reliability and validity. Self-estimates can be very inaccurate and inconsistent. Managers may supply biased figures or unconsciously attempt to rationalise their estimates. Moreover, the human memory becomes unreliable after a period of time, and so informants may rely on a significant amount of guesswork when providing retrospective reports (Carroll & Johnson, 1990).

For the reasons given above, data obtained from more direct or intensive methods can usefully complement or even substitute for that obtained from less direct ones, such as a survey. The more direct methods of collecting data include diary content analysis, work sampling, structured observation, and the interpretive recall interview (Gay & Diehl, 1996; Merton & Kendall, 1956). With the interpretive recall interview, the informant is asked to recall a specific sequence of events, where these took place, with whom, and so on (Gorden, 1981). While describing the details, the informant is prompted to explain why certain things happened the way that they did. This can be done on a random sampling basis, or on a systematic and structured basis.

More direct methods promise greater reliability and validity than their less direct counterparts, but they demand comparatively more time and effort, and higher levels of involvement and commitment from the informant or observed party. For example, the design of diaries or elaborate protocols and the subsequent observation or interaction, respectively, represent a large investment that is difficult to justify since only a few informants can be directly observed or subjected to detailed interviews. Consequently, work activity studies or interpretive recall interviews are usually intensive (within a few organisations) rather than extensive (across many organisations).

4.3.3 Combining research methods
The study reported here combined a quantitative (and essentially positivist) research method with a qualititative (and

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interpretive) one. The merits of this approach, whereby different methods are used to investigate different facets of the same phenomenon, can be debated.

Some scholars insist that there is a fundamental clash between qualitative and quantitative methods in the social sciences (see Brannen, 1992; Bryman, 1989). However, Gable (1994, p. 112) claimed that research designs that extensively integrate both fieldwork (e.g. case studies) and survey research, while rare, are well worth the effort. The decision to integrate them in this study followed from the research questions which were addressed as well as personal belief that quantitative and qualitative techniques can be complementary and even synergistic rather than antithetical.

Burrell and Morgan (1979) defined the traditional positivism of scientific enquiry as an epistemology "which seeks to explain and predict what happens in the social world by searching for regularities and causal relationships between its constituent elements". They suggested that case studies may be employed within this perspective by involving content analysis or other embedded techniques.

A basic epistemological paradox of social science is the requirement to have subjective human beings objectively explain human phenomena (Smith, 1989, p. 52). The author concurs with Smith (1989), in that the objectivity of scientific knowledge, with its attendant need for researchers to *stand back a bit* must be balanced with the requirement *not to stand back too far*. Otherwise, the findings are easily distorted by distance as well as by the act of interpretation. This, in turn, would merely reinforce the gap between academic assumptions and the real-world situation, and lead to prescriptive advice that is impractical.

Compromise is inevitable given the fundamental conflict between generality, realism and precision. Since reality is not a tidy set of sequential or independent events, statistical methods are

insufficient to uncover and explain the complex and interwoven interactions between organisations and their environments. There is often a need for deeper abstraction and investigation to probe into structures and causal mechanisms that underlie quantitative results. Wynekoop (1992) acknowledged this, and suggested that quantitative 'micro-level' analyses should be integrated with qualitative 'macro-level' analyses in order to help explain how macro-level factors affect the behaviour of individuals.

Previous research in different Western countries indicates that contextual factors such as size, industry/product and ownership all significantly affect the environmental scanning activities (Hambrick, 1979; Jauch & Kraft, 1986; Jennings & Lumpkin, 1992). However, the specific nature of the research topic, with its focus on the most senior executive level, the limited understanding of information management in the Hong Kong context, and the notorious secrecy of East Asian business leaders (Ghoshal, 1988; Redding, 1990) made a stand-alone survey a poor choice at this stage of the knowledge-building process.

As a result, this study of strategic intelligence/environmental scanning was carried out in two parts. The first part was a larger-scale survey of Chinese chief executives in two different industries - one classified by the Hong Kong Government (1997) as a goods-producer and the other as a service- provider.

The second part consisted of case studies, whereby chief executives of a matched pair of organisations (one a widely-acknowledged leader, the other a newcomer or challenger) in four different industries were the subjects of more intensive investigation. This research design followed from the objectives of observing, describing and beginning to explain the strategic intelligence phenomenon in the pre-handover Hong Kong context.

4.3.4 Secondary data collection
The initial activities for this research effort involved literature reviews and secondary data collection. These were

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largely undertaken during the period from July 1993 to December 1994. The areas of literature/published information that were reviewed included: strategic management (with a focus on strategy making and strategic decision making), business intelligence, neo-Confucian cultural characteristics and Chinese management/thinking, and the Hong Kong business environment.

As a result of the latter area of review, a largely qualitative perspective of the overall Hong Kong economy was developed, as reported in Chapter 3. This was followed by the profiling of specific industry environments (using archival material and talking to industry observers). Four industries that represented a partial cross-section of the Hong Kong economy were selected.

As mentioned in Chapter 3, manufacturing now accounts for less than 25 per cent of the GDP and employment in Hong Kong. As a result, it was deemed appropriate to select one goods-producing industry and three service-providing industries, as classified by the Hong Kong Government. Several negative responses to requests for cooperation from industry associations severely constrained the choice of the goods-producing sector. The large size of the printing industry, in terms of its economic contribution and employment, and the support of its industry association for this study, eventually led to its selection as the goods-producing industry of interest.

In order to encompass both the public and private sector economies, the following service-providing industries were chosen: securities, Chinese lanaguage newspapers, and universities. Given the relatively few newspaper firms and universities in Hong Kong, it was natural to select the securities industry (along with the printing industry) as the basis for the larger-scale survey. Chief executives in the other two industries, along with their printing and securities counterparts, were the focus of case studies.

Largely quantitative data was collected by administering a

questionnaire to chief executives in the printing and securities industries. Meanwhile, given the time and resources available, it was considered appropriate (and endorsed by the dissertation committee) to conduct case studies of two chief executives in each of the four industries. The next two sections detail the data collection and analysis procedures employed for the survey and case studies.

4.4 Survey

4.4.1 The sample

The survey sought to examine the natural behaviours of Chinese chief executives in pre-handover Hong Kong. Nearly 99 percent of all establishments in Hong Kong (and 97 percent of those in the manufacturing sector) employed less than 100 people (Hong Kong Government, 1995). A very small number of Hong Kong firms were owned and/or led by non-Chinese. These were *excluded* from the sample population of the reported study.

A work force below 200 had been used to distinguish *small and medium* firms from their larger counterparts in Hong Kong (see Sit & Wong, 1989). Meanwhile, *very small* businesses were defined as those with fewer than 20 full-time staff (see Yeung, Foster & Ogunmokun, 1995). Based on the organisational demographics of the Hong Kong economy, the focus was on *smaller* Chinese-run firms, although, in contrast to Johnson & Kuehn (1987), firms with more than 100 staff were *not* explicitly excluded.

Nearly all of the previously-reported surveys of environmental scanning used the individual respondent, usually the chief executive, as the unit of analysis. The nature of smaller businesses in general (see Welsh & White, 1981), and especially the paternalistic and autocratic characteristics of Chinese management (Martinsons & Hempel, 1995; Redding, 1990), made it most appropriate to follow this tradition in this study.

In order to consider the industry effects, samples were drawn from both the goods-producing (printing and packaging industry)

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and service-providing (securities industry) sectors of the Hong
Kong economy. The two selected industries were of considerable
importance to the Hong Kong economy (both in terms of revenues
and employment). They also reflected many of its distinctive
characteristics, such as a healthy rate of growth and fairly low
entry barriers leading to high levels of competition. Each had
some foreign-owned competitors, including recent entrants from
the PRC, but was dominated by local firms that fit the definition
of a Chinese family business (see Redding, 1990; Sit & Wong,
1989). Detailed profiles of these two industries are provided
in **Appendix A**.

4.4.2 The questionnaire

It is almost impossible to replicate faithfully any research that
deals with the social world in an open system. However, this
study sought to generate findings that could be compared to those
obtained in studies conducted elsewhere. In order to facilitate
such a comparison, the measurement of major variables followed
Auster & Choo (1993), Daft et al. (1988), Duncan (1972), Hambrick
(1982), and Sawyerr (1993). The major areas examined were:

a. perceptions of uncertainty in different environmental
   sectors;
b. relationships between perceived environmental uncertainty
   and scanning patterns;
c. selection and usage of information sources for scanning the
   environment;
d. decision-making roles.

The survey instrument was adapted from Auster & Choo (1993), Daft
et al. (1988), and Hambrick (1982). The weaknesses and
idiosyncrasies of certain environmental scanning measures has
been discussed by the aforementioned researchers and in other
articles (see Buchko, 1994; Sharfman & Dean, 1991). For example,
Buchko (1994) considered the reliability and validity of the
perceived environmental uncertainty scales and identified some
shortcoming as well as inconsistencies.

It is accepted that the measurement of environmental uncertainty remains a research challenge. However, the comparative management aspect of this study made it important to generate a data set that could be compared with previous results from other settings. The use of these well-established constructs and measures also addresses implicitly many concerns about content validity and reliability (in terms of internal consistency). Nevertheless, a confirmatory factor analysis was conducted in order to further ensure the content and construct validities of the instrument.

The questionnaire considered ten information sources that had been commonly used in previous studies (see Aguilar, 1967; Auster & Choo, 1993; Culnan, 1983; Daft et al., 1988). An eleventh source, *family and friends*, was added because of its identified salience in Chinese culture (see Bond & Hwang, 1986; Martinsons & Hempel, 1995; Redding, 1990). Consistent with several other studies including Culnan (1983), Auster & Choo (1993) and Sawyerr (1993), these sources were classified on two dimensions: internal/external to the organisation and personal/impersonal. This classification is shown in **Table 4.1**.

Table 4.1

Classification of Information Sources

	External Sources	**Internal Sources**
Personal Sources	• Customers • Competitors • Business and professional associates • Family and friends	• Superiors and mentors • Subordinates (and employees)
Impersonal Sources	• Mass media • Government and regulations • Trade publications and events	• Internal documents • Electronic services

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As advocated by Farh, Hoffman & Hegarty (1984), the amount of scanning was measured by combining the *demonstrated level of interest* and *frequency of receiving information* methods from Hambrick (1982). This approach is consistent with Auster & Choo (1993) and Sawyerr (1993).

A Chinese language version of the instrument was created and back translated in order to ensure bilingual consistency. Minor revisions, to reduce potential ambiguities, were made to both the English and Chinese versions after pilot testing with graduate students at the City University of Hong Kong and the University of Toronto. The final versions of both the English- and Chinese-language questionnaire appear in **Appendix B**.

Before this study was conducted, it was not known whether the scanning behaviour of Hong Kong Chinese CEOs was similar to any of those previously found in Canada, Nigeria and/or the United States, or if the pattern in Hong Kong had its own distinct profile.

Nevertheless, based upon the relationships identified in the review of the existing environmental scanning literature and a consideration of how the Chinese culture and the pre-handover Hong Kong business environment might influence them, a number of hypotheses could be forumulated. The survey was designed to test the hypotheses presented in next sub-section.

4.4.3 The hypotheses

External political and economic events, especially those occurring in mainland China, had greatly influenced the pace and direction of economic development in Hong Kong for many decades. Confidence levels and business performance had often been buffeted by the winds of political and economic change in the PRC. Hong Kong has been an important source of foreign exchange earnings, capital, and technology transfer for mainland China since the latter adopted an Open Door Policy and began its economic reforms in the late 1970s.

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The economies of Hong Kong and the (rest of the) PRC had largely complementary factor endowments and their symbiotic relationship had enabled the rapid development of the trade and financial service sectors in the territory. Events to its north (the so-called *China factor*) may be expected to influence greatly the future of Hong Kong. For example, continued economic growth in the Hong Kong SAR would hinge largely on the ability of the PRC to sustain its social stability and economic development.

The impending transfer of sovereignty from Britain to China cast a large shadow over Hong Kong for many years before the actual handover date. The foremost question in its collective psyche was: what will happen after 1997? Some assurances were provided by the terms of the Sino-British Joint Declaration and a premise that Hong Kong only continued to exist because the political leaders in Beijing perceived it to be a convenient and valuable gateway to the outside world.

Nevertheless, Hicks (1987) and Mushkat (1990) were among those who insisted that there were equally plausible optimistic and pessimistic scenarios related to the post-1997 era in Hong Kong. The mass media in many overseas countries, and particularly in the United States, fanned the flames of alarmism by emphasising the things that *could* and *would* go wrong in post-handover Hong Kong. For example, Kraar (1995) reported that the local populace had acute concerns about crime and corruption as well as infringements on human rights and free markets. Many of these handover-related worries would be heightened by the fact that most Hong Kong residents were PRC refugees or their offspring.

In addition to the political and general economic concerns, the manufacturing industry in Hong Kong also had to worry about being squeezed between higher-technology competitors from places such as Singapore, South Korea and Taiwan) and those from lesser-developed, lower-cost economies such as Indonesia, Thailand and Vietnam. Without the benefit of established brand names or demonstrated customer loyalty, local firms had to remain cost-

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competitive while moving toward higher value products.

Although Hong Kong manufacturers had assumed considerable levels of both commercial and political risk, they seldom acted as forces of disequilibrium or innovative producers. They were renowned for successfully imitating and adapting foreign innovations and designs (Davies, 1996; Redding, 1990). Since local firms engaged in little of their own research and development, it was important for them to follow the latest technological developments closely and monitor the sources of key inputs. Remarkably, Hong Kong imports raw materials from over 100 countries. These circumstances led to the first hypothesis:

H1a: The economic and political/legal sectors are perceived to have a higher perceived strategic uncertainty for securities firms than other four sectors of the environment.

H1b: The economic, political/legal and technological sectors are perceived to have a higher perceived strategic uncertainty for printing firms than other three sectors of the environment.

Aguilar (1967) characterised environmental scanning by its amount (frequency and intensity), its focus (the kind of information acquired), and its mode (regular or periodic). Gathering more information is a coping strategy available to those facing uncertainty (Culnan, 1983). However, as mentioned in Chapter 1, managers face time and resource constraints, their own cognitive limitations, and related *information overload* problems.

Kefalas & Schoderbek (1973) found that executives did more scanning in dynamic environments while Daft et al. (1988) reported that scanning frequencies rose along with PSU levels. This implies that managers will seek out more information primarily to reduce their levels of perceived uncertainty in areas that they consider to be of importance to their firm.

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Remarkably, Auster & Choo (1993) and Sawyerr (1993) found significant positive relationships between PSU and the amount of scanning in Canada and Nigeria. This led to the second hypothesis:

H2: The amount of scanning is positively related to the level of perceived strategic uncertainty.

Aguilar (1967) and Culnan (1983) were among those differentiating between internal and external as well as personal and impersonal information sources. Based on the information richness theory considered in Chapter 2, the *richer media* of personal information sources will be used when direct communications are needed in order to minimise the loss of meaning or distortion of data (see Daft & Lengel, 1986; Daft & Weick, 1984).

Although the research evidence from the U.S. indicates that small business managers prefer to rely on personal sources (Schafer, 1990; Smeltzer et al., 1989; Specht, 1987), other studies indicate that multiple sources are used to interpret uncertain environments (see Auster & Choo, 1993; Daft et al., 1988). Daft et al. (1988) also suggested that personal and impersonal sources may complement one another to give a better view of an uncertain environment. Managers may be expected to use both types of sources in order to understand better the nature of developments in the environmental sectors that they perceive to have the highest levels of uncertainty. This led to the third hypothesis:

H3: The use of both personal and impersonal information sources is positively related to the level of perceived strategic uncertainty.

Information may be collected from many different sources. The decision to use a particular information source may be related to its accessibility and/or its quality. Older studies found that decision-makers had a pronounced tendency to rely on readily accessible sources, with less regard for the quality of the

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supplied information (Blandin & Brown, 1977; Gerstberger & Allen, 1968; O'Reilly, 1982). Culnan (1983) was the first to contradict these findings. A subsequent study (Auster & Choo, 1993) also found source quality to be a more important factor for explaining the frequency of information source use (FISU) than either source accessibility or the overall level of perceived environmental uncertainty. This led to a fourth hypothesis:

H4: Perceived source quality is a better predictor of the frequency with which an information source is used than either perceived source accessibility or the overall level of perceived environmental uncertainty.

Managers have assorted experiences and preferences as well as different educational backgrounds and personalities. Very few previous studies had considered whether information source use was related to the specific traits of decision makers. Among the few that have addressed this area, O'Reilly (1982) found that more educated respondents were less likely to use files as an information source while Culnan (1983) found that personal information sources were the most frequently used in two firms that had over 70 per cent university degree holders.

The educational level of the population in Hong Kong had rapidly risen in advance of the handover, as progressive improvements in economic prosperity and political development prompted a rapid expansion of the education system. A transition from an elitist to a mass market model took place in the secondary school system from the early 1970s to the mid 1980s. A similar transition at the university level was observable from the late 1980s to the mid 1990s (see Howlett, 1996).

As a result of these transitions, the younger generation of Hong Kong business managers can be distinguished from its older and more experienced counterpart by a much higher percentage of formal qualifications, both in terms of secondary school diplomas and university degrees. In fact, people in pre-handover Hong

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Kong without an MBA degree increasingly face a "glass ceiling" on their professional career prospects. As a result, it is deemed useful to study how the educational backgrounds of managers influenced their use of information sources.

Individuals with higher educational backgrounds may be expected to have enhanced reading abilities. This can in turn lead to the increased use of impersonal sources. More educated managers may also have a wider range of personal contacts, including those made during successive stages of schooling. These personal sources will provide more immediate feedback. Consequently, as long as the investment in these different sources (in terms of maintaining contact with people, subscribing to information services, etc.) can be justified, top managers may be expected to make greater use of both impersonal and personal sources in order to cope with additional uncertainty. This theory is supported by the findings of Auster and Choo (1993) in Canada. As a result, a fifth hypothesis was formulated as follows:

H5a: Education level is positively correlated with the use of impersonal information sources.

H5b: Education level is positively correlated with the use of personal information sources.

As mentioned in Chapter 1, Mintzberg (1973) provided a framework for understanding managerial roles. He categorised ten managerial roles into three groups: interpersonal, information and decisional. Information is *the* critical input to decision making. The relationship between environmental scanning and the four roles within the decisional grouping, namely *entrepreneur*, *resource allocator*, *disturbance handler* and *negotiator*, was studied previously in North American settings.

Both Auster & Choo (1994) and McLeod, Jones & Poitevent (1993) found that information about the external business environment was more likely to be gathered in the entrepreneurial role. This

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is consistent with the contention in Mintzberg (1973) that "Entrepreneurial work begins with scanning activity". Managers use information gathered through environmental scanning to first identify key issues, and then to design and select from specific courses of action (Mintzberg, 1973; Auster & Choo, 1994).

In a metropolis like Hong Kong that was about to be reunited with its motherland, a huge developing country, there were expected to be assorted business opportunities. Thus, the entrepreneur role was anticipated to prompt the largest amount of environmental scanning. This led to a sixth hypothesis:

H6: Information about the environment is more frequently used in the entrepreneur role than in any of the other three decisional roles identified by Mintzberg.

The relationship between information source use and decisional roles has received little attention. Jones, Saunders and McLeod (1994) found that face-to-face meetings were preferred when engaging in entrepreneurial projects. Resource allocation and disturbance handling activities relied largely on written sources while managers in negotiator roles tended to use personal and written media.

Auster & Choo (1994) also found that information from personal sources was frequently used directly for decision-making, particularly in the entrepreneur role. Thus, the cumulative evidence from the West suggests that personal sources are used more frequently than impersonal ones for entrepreneurial decisions, but impersonal ones are used for resource allocation and disturbance handling. This led to the final hypothesis:

H7a: Personal sources are used *more* frequently than impersonal sources in the entrepreneurial decision making role.

H7b: Personal sources are used *less* frequently than

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impersonal sources in the resource allocation and distrubance handling decision making roles.

The relationships considered in the seven hypotheses are depicted in **Figure 4.1**, which may be seen as the model guiding the survey part of the research.

Figure 4.1
The Research Model
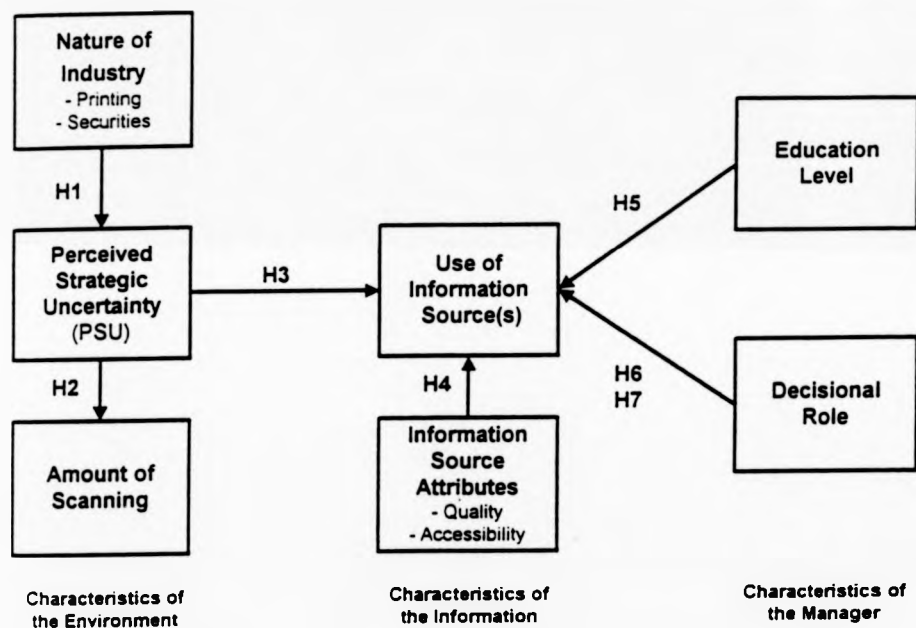
4.4.4 Data collection and analysis

The *Members List* of the Hong Kong Stock Exchange and the *Hong Kong Business and Industrial Directory* were used to randomly select companies from the securities and printing industries, respectively. Each selected firm was subsequently contacted, to ensure that it was an independent, single-business firm with an ethnic Chinese chief executive. The names and addresses of the CEOs were verified during this contact and added to a list. This procedure was continued until the list included 200 CEOs in each industry.

Letters that requested participation in the study and mentioned the support of the relevant industry association were mailed out to the 400 listed CEOs. Only 26 affirmative responses were received within three weeks of this mailing. A follow-up, conducted using telephone and facsimile, resulted in 38 more CEOs agreeing to participate. Five potential informants subsequently declined to, or were unable to participate. In six other cases, someone other than the CEO proposed to participate. This reduced the final sample size from 64 to 53.

The possibility of non-response bias was examined by using late respondents as proxies for non-respondents. A comparison of those responding before and after the follow-up found no significant differences in either firm characteristics or manager demographics. This suggested that the sample was highly representative of the target population.

The 53 participating CEOs represented a 13 percent response rate from the initial mailing. Undeniably, a larger percentage would have been preferable. Nevertheless, the response was considered to be satisfactory for the purposes of the study and perhaps even encouraging given the context, which is discussed further in the Limitations section of this chapter.

A standardised questionnaire was used to obtain a certain level of consistency among the respondents. A face-to-face session was

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held with each respondent in order to enable a more comprehensive and detailed exploration of the interplay between actions/behaviours and context/circumstances. This personal administration of the questionnaire, combined with a discursive dialogue, was used in order to overcome the problems that are commonly associated with postal surveys (see Huber & Power, 1985). In addition to facilitating the completion of a structured questionnaire, these personal interviews led to varying amounts of dialogue, discussion, and even debate. As a result, the respondent became an informant. Additional probing was conducted in a several cases where the chief executive was friendly and forthcoming.

The data analysis included assorted statistical tests. Means and standard deviations were calculated for most variables while t-tests were used to determine whether there were significant differences between the two industries. Correlation coefficients were employed to consider relationships between demographic and behavioural variables while a regression analysis was used to determine how three different factors - overall environmental uncertainty, perceived source accessibility and perceived source quality - influenced the frequency of information source use.

4.5 Case Studies

This part of the study combined the advantages of rich detail from a single retrospective case with those from data collection from multiple sites (see McGrath, 1964; Yin, 1994). Yin (1984/1994) suggests that such multiple-case designs are desirable for description, theory building or theory testing. Comparisons across cases can provide analytical generalizaion (Yin, 1994, pp. 108-109), whereby cases are revealed as similar to each other (literal replication) or different for reasons that help to develop theory (theoretical replication).

The selection of the chief executives and their organisations in this multiple-case design was not intended to allow internal replication (Eisenhardt, 1989). However, evidence gathered from

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each subsequent case did, to some extent, serve to confirm or disconfirm inferences drawn from previous ones. Meanwhile, the goal of *illustrating* how external information is acquired and used by chief executives prompted an embedded case design.

The strategic issue was an embedded unit of analysis within each case of a CEO's information management activities. Each CEO was first asked to identify two or three specific issues that had received their attention. Then each issue was considered in terms of the acquisition and use of information about the external environment. Yin (1994, p.42) noted that such an embedded case design helps an investigator to examine the operational details and contingent relationships associated with a given phenomenon.

4.5.1 Selecting the cases

Case studies may be selected either because they appear to be typic*al or else because they seem to be unusual or extreme (Yin, 1994). A typical case may be expected to reveal the general situation while an unusual one could provoke distinctive insights. Consistent with the purpose of this study, an attempt was made to select *typical* cases.

The primary focus of each case was on the top manager of a single-business organisation with relatively independent operations. The cases were drawn from the following four industries: printing, securities, higher education, and Chinese language newspapers. Each of these had a defined task environment and information sourcing behaviours that were expected to be related to varying levels of environmental forces as well as government policies or regulations. A total of eight chief executives, two in each of the four industries were selected. Since eight is considerd to be the luckiest number in the Chinese culture, it was believed that invited CEOs would feel more honoured and inclined to participate in the case studies if they were among a select group of eight peers.

As noted in the general management literature (see Ghoshal, 1988; Healey & Rawlinson, 1993), it is not easy to gain access to top managers. This has been found to be particularly true of Chinese business chief executives (see Redding, 1990; Siu & Martin, 1993). As a result, no attempt was made to get a random or representative sample. Instead, existing relationships between the researcher and senior-level managers and professionals in the Hong Kong community were leveraged as the participation of chief executives was sought.

The process of getting a commitment to participate from the desired number of CEOs, and completing the data collection process with each one, proved to be very tedious, time-consuming and frustrating. Most of the targetted organisations had one or more gatekeepers to their chief executives. The gatekeeper was often the personal secretary of the top manager.

Despite the aforementioned relationships of the researcher and the summary of the results that was offered as an incentive for participation, a total of 13 other chief executives politely declined direct requests to participate before the eventual set of eight was complete. Consequently, patience and perseverance may be seen as critical success factors in the process of identifying, obtaining the cooperation of, and studying chief executives, particularly in a Chinese business culture.

4.5.2 The informants

The general purpose of the study and the sincere curiosity of the investigator were clearly (and sometimes repeatedly) communicated to potential informants. The amount of time that was expected to be required as well as the option for anonymity were also mentioned explicitly. Each element in this approach was perceived to be helpful in raising the level of interest of potential informants and/or the personal trust and rapport between the researcher and those particpating in the study. Nevertheless, several informants still exhibited a considerable amount of suspicion, perhaps because they were unfamiliar with

academic research and/or because the researcher was non-Chinese. In two cases, substitutes had to be found for chief executives who had agreed previously to participate.

The eight chief executives had widely differing levels of enthusiasm and preparedness in discussing their perceptions and experiences. Nevertheless, all of them did appear to speak quite freely. Consistent with the guidelines provided by Huber and Power (1985), the CEOs were asked, in appropriate cases, to provide documentary evidence to support their responses. Where the informants expressed no objection, the interactive sessions were tape recorded in an attempt to provide a record of the richness and diversity of the data that was collected from in-depth probing, cognitive mapping, and more casual dialogue.

Three of the eight chief executives requested anonymity for themselves and/or their organisations. This is not surprising given the nature of the Chinese business culture (outlined in Chapter 3) and the secrecy ethos that is prevalent in Hong Kong (see Lasserre, 1993; Redding, 1980; Siu & Martin, 1992). The aforementioned informants wished to ensure that their names and those of their organisations would *not* be mentioned in reporting this study. They expressed or implied fears about revealing business strategies, the best sources for environmental information, and/or organisational shortcomings.

As a result, three of the case studied organisations in this disseration are identified only by a two-word designation, a noun to denote industry (Printer, Securities, Newspaper, or University) preceded by an adjective to denote their position as either one of the established industry leaders (Leading) or newer challengers (New) in the industry. These organisations were given the short-hand designations as follows: Leading Printer, Leading Newspaper, and New University.

4.5.3 Designing the interactive sessions
Face-to-face contact time with top managers is both precious and

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difficult to arrange. As a result, the design of the case study procedure sought to maximise the research value of these direct contact opportunities while incorporating a variety of data gathering techniques.

A reasonable understanding of each informant's organisation and industry was developed by reviewing archival records and other documents before meeting with the informant. Each interactive session aimed to identify two or three strategic issues that had been recently faced by the informant and to determine how information about the external environment had been acquired and used in diagnosing each strategic issue.

The form of interaction was based on the *focused interview* as first described by Merton and Kendall (1956) and later amended by Judd et al. (1991). Originally, Merton and Kendall described two requirements for this type of interview: the persons interviewed have to be involved in a particular situation, and the interviewer has to theoretically analyze the situation beforehand. Judd et al. (1991) broadened this definition to include any interview where the interviewer has some advanced knowledge of the experience to be discussed, irrespective of whether or not the investigator has observed and analyzed the specific situation.

For this study, the interviewees were asked to recall their experiences and behaviours in specific incidents where they had received and used environmental information. The interview design was based largely on the principles of the *Critical Incident Technique* (CIT), which seeks to focus on complete and recent incidents with clear consequences. The CIT was developed at the American Institute for Research in 1947, where it was used in studies to determine critical requirements for the work of pilots, air force officers, scientists, air traffic controllers, and hourly wage employees (Flanagan, 1954).

The CIT was used to collect data because it was consistent with

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the aim of analysing complete sequences of acquiring and using information from the external environment, and to understand the cognitive processes associated with this process. At least two previous environmental scanning studies (Aguilar, 1967; Keegan, 1974) employed a simplified version of this method.

4.5.4 The interactive case protocol

A specific sequence for the questioning process, formally termed a *protocol*, was developed before undertaking the interactions with the chief executives. This document concisely summarised the objective and scope of the case study (for the benefit of the investigator), and listed the questions to be asked of the informants. The protocol was developed largely using concepts drawn from the strategic management or environmental scanning literatures that were reviewed in Chapters 1 and 2. Pre-testing with two academic colleagues and a practising manager led to some elaboration of definitions and minor modifications in phrasing.

Semi-structured interviews with the chief executives were used to ask questions about specific strategic issues and the related acqusition and use of information about the external business environment. A variety of qualitative data was elicited from the chief executives in order to gain a deeper understanding of the strategic intelligence phenomenon in the context of pre-handover Hong Kong. The researcher probed the what, how and why of strategy making or strategic issue diagnosis, and the use of information to support this process.

The major focus of each session with the chief executive was on *critical incidents* of acquiring and using information about the external business environment. Specifically, each informant was asked to identify and briefly describe two or three "strategic issues" about which such information was received. As mentioned in Chapter 1, Dutton and Duncan (1987) presented a model of strategic issue diagnosis as an iterative process involving two major phases - activation/recognition and interpretation. Consistent with this model, the following questions were posed:

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Please try to recall a development, trend or event in the external environment that has attracted your attention, and led you and your organisation to consider a new initiative, a change of direction, or some other significant action.

Would you please briefly describe this development, trend or event?

How did you first become aware of this development, trend or event? (triggering information and its source)

What led you to decide that this development, trend or event was a strategic issue for your organisation? (activation/recognition)

Would you please describe the strategic issue for me in enough detail so that I can visualise the situation.

What information sources have you relied on in order to better understand this issue? (interpretation)

Which of these information source(s) has/have been the most useful in terms of helping you understand the issue?

Have you determined the urgency of taking action on this issue? If so, what information was useful to help make this determination?

Have you determined the feasibility of taking a specific action on this issue? If so, what information was useful to help make this determination?

As indicated above, the chief executive was prompted to recall and describe the nature of the strategic issue or problem that had been addressed, the substance of the information about the external environment that had been sought out during strategic issue diagnosis, the sources for the information, how the

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information was used, and (if appropriate) what the end results were of acquiring and using the information.

Finally, the chief executive was asked about the strategic posture (analyser, prospector, reactor, defender), strategy making approach (based on Mintzberg & Waters, 1985), and business planning approach (based on Rhyne, 1985) that he perceived to best represent his organisation. At the end of the session, he was also invited to comment on the role of different types of information and information sources for the strategy making/business planning process in his organisation.

4.5.5 Cognitive mapping, triangulating, and tape recording

A cognitive mapping procedure was developed so that the chief executives would rank the eleven aforementioned information sources in terms of three dimensions: the frequency with which they used them, their perceived accessibility, and their perceived quality. However, the pre-testing indicated that a ranking of all eleven sources would be both very time-consuming and difficult for informants.

As a result, a modification to this part of the protocol was made. The case-studied chief executives were only asked to select the "top five" of the eleven information sources on each of the three dimensions, and then rank order the selected sources. Data about the use of information sources were triangulated by having the personal secretary of each chief executive perform a similar ranking of the "top five" sources used, either before or after the focal interview.

The researcher had previously requested each of the personal secretaries to keep a week-long log of their bosses' interactions, including scheduled and unscheduled meetings; letters from outside the organisation and memos from within it; and incoming telephone calls. This request was intended to encourage the personal secretaries to rank their bosses' information source use based on sampled data rather than mere

perception. Each informant was asked to explain the rationale behind their rankings, especially for the sources appearing at the top of their lists.

Each interactive session was tape recorded, subject to the permission of the informant. Only two of the eight executives and one of the personal secretaries did not permit such recording. Tape recording relieved the researcher from the burden of note taking. It enabled him to concentrate on the issues of concern and also helped to facilitate a greater level of rapport with the informant. The tapes also enabled later re-analysis of the discussions, thereby adding to the rigour of the study.

The sessions where tape recording was not permitted tended to be less time-efficient as the researcher endeavoured to take notes while maintaining a smooth flow of dialogue. The interactive sessions with the eight chief executives varied in duration and formality. Some were limited to the initially-scheduled, heavily-scripted interview. However, in three cases, a subsequent informal and *ad hoc* conversation took place over lunch or dinner.

Considerable care was taken to make efficient use of time during the interactive sessions. However, an effort was also made in each case to ensure that, if necessary, it would be possible to hold further discussions at a later time. Each of the chief executives was also provided with a copy of a short questionnaire that requested (largely demographic) data about the informant and his organisation. Completed questionnaires were later collected from the informants, and their responses were used to triangulate specific details obtained previously from secondary sources.

4.5.6 Data analysis

Miles and Huberman (1984, p. 21) identify data reduction as the first flow of activity in qualitative data analysis. This is the process of selecting, focusing, simplifying, abstracting and

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transforming the raw data that are collected. The researcher was careful to comb through the data collected from the interactive sessions as well as associated documents in order to find patterns that suggested general principles. This process occurred over the extended period of the study. Data were summarised and coded with themes being teased out and clustered along the way. Nevertheless, it was possible to identify content analysis, cognitive mapping, and interpretation as cornerstones in the processing of the case study data.

The second major flow of analysis activity identified by Miles and Huberman (1984) has been termed data display. It involves the organised assembly of information to permit conclusion drawing. This can be in the form of text, matrices, graphs, networks or tables and charts. In this study, the data related to each strategic issue were first summarised explicitly on the basis of the specific case - the chief executive of a particular organisation in a particular industry. The descriptive details of each strategic issue diagnosis were then *mapped* onto a coding scheme based upon the conceptual framework from Chapter 2.

As advocated by Miles and Huberman (1984/1994), matrices were developed to relate environmental sectors, decisional roles, and information sources. The process of mapping the issues onto relevant environmental sector(s), decisional role(s), and information sources was proved to be inexact science. For each issue, two colleagues were asked to read through the provided descriptions and then perform the aforementioned mapping. They produced similar but not identical results, and so a third individual was asked to arbitrate in situations where alternative mappings had been made.

Limited quantitative analysis was undertaken to obtain descriptive statistics. Where appropriate, data from the two cases in an industry were compared and discussed. Such a pair-wise analysis of the strategic issues and intelligence activities was typically enhanced by collecting secondary data about the

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relevant industry.

Subsequently, data from the eight cases were aggregrated, analysed and interpreted on the basis of the pre-handover Hong Kong macroenvironment. Finally, the aggregated profile was compared to (and contrasted with) previous, Western-based findings. This approach contextualised the study, provided insights into "Hong Kong Chinese information management" from a cross-cultural perspective, and facilitated the development of both explanatory theory and recommendations for further research.

4.6 Design assumptions

The research design was based on the assumption that a chief executive or a small number of senior managers had the entire or principal responsibility for making the strategy that aligns the organisation with its environment. The Western-based management literature indicates that even when chief executives do not do all the scanning, they are largely responsible for interpreting and acting on information integrated from various internal and external sources (El Sawy, 1985; Hambrick, 1981). The high power distances and patriarchal leadership/headship that characterise Chinese societies imply that such an assumption is even more likely to be appropriate in the Chinese business culture.

The primary focus in both the survey and the case studies was the top manager (chief executive, managing director). However, the personal secretary of each case-studied top manager also ranked the information sources in order to enable triangulation. Archival records, documents supplied by the informant, and other materials in the public domain (where available) were used to supplement this primary data. This multiple perspective methodology helped to ensure that a wide range of rich and relevant data was collected.

Another assumption was that the environmental scanning activities of top managers would be significantly constrained by factors such as time, their cognitive capacity and organisational

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resources. Consequently, they would have to choose among alternative intelligence activities, such as scanning broadly (and perhaps superficially) across the general environment or focusing narrowly on certain aspects. Comments offered by the informants strongly indicated that this condition was satisfied.

The issue of whether strategy is formally designed or informally evolves was investigated, but this work does not make any assumptions about strategy implementation, whereby an organisation may seek to align itself with its environment.

4.7 Design Limitations

A postal survey is an efficient approach to generate a large sample of responses from a relevant segment of the population in a modern urban setting like Hong Kong. However, it is restricted to a small number of simple questions in order to avoid misunderstandings or misconceptions. Large numbers of questions or those that are more complex and open-ended are likely to reduce the response rate in such an arms-length questionnaire. The reliability of data collected using a postal survey is also questionable, since the process does not provide for two-way communication. The lack of direct human interaction means that the researcher must, to a large extent, anticipate responses and ensure that the included questions are sufficient to meet the intended research objective.

Yeung (1995) detailed the difficulties of conducting postal surveys in Hong Kong compared to places like the United States and the United Kingdom. He identified several unique obstacles in Hong Kong that could be attributed to cultural and economic factors. These include a high degree of personalistic trust and the fast pace of business that produces severe time constraints.

Harzing (1997) subsequently examined how respondents from different countries react to a large-scale mail survey. She reported that Hong Kong had the lowest response rate of all the 22 *countries*, and echoed Yeung (1995) in terms of how difficult

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it was to conduct arms-length research in Hong Kong. Harzing (1997, pp. 660-661) concluded that "personal interviews would seem the only way to acquire information from Hong Kongese respondents".

At least three factors may be expected to discourage the participation of Hong Kong Chinese business chief executives in academic research: 1) the demands placed on them as a result of their role and responsibilities; 2) the absence of tangible benefits for such participation; and 3) the secretive nature of the prevailing business culture, as noted in Chapter 3.

Consequently, it was decided to collect the primary data by personally administering a questionnaire to each of the CEOs who had agreed to participate in the survey phase of the study. This approach, while very resource intensive, fit well with the autocratic and personalistic nature of Chinese business (Redding, 1990) and, as suggested by Huber & Power (1985), was helpful to assure data reliability and validity.

Given the intensive nature of this phase of the study, the selection of the cases was based largely on availability rather than a random representation of Hong Kong organisations. This approach was consistent with the aim of these cases - to enable a detailed description of how Hong Kong Chinese CEOs actually conduct their diagnosis of strategic issues and the role that information about the external environment plays in this process.

Critics may also express concern about the lack of objectivity in data gleaned from interview sessions. Chan and Chiang (1994, p.21) suggest that when a person talks about events in which he has been an active participant, "that dialogue is contextualised within a particular interaction matrix that involves two personalities (the interviewer and the interviewee) ... and is filtered through the glaze of language, which is inherently unstable, in flux, and changes in interpretation and emphasis over time. There is little guarantee that the words uttered by

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one will not be misinterpreted or misrepresented by another."
Many factors, such as the personality of the informant, the
personality of the researcher, the process of the interaction,
the venue of the interaction, and the existence of distractions
can affect the outcome of an interview (Carroll & Johnson, 1990).

With the limited use of multiple data collection and analysis
methods, and the central reliance on interpretive recall
interviews, it is recognised that the results of the case studies
represent "espoused" practice and theories, and may not fully
reflect actual practice or theories-in-use (Argyris & Schön,
1974). However, similar caveats would appear to be applicable
to most social science research. For example, a person who knows
that they are under observation will undoubtedly exercise more
care in doing their work and display an increased tendency to
follow policies and procedures.

Meanwhile, with an arms-length questionnaire, self-interest would
encourage respondents/informants to re-interpret their own
actions in a favourable light (Huber & Power, 1985). They may
highlight personal strengths and downplay their weaknesses, and
over-dramatise their role in a specific event (see Chan & Chiang,
1994, pp. 23-25). Carroll and Johnson (1990, pp. 33-37)
identified three specific threats to the usefulness of self-
reported responses:

1) in recalling what they did in any specific instance, they
   may forget parts of the focal process;
2) they may *reconstruct* the process in terms of what they
   usually do or are supposed to do rather than what they
   actually did;
3) they may rationalise by creating a logical story or saying
   what they the audience wants to hear, instead of the truth.

Remarkably, the recognition of such human behaviour has led some
theorists to distinguish between a life as lived, a life as
experienced, and a life as told. "A life lived is what actually

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happens. A life experienced consists of the images, feelings, sentiments, desires, thoughts, and meanings known to the person whose life it is ... A life as told, a life history, is a narrative influenced by the cultural conventions of telling, by the audience, and by the social context." (Denzin, 1989, p. 30). Similar distinctions may apply to the recall of specific events and issues. Thus, the data from both the survey and case studies could be subject to lapses, errors, exaggerations, distortions, and fabrications of human memory/imagination as well as the limitations of interpretation by a non-participant researcher.

However, an informal review of articles in *Long Range Planning* and *Strategic Management Journal* indicated that the reliance on CEOs as single informants has been common in strategic decision making and process research. Significantly, Hambrick (1981) is one of several studies concluding that the perceptions of CEOs with respect to both firm strategies and their own behaviours were closer to a set of *objective* measures of the same phenomena than those of their subordinates. Thus, while these top managers are far from unbiased sources of data, CEO-centred data collection offered an attractive combination of rigour, relevance and 'doability' (Carroll & Johnson, 1990; Huber & Power, 1985).

In instances where it was deemed appropriate or useful as a spot-check, efforts were made to achieve a degree of control in data validation. This was done by a) reviewing the internal consistency of the interview, b) questioning the informant about certain matters again at a later date, and c) matching the data with that from other sources. The researcher also involved professional colleagues to code the strategic issues in terms of environmental sectors, decisional roles, and information sources. This was done in order to promote objectivity in the data analysis stage of the study.

The next two chapters present the results of the survey and the case studies, respectively. As a result of the research framework and specific methods that were adopted, these results

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are believed to provide a fairly insightful and reliable profile
of the processes and content of strategic intelligence activities
in pre-handover Hong Kong.

This chapter reports on the results of the survey and the testing of the seven hypotheses that were outlined in Chapter 5. First, a profile is provided of the chief executives who responded to the questionnaire and the firms in the securities and printing industries that they represented. The responses of those CEOs are then presented. Separate sections report on their perceptions of uncertainty in different sectors of the pre-handover Hong Kong environment, the amount and focus of their scanning, the information sources that they used, and finally how these information sources related to the educational backgrounds and decision-making roles of the chief executives.

5.1 Profiles of the CEOs and their Organisations

Twenty-nine CEOs from the securities industry and 24 from the printing industry completed the questionnaire. They and their companies are profiled in **Table 5.1** and **Table 5.2**, respectively. Thirty-one (or 58 percent) of the respondents, 17 from the printing industry and 14 from the securities industry, chose to work with the Chinese version of the questionnaire. This justified the decision to develop a bilingual instrument.

The respondents from the securities industry tended to be younger and more educated than those from the printing industry. They also had comparatively less overall work experience and a short tenure in their current positions. Only 21 percent of the securities CEOs had reached their 45th birthday while 49 percent of the printing CEOs had passed this milestone. Somewhat surprisingly, 28 percent of the respondents from the securities industry were actually below the age of 35 compared to only 8 percent of those from the printing industry. Although more than 75 percent of those from the securities industry had attained some form of post-secondary qualification, the majority of those from the printing industry had not. The mean lengths of CEO tenure were six years for the respondents from the securities

industry and 12 years for those from the printing industry.

Table 5.1

Profile of the Sampled Chief Executives

	Securities (n=29)	Printing (n=24)
Age		
Below 25	2 (7%)	1 (4%)
25-34	6 (21%)	1 (4%)
35-44	15 (52%)	10 (42%)
45-54	4 (14%)	8 (33%)
Above 55	2 (7%)	4 (16%)
Length of tenure as CEO		
5 years or less	18 (63%)	7 (29%)
6-10 years	6 (21%)	5 (21%)
11-15 years	3 (10%)	6 (25%)
16-20 years	2 (7%)	3 (12%)
More than 20 years	0 (0%)	3 (12%)
Education Level		
Primary or below	0 (0%)	0 (0%)
Secondary	7 (24%)	13 (54%)
Post-secondary non-degree	10 (35%)	5 (21%)
Bachelor degree	11 (38%)	5 (21%)
Masters degree or above	1 (3%)	1 (4%)

The securities firms represented in the survey tended to be both younger and smaller than their counterparts from the printing industry. Full-time employees in the securities firms ranged from 13 to 120, with mean and median values being 33 and 19, respectively. Meanwhile, the sampled printing firms had between 10 to 219 full-time staff, with their mean and median employee numbers being 46 and 21, respectively. Only three out of the 53 sampled firms, all from the securities industry, had someone with an explicit responsibility for environmental scanning.

Table 5.2

Profile of the Firms Represented by the Chief Executives

	Securities (n=29)	Printing (n=24)
Number of Employees		
Below 20	16 (56%)	12 (50%)
21-50	9 (31%)	6 (25%)
51-100	3 (10%)	2 (8%)
101-200	1 (3%)	3 (13%)
Above 200	0 (0%)	1 (4%)
Age of Firm		
Below 5 years	16 (55%)	6 (25%)
6-10	6 (21%)	7 (29%)
11-15	3 (10%)	3 (13%)
16-20	3 (10%)	4 (17%)
Above 20 years	1 (3%)	4 (17%)
Explicit Scanning Person/Unit		
Yes	3 (10%)	0 (0%)
No	26 (90%)	24 (100%)

The two industry samples were representative of their respective populations in terms of both the age and size of the firm. The differences between the samples were consistent with many of the attributes that distinguished the securities industry from the printing industry in Hong Kong. During the interviews conducted with the CEOs, the printing industry was cited repeatedly as a more traditional and established industry in the local economy.

The emergence of the printing industry in Hong Kong was largely the result of an effort by the first wave of Communist refugees from mainland China to capitalise on a market niche that was under-served by existing businesses. Informal family and kin networks were a critical factor in its early development and the respect that came with age and experience was still perceived to

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be an important attribute for its top managers.

In contrast, the securities industry was widely acknowledged to be a "young man's game", with plenty of energy and an openness to new ideas being among the key attributes for its top executives. The growth of the securities industry had accompanied Hong Kong's recent economic shift towards financial and business services.

5.2 Environmental Uncertainty and Scanning

The *first hypotheses* predicted that the economic and political/legal sectors would have the highest perceived strategic uncertainty (PSU) for the securities industry. Meanwhile, the socio-cultural sector was predicted to have the lowest PSU for the printing industry.

The sector characteristics as perceived by the informants are shown in **Table 5.3**. As noted in Chapter 4, the scores shown in this table are based upon five-point Likert scales.

Table 5.3

Perceived Environmental Characteristics

Sector	Securities						Printing					
	Importance		Complexity		Rate of Change		Importance		Complexity		Rate of Change	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Customer	4.41	0.68	3.07	0.92	3.38	0.90	4.50	0.72	3.21	1.06	3.46	0.88
Competition	3.83	0.93	3.21	0.90	3.31	0.89	3.96	1.00	3.50	0.98	3.29	0.91
Technological	3.38	1.05	3.14	0.88	3.00	0.80	4.04	0.81	3.71	0.95	3.54	1.06
Political/legal	4.28	0.75	3.97	0.78	3.79	0.77	2.63	1.06	2.54	0.93	2.92	1.06
Economic	4.59	0.57	4.21	0.68	3.93	0.75	3.83	1.13	3.21	1.06	3.29	0.95
Socio-cultural	3.21	1.01	2.72	0.88	2.66	0.97	2.63	1.06	2.37	0.97	2.42	0.83

The economic and political/legal sectors were perceived to be the most important, complex and dynamic by the CEOs from the

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securities industry. Although the customer sector was ranked second in terms of importance, its scores on both complexity and rate of change were significantly lower than those of the economic and political/legal sectors. In contrast, the customer sector was perceived to be significantly more important than any other sector by the printing industry CEOs while technology was both the most complex *and* the most dynamic sector.

The perceived characteristics of the political/legal sector represented the most significant difference between the to industries. As mentioned above, it was perceived as an important, complex and dynamic sector by the CEOs of securities firms. In sharp contrast, the CEOs of printing firms perceived the political/legal sector to rival the socio-economic sector as the least important *and* least complex sector.

The formula developed in Daft et al. (1988), and mentioned in Chapter 2, enabled the perceived strategic uncertainty (PSU) of each sector to be calculated by multiplying its score on importance with the sum of its scores on complexity and rate of change. The two industries differed considerably in their PSU scores, as evident from **Tables 5.4 and 5.5**.

Table 5.4

Perceived Strategic Uncertainty of Environmental Sectors

Sector	Securities			Printing		
	Mean	Rank	SD	Mean	Rank	SD
Customer	28.48	3	8.42	30.33	1	9.13
Competition	25.52	4	10.37	27.83	3	11.85
Technological	21.34	5	10.64	30.04	2	12.12
Political/legal	33.76	2	10.56	15.42	5	10.08
Economic	37.76	1	9.24	26.54	4	12.26
Socio-cultural	18.24	6	10.53	13.46	6	8.57

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Securities CEOs perceived the economic and political/legal sectors to have the highest strategic uncertainty. This provided strong support for the first half of the first hypothesis. It also implied that the transfer of sovereignty was a key strategic issue for the securities industry.

Table 5.5

Multiple Comparison Testing of the PSU Scores in Different Environmental Sectors

Sector	Securities (S)						Printing (P)						Industry Difference
	1	2	3	4	5	6	1	2	3	4	5	6	
1. Customer		ns	>	<	<	>		ns	ns	>	>	>	ns
2. Competitive			>	<	<	>			ns	>	ns	>	ns
3. Technological				<	<	ns				>	ns	>	S < P
4. Political/legal					ns	>					<	ns	S > P
5. Economic						>						>	S > P
6. Socio-cultural													ns

ns   indicates no significant difference using Scheffe's multiple comparison procedure at p< 05

>   indicates that the row sector has a significantly higher PSU value than the column sector

<   indicates that the column sector has a significantly lower PSU value than the column sector

In contrast, the customer and technological sectors had the highest PSU scores for printing CEOs. However, because the PSU score for the political/legal sector was almost as low as that for the socio-cultural sector, the hypothesis for the printing industry was weakly supported. Remarkably, the political transition did not appear to be a major source of environmental uncertainty for the CEOs of Hong Kong-based printing firms.

As indicated in **Table 5.5**, the PSU scores for three of the six environmental sectors were significantly different in the two industries. The economic and political/legal sectors had significantly higher PSU scores in the securities industry, while

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the technological sector had a significantly higher PSU score in the printing industry.

The *second hypothesis* predicted that as the PSU scores increased, the CEOs would scan more. **Table 5.6** shows the amount of scanning conducted by the chief executives by combining the *interest* and *frequency* methods (whereby the highest and lowest possible scores are 10 and 2, respectively). In the securities industry, the order of the sectors mirrored that for PSU, with the economic, legal/political and customer sectors being scanned the most. Meanwhile, printing CEOs indicated that most of their scanning was related to customer, competition and technological sectors.

Table 5.6

Amount of Scanning

Sector	Securities			Printing		
	Mean	Rank	SD	Mean	Rank	SD
Customer	7.31	3	1.09	7.38	1	1.18
Competition	6.79	4	1.22	6.42	2	1.28
Technological	6.24	5	1.24	6.08	3	1.23
Political/legal	7.69	2	1.03	4.52	6	1.35
Economic	8.82	1	0.92	5.87	4	1.43
Socio-cultural	6.17	6	1.31	4.63	5	1.18

As shown in **Table 5.7**, all of the correlation coefficients between PSU and the amount of scanning were positive, with the single exception of the economic sector in the printing industry. However, only half of these coefficients were statistically significant at the *p<.05* level.

The results provide weak support for the hypothesis that Hong Kong Chinese CEOs scan more as their PSUs increase. They also imply that strategic intelligence activities will remain

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important and intense in the infancy of the Hong Kong Special Administrative Region.

Table 5.7

Correlations between PSU and the Amount of Scanning

Sector	Securities	Printing
Customer	0.23*	0.11
Competition	0.07	0.36**
Technological	0.38**	0.21*
Political/legal	0.14	0.16
Economic	0.21*	-0.05
Socio-cultural	0.32*	0.29*

*$p < 05$; ** $p < 01$

5.3 Information Source Use

The *third hypothesis* predicted that the use of both personal and impersonal sources would be positively related to the overall environmental uncertainty (OEU). Meanwhile, the *fourth hypothesis* predicted that information quality rather than either information accessibility or OEU would be the strongest predictor for the frequency of information source use (FISU).

Table 5.8 depicts the mean FISU (on a scale of 1 to 5) for the eleven information sources. Based upon the earlier classification, the securities CEOs used both internal and external sources extensively and relied slightly more upon impersonal than personal sources to scan the environment. In contrast, the printing CEOs have a significantly lower overall reliance on information sources and they ranked three external and personal sources, namely customers, business associates and superiors/mentors, as the ones that they used most frequently. It was also quite surprising to find that *family and friends*, the

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traditional backbone of Chinese communication (Bond & Hwang, 1986; Redding, 1990) were among the least frequently used information sources in both industries.

Table 5.8

Frequency of Information Source Use

Information Source	Securities			Printing		
	Mean	Rank	SD	Mean	Rank	SD
Customers	4.24	3	0.95	4.00	1	0.93
Competitors	3.11	10	1.02	2.96	6	1.04
Business associates	3.86	7	1.30	3.96	2	1.12
Family and friends	2.94	11	1.30	2.71	9	1.27
Public media	4.93	1	1.26	3.29	6	1.16
Government publications	3.90	6	1.23	2.58	11	1.28
Trade associations	3.26	9	1.30	2.79	8	0.93
Superiors/mentors	4.18	4	1.44	3.79	3	1.18
Subordinates/employees	3.66	8	1.16	3.57	4	1.24
Internal documents	4.03	5	1.38	3.42	5	1.64
Electronic services	4.72	2	1.58	2.63	10	1.53

The perceived accessibility and the perceived quality of the different information sources are shown in **Tables 5.9 and 5.10**, respectively. The maximum and minimum possible values in both tables are 10 and 2, because each construct represents a sum of two scales. As mentioned in Chapter 2, perceived accessibility is a combination of the time and effort to contact or locate the source and the ease of getting the desired information from the source. Meanwhile, perceived quality combines two scales that measure information relevance and reliability, respectively.

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Table 5.9

Perceived Accessibility of Information Sources

Information Source	Securities			Printing		
	Mean	Rank	SD	Mean	Rank	SD
Customers	5.21	10	1.01	6.46	9	1.25
Competitors	5.14	11	1.25	5.54	11	1.32
Business associates	6.22	9	1.08	6.25	10	1.46
Family and friends	7.17	3	1.47	7.29	1	1.10
Public media	6.90	5	1.14	7.08	2	1.37
Government publications	6.86	7	1.30	6.83	6	1.27
Trade associations	6.59	8	1.05	6.67	8	1.43
Superiors/mentors	6.86	6	1.35	6.95	5	1.14
Subordinates/employees	7.07	4	1.13	6.79	7	1.02
Internal documents	7.66	2	1.59	7.00	3	1.10
Electronic services	7.93	1	1.41	6.96	4	1.23

Table 5.10

Perceived Quality of Information Sources

Information Source	Securities			Printing		
	Mean	Rank	SD	Mean	Rank	SD
Customers	7.00	5	1.07	8.00	1	1.62
Competitors	6.52	9	1.02	6.42	4	1.59
Business associates	7.00	6	1.58	6.50	3	1.79
Family and friends	5.69	11	1.39	5.88	9	1.51
Public media	6.97	7	1.61	5.96	8	1.33
Government publications	7.17	2	1.42	5.67	10	1.61
Trade associations	6.69	8	1.61	6.33	6	1.55
Superiors/mentors	7.07	4	1.56	6.89	2	1.10
Subordinates	6.41	10	1.56	6.38	5	1.31
Internal documents	7.10	3	2.13	6.33	7	1.01
Electronic services	7.69	1	2.07	4.96	11	1.83

Chief executives from both industries ranked the following as among the most accessible information sources: electronic services, the public media, internal documents, family and friends, and subordinates. The rankings indicate little overall difference between personal and impersonal sources or between internal and external sources in terms of perceived accessibility.

The CEOs from securities firms also gave their highest ratings on the perceived quality dimension to impersonal sources, such as electronic services and publications. Meanwhile, their printing counterparts perceived that personal sources, including customers and business associates, provided the highest quality information. Most remarkably, electronic services were ranked first by the securities CEOs and last by the printing CEOs. These rankings demonstrate the variability of perceived information source quality from one industry to another.

The use of information sources in both industries was found to be highly correlated with quality perceptions but not with perceived accessibility. The lack of significant relationships (at $p < .05$) between the overall environmental uncertainty and the frequency with which information sources were used led to a rejection of the third hypothesis. Regression models were also computed to analyse the relationship of source quality, source accessibility and OEU with the use of each source.

The results of the regression analysis are presented in **Table 5.11**. The adjusted R-squared values indicate that the variance in FISU is related primarily to a combination of OEU, source accessibility and source quality. Meanwhile, for nearly every information source, the perceived quality of the source was the most important influence in terms of determining how frequently the information source was used by the CEOs. These findings are remarkably consistent between the two industries, and thereby suggest the likelihood of an industry-independent relationship.

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Table 5.11

Results of Regression Analysis for
Predicting Frequency of Information Source Use

Information Source	Securities					Printing				
	F value	Adjusted R^2	OEU*	Accessibility*	Quality*	F value	Adjusted R^2	OEU*	Accessibility	Quality*
Customers	1.47	0.49	0.26	-0.03	0.38	1.92	0.11	-0.13	-0.15	0.51*
Competitors	6.95**	0.39	-0.03	-0.29	0.57**	4.44*	0.31	-0.16	-0.10	0.69**
Business associates	3.71*	0.23	0.39*	-0.05	0.43*	6.56**	0.42	0.43*	-0.05	0.73**
Family and friends	5.13**	0.31	0.15	-0.08	0.53**	5.96**	0.39	-0.17	0.05	0.66***
Public media	17.86****	0.64	0.13	0.25*	0.72****	5.86**	0.39	0.41*	0.05	0.68***
Govt. publications	2.86	0.17	0.47*	0.01	0.50*	8.36***	0.49	-0.15	-0.11	0.85***
Trade associations	9.46*	0.48	0.21	0.22	0.70****	1.83	0.10	0.14	0.25	0.21
Superiors/mentors	13.03****	0.57	0.58**	-0.14	0.78***	5.32*	0.42	0.09	-0.06	-0.68**
Subordinates	6.30**	0.36	0.12	0.16	0.47**	2.55	0.17	0.31	-0.22	0.31
Internal documents	25.36****	0.72	-0.04	-0.03	0.84****	11.51***	0.58	0.01	-0.12	0.79****
Electronic services	6.14*	0.35	0.21	0.27	0.53*	12.89***	0.61	-0.01	0.12	0.80***
Mean	12.73*	0.57	0.18	0.03	0.71**	7.84*	0.53	-0.11	-0.05	0.87**

* Standardized regression coefficients
*$p<.05$, **$p<.01$, ***$p<.001$, ****$p<.0004$

The use of multiple regression equations as part of the data analysis created a concern about the likelihood of mistakenly finding significant results among the multiple comparisons. In order to account for this, a much more conservative significance level was adopted by applying the Bonferroni inequality procedure. The Bonferroni procedure has recently emerged as an approach in social science research (see Rediker et al., 1993) to adjust the significance level to account for the possibility of obtaining significant results based on chance alone, due to the large number of comparisons that were being made.

Based upon the 121 comparisons (11 variables x 11 variables), and a basic significance level of .05, the corrected significance level for this estimate is $p < .0004$. At this level, the quality of 10 of the 11 sources in the securities industry and 9 of 11 sources in the printing industry remained significantly related to FISU.

5.4 Education Level and Information Source Use

The fifth hypothesis predicted that a higher educational background will be positively correlated with the use of both personal and impersonal information sources. As shown in **Table 5.12**, only four information sources in the securities industry and two in the printing industry were significantly related to the level of education.

Three of the six sources with significant correlations to educational level can be classified as personal while the other three were impersonal ones. The results provided little support for the fifth hypothesis.

The weakness of the evidence may be attributed partly to the relatively small sample sizes as well as the central tendencies in educational levels in both industries. As shown in **Table 5.1**, a majority of the securities CEOs had a post-secondary diploma or degree while more than half of those in the printing industry had a secondary level education.

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Table 5.12

Correlations between Education Level and Information Sources

	Securities	Printing
Customers	0.02	0.10
Competitors	0.51**	-0.23
Business associates	0.28	0.46*
Family and friends	0.20	-0.20
Public media	0.32*	0.18
Government publications	0.29	0.11
Trade associations	0.31*	0.25
Superiors/mentors	0.03	0.23
Subordinates	0.14	0.20
Internal documents	-0.16	0.17
Electronic services	0.37*	0.52**

*p<.05, **p<.01, ***p<.001

5.5 Decision Making Roles

The sixth hypothesis predicted that strategic decision makers will use more environmental information in the entrepreneur role than in any of the other three roles (disturbance handler, resource allocator, negotiator) as conceptualised by Mintzberg (1973). This hypothesis was tested by ranking the mean score of each decision making role, as shown in **Table 5.13**.

Table 5.13

External Information Use in Different Decision Making Roles

Sector	Securities			Printing		
	Mean	Rank	SD	Mean	Rank	SD
Entrepreneur	4.47	1	0.86	3.41	2	0.93
Resource allocator	4.00	2	0.76	3.55	1	0.85
Decision handler	3.86	3	0.78	2.98	4	0.72
Negotiator	3.76	4	0.95	3.17	3	0.92

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The most frequent use of strategic intelligence in the securities industry was related to the entrepreneur role, but the entrepreneur role ranked second to the resource allocator role in the printing industry. Thus, the data from the securities industry strongly support the sixth hypothesis while the data from the printing industry data is more equivocal. Remarkably, even the lowest level of information use for a decisional role in the securities industry exceeded the highest level in the printing industry.

The seventh and final hypothesis was that personal sources would be used more frequently than impersonal ones in decision making.

Table 5.14

Frequency of Information Source Use in Decision Making

	Securities			Printing		
Information Source	Mean	Rank	SD	Mean	Rank	SD
Customers	3.26	7	0.95	3.76	2	0.91
Competitors	3.41	5	0.78	3.04	4	0.86
Business associates	3.66	1	0.93	3.88	1	0.84
Family and friends	2.73	11	0.76	2.54	8	1.06
Public media	3.55	3	0.95	2.71	7	0.85
Government publications	3.24	8	0.83	2.33	10	1.01
Trade associations	2.93	10	0.88	2.50	9	0.88
Superiors/mentors	3.10	9	1.25	3.62	3	0.98
Subordinates	3.38	6	0.73	3.04	4	0.91
Internal documents	3.55	3	1.09	2.96	6	1.04
Electronic services	3.62	2	0.90	2.32	11	1.09

As shown in **Table 5.14**, business associates were ranked as the most frequently used information sources by CEOs in both the

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securities and printing industries. Remarkably though, the next two highest ranking sources were impersonal ones (electronic services and internal documents) in the securities industry but personal ones (customers and superiors/mentors) in the printing industry. From the perspective of IT application, it is noteworthy that electronic services were ranked as the second most frequently used source by the securities CEOs, but as the least used one by the printing CEOs.

The aggregate means for personal sources and impersonal sources are 20.5 and 16.9, respectively, in securities, and 18.6 and 11.1, respectively, in printing. The application of t-tests found that the seventh hypothesis was strongly supported by the printing industry data, but only weakly supported by that from the securities industry.

Remarkably, all four of the most frequently used sources of information for strategic decision making in the printing industry were personal, and three of the four were external to To the organisation. In contrast, three of the top five ranked information sources in the securities industry were impersonal.

5.5 The Results in a Comparative Context

The survey results are discussed more fully in Chapter 7, but at this point, it is worthwhile to provide a comparative context. Remarkably, many industry-specific differences were found. These included the relative rankings of the environmental sectors in terms of perceived environmental uncertainty and the relative use of different information sources. Political and economic issues (presumably related to the handover) were a greater concern to the CEOs from the securities industry and they also relied more on impersonal sources for external information.

At the same time, there were remarkable similarities between the two industries. These included a strong positive relationship between environmental uncertainty and the amount of CEO scanning as well as the perceived quality of an information source being

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the primary factor influencing its frequency of use.

The results from Hong Kong can also be compared with those from previous studies conducted in the United States, Canada and Nigeria. They were similar in terms of the positive relationship between environmental uncertainty and the amount of CEO scanning, but the correlation coefficients for both Hong Kong industries were significantly lower than in any of the studies conducted elsewhere. Moreover, each Hong Kong industry had a distinctive profile in terms of both sector rankings on perceived environmental uncertainty and the frequency with which different information sources were used.

The findings strongly suggest that both the nature of the business environment and the CEO scanning behaviours in pre-handover Hong Kong differed significantly from those found in all the locations that have been the focus of previous environmental scanning studies. Furthermore, each Hong Kong industry had its own distinctive environmental characteristics and CEO scanning behaviours.

As noted earlier, Chapter 7 discusses the survey results in greater detail while Chapter 8 draws specific conclusions. However, before that, Chapter 6 is used to present the results from eight case studies that aimed to complement the survey. While the survey results enable a cross-sectional profile of both CEO perceptions and behaviours, the cases permitted a close look at how information was acquired and used during the process of addressing specific strategic issues.

CHAPTER 6
CASE STUDY RESULTS

Chapter 5 reported on the survey of ethnic Chinese chief executives in two Hong Kong industries - printing and securities. Consistent with many other studies conducted in Western settings, the objective was to *discover* the nature of strategic intelligence in the pre-handover Hong Kong environment. The aim was to observe and describe how business leaders in the two industries perceived this environment, and the information sourcing that they undertook.

Many aspects of the environmental perceptions and scanning behaviours of Hong Kong Chinese CEOs were similar to those found previously in the U.S., Canada and Nigeria. However, as reported in Chapter 5, there were some specific and significant differences not only between Hong Kong and other countries, but also between the two industries that were surveyed. The most prominent differences included the rankings of environmental sectors in terms of uncertainty and the relative frequency of information source use. Additional investigation, in the form of case studies, was undertaken in an attempt to better understand and explain how Hong Kong Chinese CEOs in securities firms, printing firms, newspaper firms, and universities acquired and used information about the external environment.

This chapter reports on the case studies. The first section profiles the eight chief executives and their organizations. A second section outlines the 19 strategic issues that these CEOs identified. The strategic issues recalled by the CEOs from each industry are then detailed in a separate section. Relationships between the environmental sectors, the decision roles, and the sources of information about the external environment are then considered. Subsequently, the chief executive's rankings of information sources in terms of frequency of use, perceived accessibility, and perceived quality are presented. Finally, the key results from the case study analysis are summarised.

6.1 Profile of the case studies

Two chief executives in each of the printing, securities, Chinese language newspaper, and higher education (university) industries in Hong Kong were the subjects of case study. As mentioned in Chapter 4, the printing and securities industries in Hong Kong are profiled in the first part of **Appendix A** while the newspaper and higher education industries are profiled in the second part of the same appendix. Profiles of the organisations and their CEOs appear in **Tables 6.1** and **6.2**, respectively.

Table 6.1

Profiles of the Organisations

Industry Organisation	Business	Number of Employees	Chief Executive
Printing			
Leading Printer *established in 1979*	Periodicals and packaging materials printing	nearly 400	Mr. Li
Chow Printing *established in 1977*	Job printing	recent growth from 70 to 200	Mr. Chow
Securities			
South China Securities *established in 1960s*	Institutional and retail securities trading	about 200	Mr. Mak
HL Securities *established in 1988*	Retail securities trading and financial planning	15	Mr. Chan
Newspapers			
Leading Paper *established in 1970s*	Daily newspaper	500	Mr. Leung
Apple Daily *established in 1994*	Daily newspaper	300-400	Mr. Ho
Universities			
Univ. of Hong Kong *established in 1911*	Higher education	about 1500	Prof. Cheng
New University	Higher education	about 1500	Prof. Tang

Note: Pseudonyms are used to protect the anonymity of some CEOs and their organisations

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Table 6.2

Profile of the Chief Executives

Name	Age	Tenure with Organisation	Tenure as CEO	Highest Education	Time outside Chinese society
Printing Mr. Li	55-64	10-20 years, (son of the founder)	2-5 years	Higher diploma	No
Mr. Chow	45-54	~20 years	~20 years (founder)	Form 5 (O level)	< 1 year
Securities Mr. Mak	45-54	10-20 years	5-10 years	Bachelor's degree	3 years (university)
Mr. Chan	45-54	10-20 years	5-10 years	Higher diploma	No
Newspapers Mr. Leung	55-64	5-10 years (> 25 yrs. in industry)	5-10 years	Form 7 (A level)	No
Mr. Ho	45-54	< 2 years (> 20 yrs. in industry)	< 2 years	Bachelor's degree	No
Universities Prof. Cheng	45-54	< 2 years (over 20 yrs. in academia)	< 2 years	Ph.D. in Engineering	13 years
Prof. Tang	45-54	< 2 years (over 20 yrs. in academia)	< 2 years	Ph.D. in Engineer'g	17 years

Note: Pseudonyms are used to protect the anonymity of some CEOs and their organisations

The case studied organisations ranged in size from 15 to about 1500 employees. Remarkably, none of them had a formal scanning system. Even their business planning tended to be relatively unsophisticated. In terms of the continuum proposed by Rhyne (1985), only the New University was about to introduce strategic planning. Formal business plans had also been developed at the University of Hong Kong and South China Securities.

6.2 Strategic issues

The chief executives identified a total of 19 strategic issues. The list that appears in **Table 6.3** attempts to preserve their own framing of these issues.

Table 6.3

The Strategic Issues as Framed by the Informants

Informant	Summary of the Strategic Issue
Mr. Li Leading Printer	1 Responding to skilled (and semi-skilled) labour shortage
	2 Reviewing and revising the product focus
	3 Assuring quality standards by pursuing ISO 9000 certification
Mr. Chow Chow Printing	4 Finding (and grooming) a successor to the current CEO
	5 Maintaining competitiveness despite rising input costs
Mr. Mak South China Securities	6 Responding to the emergence of Internet trading
	7 Ensuring a high degree of professionalism in the industry
Mr. Chan HL Securities	8 Responding to intensified and internationalised competition
	9 Considering the computerisation of business processes
Mr. Leung Leading Paper	10 Responding to a potential ban on tobacco advertising
	11 Responding to a retail price war initiated by a newcomer
Mr. Ho Apple Daily	12 Preserving freedom of the press in Hong Kong
	13 Achieving technology leadership within the local industry
Prof. Cheng Univ. of Hong Kong	14 Maintaining and enhancing reputation and linkages
	15 'Riding the wave' of information technology
	16 Recruiting and retaining staff
Prof. Tang New University	17 Managing transition from teaching to research focus
	18 Implementing a strategic planning process
	19 Improving business processes and management systems

The next four sections detail the issues that were identified in the four different industries. Each of the written accounts that follow was reviewed by the relevant informant in order to help ensure its reliability and validity. A brief description of each

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organisation and its CEO begins each sub-section.

Each strategic issue is classified in terms of three different dimensions: 1) the environmental sector(s) relevant to the issue, 2) the decisional role(s) in which the informant was acting, and 3) the information source(s) through which the informant became aware of the issue and/or improved his understanding of the issue. This classification or *mapping* enables a subsequent analysis of the case study data that complements the quantitative analysis of the survey data reported in Chapter 5. The findings from the case studies are discussed, together with the survey results, in Chapter 7.

6.3 Printing industry

6.3.1 Leading Printer

Leading Printer (LP) was started in 1979 with two employees and one printing press. The founding family moved to Hong Kong decades earlier and, like many others, made the transition from sojourners to settlers (see Chan & Chiang, 1994 or Wong, 1988 for a detailed discussions of this transition). The establishment of their enterprise coincided with the implementation of the Open Door Policy by the PRC. The resumption of China trade created new opportunities for printing and packaging in Hong Kong.

The company's offices were initially located in an Industrial Estate in the New Territories, but in 1995 they were moved to a commercial building in Kowloon. Leading Printer employed nearly 400 people had annual revenues of more than HK$ 500 million (about £ 40 million) at the time the case study was conducted.

Despite its business growth, LP remained very much a family-owned and family-run operation. Mr. Li, the current CEO, was the son of the company founder. He went to work in the family business immediately after completing his higher diploma at a local college. Although his father had relinquished the top management position several years ago, he retained the ultimate decision-making authority in his role as the family patriarch.

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The family had always relied heavily on its own members to maintain management control. For example, the CEO's wife was responsible for financial control and accounting while his brother, sister and two first cousins each had specific management roles. Even the current production manager joined the business after marrying the chief executive's cousin and, according to the informant, was now treated "like a brother".

The mother of the current chief executive had handled many of the administrative duties in the early years. However, one full-time administrative officer was added in 1983, and a second in 1987. Meanwhile, a full-time accountant had been on staff since 1991, although the CEO's wife was "ultimately responsible for what went on in this area". LP printed a wide range of periodicals as well as different types of books. A progressively larger share of its revenues came from the printing (and sometimes the manufacturing) of packaging materials. Growing numbers of items such as toy packages and video cassette sleeves were being sold to the manufacturing firms throughout the region.

Mr. Li indicated that his strategy was based on four pillars: 1) speed and flexibility in responding to customer needs, 2) cultivating long-term relationships to sustain cashflow even during downturns in the economic cycle, 3) avoiding heavy long-term commitments to labour, and 4) avoiding a lock-in to any single production technology by heavy capital investment. He had accumulated a deep personal understanding of the periodicals segment of the printing industry, and claimed to know people whose combined information about this segment that "was not available to anybody else".

Mr. Li noted that due to the customer-driven nature of the business, many key design and marketing decisions were removed from the firm. This enabled him to focus on improving production. Mr. Li believed that "the way to keep everyone happy is to deliver a good product while cutting or avoiding costs wherever we can".

Planning was done incrementally and Mr. Li continually assessed the business environment for changes and problems. He had solicited suggestions about several recent issues from his family, business friends, his accountant, and key clients. He also claimed that ideas from his staff could be helpful. They reported regularly to him and many of them mentioned that they had provided inputs on product quality. However, most felt that the "big boss" made all the big decisions by himself, and their ideas and information were not really taken into account.

The key performance measure for the firm had always been sales. Both the current CEO and his father firmly believed that success on this dimension would naturally result in good profits and a strong competitive position in the industry. Although LP did not have an explicit corporate strategy, two industry observers told me that it has effectively pursued a cost leadership strategy within its chosen product range.

New technologies had been periodically introduced into the core production processes, including typesetting, page composition and layout. Most of these innovations appeared to be well-received by the core group of long-term staff, who took pride in the steady productivity improvements that had been achieved over the years. The firm maintained detailed financial and accounting records; Mr. Li said that "we have comprehensive client records and a good follow-up system with loyal customers. We have also made up policy and procedure manuals in some areas as a result of our recent decision to go for ISO 9000 certification".

In contrast, the documentation related to both operational performance and external business environment was limited. There was a prevailing reliance on verbal communication and centralized decision-making. This type of decision-making and a dependence on hierarchical authority, both of which are characteristic of mechanistic organisational structures, had been merged with a high degree of flexibility and low formalization that typified an organic structure (see Burns & Stalker, 1961). Nevertheless,

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LP had a fairly simple organisational structure with a centralized control system, just like many other firms in its industry and across the Hong Kong economy (see Redding, 1990).

Issue 1 - Shortage of skilled (and semi-skilled) labour

Leading Printer had steadily upgraded its production technology by making selective investments in new hardware, software, and methods. Significantly, the returns on such investments depended largely on the skills of the workers using them. Mr. Li indicated that the supply of semi-skilled and skilled employees had become a key problem. He stated that "we can't improve efficiency unless our people have a really good understanding of the technology".

Trainees graduating from secondary schools or technical colleges increasingly preferred to work in the service sector. Service industries offered better prospects for rapid promotion and good salaries. The turnover rate among the staff who had worked at LP for less than two years had risen rapidly from 1991 to 1995. In recent times, there had been serious difficulties in both recruiting and retaining staff.

Mr. Li could not remember exactly how he first became aware of the labour shortage that would come to affect his firm. He did remember reading about the growing emigration from Hong Kong to places like Australia and Canada - the so-called *brain drain* problem, well before the Tiananmen Square massacre in June 1989. After the massacre, even his own family members considered leaving the territory because of their concerns about what *could* happen after 1997. Many talented young people emigrated in the early 1990s, and this brightened job prospects for those who stayed. Those with reasonable skill sets could seemingly command better wages and benefits than Leading Printer was willing to offer.

A series of talks with his production manager in 1992 confirmed that rising staff turnover rates coupled with recruitment

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difficulties were a strategic issue for the firm. A review of the personnel records indicated that nearly 20 percent of LP's staff had resigned in the period from December 1990 to December 1991. Meanwhile, those applying for positions advertised by the company seldom had even a secondary school diploma, and few of them demonstrated either a genuine interest or more than cursory knowledge of printing work.

Subsequent meetings with others working in the industry confirmed that many other printing firms were facing the same problem. Mr. Li said that "All of us are in the same boat ... a lot of people are jumping off, but we can't get anyone to climb on board". Employees appeared to be exiting the industry in significant numbers rather than job-hopping within it. Mr. Li and his industry associates discussed both the problem and some potential solutions, but none of them proved to be particularly useful.

Leading Printer had partially resolved this problem by moving most of its operations to mainland China This action was taken after soliciting information from customers, suppliers and, most importantly, those who already had operations in the PRC. Mr. Li noted that "everybody who had moved to Guangdong was happy they had done so ... I knew we had to follow them ... and quickly". At the time of this case study, nearly two-thirds of LP's employees worked at its new plant in Dongguan, mainland China. This had alleviated the labour problem, reduced costs, and brought the company closer to an emerging market segment.

This issue involved primarily the economic sector and secondarily the socio-cultural sector of the environment. Changes in economic conditions and the overall mix of the local economy had spawned this issue, but it was exacerbated by recent trends in socio-cultural attitudes. The informant recalled that he had acquired information from four different types of sources - the mass media, subordinates, internal documents, and business associates - while acting in the role of disturbance handler.

Issue 2 - Reviewing and revising the product focus

As more and more foreign firms (Western and Japanese) relocated their factories to mainland China, they created a growing demand for packaging materials. This was the fastest growing segment of LP's business. Consequently, Mr. Li had decided to shift the bulk of the production in the Dongguan plant from printing books to printing packaged materials. This refocus constituted a second strategic issue.

Leading Printer had traditionally derived most of its revenues from printing assorted periodicals for major publishing houses. However, many of these former customers had adopted new technologies and transferred much of their printing in-house. Advances in information technology, and particularly in desktop publishing capabilities offered by Apple computer systems, were responsible for this trend.

Mr. Li remembered seeing some pioneering versions of these IT products being demonstrated at trade shows in the early 1980s. However, he admitted that he did not really become aware of the implications for his business until much later. Some of his industry associates, to whom he sometimes contracted work, periodically mentioned their worries about competition from do-it-yourselfers. Eventually, Mr. Li decided that he had to explore this potential threat in more detail.

He conducted a series of discussions with his key business partners and also met several times with two of his own executives - his cousin, the marketing manager, and his "new brother", the production manager. At these get-togethers, a potential change in the company's business focus was considered. Eventually, Mr. Li decided to leverage the firm's existing size (which was fairly large by industry standards) and its good reputation. "We had worked hard to build up a good name ... now it was time to enter the new market". Business would come from the foreign firms that were setting up production in southern China and would need printed packaging for their outputs.

With this refocus, Leading Printer had to develop a number of new capabilities. For example, customers who were selling their goods to Russia and parts of Eastern Europe needed printing with the Cyrillic alphabet. Others demanded very high quality, fluorescent print on their packaging materials. Recently, Mr. Li had spent much of his own time with industry associates and technology vendors in order to build up these capabilities.

This issue involved primarily the competitive sector and secondarily the customer sector of the environment. The informant acted in the role of resource allocator while diagnosing this issue, and used three specific information sources - a trade show, business associates, and the mass media.

Issue 3 - Quality assurance (ISO 9000 certification)

The recent decision to pursue ISO 9000 certification resulted from a combination of customer demands and LP's desire to differentiate itself in the local printing industry. The printing industry had been a notable laggard in both adopting the principles of Total Quality Management (TQM) and seeking out ISO 9000 certification.

There appeared to be common view among senior printing executives that the time and effort associated with such initiatives simply were not justifiable in terms of foreseeable benefits. However, some of Mr. Li's overseas customers were concerned about the standard of future outputs as his firm shifted its operations to mainland China. He mentioned that "several big buyers told me that they worried about getting a quality product from China".

The ISO 9000 certificate had become popular in many of the Western countries where Mr. Li was now courting packaging-related business. He believed that potential customers would be more willing to establish long-term relationships with suppliers that demonstrated a commitment to quality assurance. Discussions with the top managers of these potential clients confirmed his belief.

Mr. Li's next step was to determine the time, effort, and expense involved with the certification process. Here, he turned to several professional associates, including the author (who had done a study on ISO 9000 outcomes in Hong Kong) and someone who worked as a quality assurance consultant. The consultant was eventually contracted to help Leading Printer document its core business processes and prepare for the audits that precede ISO 9000 certification. This consultant started to work for LP a few weeks before this case study was conducted.

This issue involved only the customer sector of the environment. The informant was acting in the role of entrepreneur while he acquired information from three different sources - customers, business associates, and consultants. Significantly, all three of these sources were personal and external to the organisation.

6.3.2 Chow Printing

Mr. Chow's printing firm had been in business for nearly 20 years. In many respects, Mr. Chow *was* the firm. He is from a rather modest Shanghainese family, but set up his own business when he was in his early 30s. Ever since he was six years old, Mr. Chow had earned his own money, variously working as a tutor, a football (soccer) trainer, and a sidewalk hawker before completing his Form 5 (Grade 11) education.

Mr. Chow launched a magazine specializing in fashion when he was 21, using his savings to pay the first instalment on a printing machine. After the failure of his magazine, he took a job as a copy editor for one of the smaller weekly newsmagazine in Hong Kong. However, he had a compulsion to go back into business "before he became too old". When he sat down to look at the kind of business that he could run successfully, he came up with two key criteria:
1. the business had to be in a growing industry so that he could tap into the overall growth of the market. Otherwise, he would have to take customers away from potential competitors in a mature industry, which would be much more

difficult.

2. the industry had to be relatively familiar to him. He wanted to hit the ground running rather than spend his time learning the ropes.

Many of the other start-ups in the late 1970s jumped into the printing industry and appeared to simply hope for a profitable piece of a growing pie. In contrast, Mr. Chow claimed to have thought long and hard about how to position his firm, not for short-term profits, but for long-term sustainability. He said that he examined the existing industry and observed that it was dominated by two types of firms:

1. bigger players, often foreign-owned, that offered sophisticated products; and

2. small firms, typically one or two person operations.

The first type had plenty of marketing clout, but were disadvantaged by the hierarchical nature of their operations. They tended to be rather impersonal in their dealings with target customers. Many of their potential clients were large companies interested in making big orders. Front-line staff working in the bigger printing firms were unable to provide good customer service; clients experienced difficulties contacting someone in the printing firm who could help them by making a big decision.

The second type handled small retail orders or were basically sub-contractors for higher-end work. They tended to rely on lower prices and promotional gimmicks for their sales and offered little in the way of after-sales service. There were few barriers to entry or exit, and so these types of firms would come and go quite frequently.

Mr. Chow believed that there was a vacuum to be filled in the middle-range segment of the printing industry. His firm, Chow Printing, grew by serving this market segment better than either the large or small companies. Financial service and trading firms had been among its major customers. They needed fast

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turnaround times and demanded reasonably good customer service.

Chow Printing emphasized technical expertise, good qualifications and strong interpersonal skills. In contrast to most of its rivals, staff were encouraged to attend developmental courses and seminars. Although customers paid a small premium, they received prompt attention to their needs, and good quality products along with above-average service.

Mr. Chow viewed both his customers and long-term employees as friends. He was keen to develop good relationships as evident from his extensive customer records. They included individual profiles of preferences, usage patterns and peculiarities as well as notes about problems and complaints. The records enabled targeted marketing, and promoted a high rate of repeat business. Loyal customers had liberal and near-instant access to the service staff at Chow Printing through dedicated telephone lines and a recently-introduced electronic mail system. The latter also enabled cost-effective and flexible direct marketing.

Over the years, Mr. Chow's firm has grown slowly but steadily. "My company has given me tremendous psychological pressure. Whenever there were changes in the situation, I feel worried and cannot function effectively. Maybe it is best to work for someone else, and let them make all the difficult decisions."

Mr. Chow admitted that he had traditionally been a very conservative manager and that his firm probably possessed too much cash. It rarely incurred any debt, even in the early years, except for the property mortgage that was taken out only because interest payments on it were tax deductible. That had recently changed. Between 1992 and 1995, Mr. Chow had made local media headlines by rapidly expanding his maturing business through three separate acquisitions on the mainland. This raised employee numbers from less than 70 to more than 200.

The firm had tried to tightly control its production costs, but

it seemed to have little formalization or standardization beyond the printing and customer service areas. Mr. Chow stated that "surviving in a competitive market is a constant challenge. But to be successful, as we have, is even more daunting. I constantly re-examine what we are doing and how we can do it better, in less time, with less money, or more effectively."

Some industry analysts, contacted by the researcher, indicated that this company would benefit from a more professional management approach. Despite efforts to promote employee involvement, Mr. Chow still ran the show. The responsibilities of his employees were to smoothly carry out the everyday activities which involve a minimum of discretionary behaviour. The CEO believed that they were able to deliver excellent customer service because certain policies and guidelines ensured a consistently high level of quality throughout the organisation.

Only fairly routine decisions and actions were taken without Mr. Chow's involvement. "I have to stay on top of everything my company does." One employee described his management as "a one-man show". In contrast, several other staff mentioned that Mr. Chow did not interfere too much in their day-to-day work and that he was quite generous with bonuses before the Chinese New Year.

Issue 4 - Finding (and grooming) a successor
Long-term relationships were very important in the printing business. For at least the last five years, Mr. Chow had spent a lot of his time thinking about what would happen to his company after he retired. He wanted to hand over the reins to someone he could trust, but there was no natural successor. His daughter and nephews were pursuing professional careers or determined to do so in the future. As a result of his own observations, he was convinced that too much education had turned his younger generation into "rule followers".

In contrast, Mr. Chow felt that the secret to running a company successfully was having the experience and acumen to make one's

own rules. He had spent a great deal of time and effort actively searching for an appropriate protege. He felt that whoever went on to lead his business would need at least five years of grooming while Mr. Chow remained in charge.

Mr. Chow had sought out a person who could maintain his company's tradition while providing the momentum for future growth. Initially, the target population for his search was confined to second-level managers within the company and its key business partners. However, Mr. Chow did not find anyone in this group who was both suitable and willing to take the job. The scope of the search had thus been widened to include senior managers across the printing and publishing industry.

Mr. Chow eventually invited Mr. Wong to become his deputy. Mr. Wong came from the same sub-ethnic group, was a life-long Hong Kong resident, had worked in the printing industry for more than five years, and expressed great enthusiasm in helping to further build up the business when he accepted the invitation. Mr. Chow had checked with several of Mr. Wong's business associates and clients. Their expressions of trust in Mr. Wong reassured Mr. Chow that he was making the right choice. He also mentioned a recommendation from the patriarch of one of the Wong clans in Hong Kong. This had a great influence on his ultimate decision to groom Mr. Wong as his successor.

This issue was not mapped onto any of the six environmental sectors, but the informant was deemed to be acting in the role of entrepreneur. During the diagnosis of this strategic issue, he recalled acquiring information from three external and personal sources - business associates, friends, and customers.

Issue 5 - Maintaining competitiveness
Offset printing in Hong Kong was more advanced than in many other countries within East Asia. However, Mr. Chow was losing many orders because he could not compete on price. By reviewing internal documents such as sales and expense reports, Mr. Chow

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knew that his profit margin was declining on orders that he did get. The big problem was rental costs in Hong Kong. They had risen rapidly in recent years and, for an industry that had large physical space requirements, now represented an enormous expense.

From his conversations with industry associates, Mr. Chow knew that many local printing firms were moving part or all of their operations to near-by areas of mainland China. This enabled them to take advantage of lower land and labour costs, and increase their competitiveness in an industry that was subject to growing levels of international rivalry. Mr. Chow followed, not by relocating, but by buying additional facilities in China.

During the 1990s, the growth of public relations increased the demand for printing services in Hong Kong. Chow Printing had shifted its attention from the overseas market to the local one in order to capitalize on the market opportunities that Mr. Chow had heard about. In the late 1980s, about 70 percent of its turnover came from abroad; at the time of the case study, nearly 70 percent was derived from customers in Hong Kong and China.

The rapid development of the mainland China market for printing has offset falling demand from overseas markets. This had reduced the high costs of transporting both semi-finished and finished outputs, and improved the firm's competitive position. Between 1992 and 1995, Mr. Chow had spent nearly HK$ 100 million to take over several existing plants in China and purchased new equipment for them. This investment for the long-term had constrained the company's cashflow and would hurt its profitability in the near future.

Mr. Chow admitted that the costs of running a couple of the plants were higher than he had expected. His expectations had been based on information supplied by friends and associates in related industries. Nevertheless, he continued to believe that the new locations, employees and machines would enable the company to operate on much larger scale.

As a result of some informal benchmarking that Mr. Chow had undertaken, he suggested that his company was now well-positioned to enhance operational efficiency and to take advantage of the growing China market. However, he admitted that the transition "had been more difficult than I thought it would be, and our financial results for the next while will reflect this."

This issue involved primarily the competitive sector, and secondarily the technological sectors of the environment. The CEO acquired information from the mass media and business associates while acting in the role of disturbance handler.

6.4 Securities industry

6.4.1   South China Securities

South China Securities is one of the largest and most successful locally-owned securities trading firms in Hong Kong. It was established in the 1960s and subsequently rode the growth wave of the Hong Kong financial services industry. By the end of 1996, it directly employed nearly 200 people, including 40 traders and brokers, and had established a solid network of retail agencies. It had inspired above-average loyalty from both its employees and agents by providing generous profit-sharing payouts and developmental opportunities.

South China Securities had acted as the sole or lead agent for nearly two dozen placements between 1993 and 1995, and was an underwriter for many other new issues. It had received several awards, from both issuers and investors, in recognition of its accomplishments with placements and underwriting. The firm further solidified its strong competitive position in the local securities market.

Mr. Mak, the chief executive, came from a well-to-do family. It had started up a garment business in the 1950s and done quite well in this industry. He was sent to Britain for his university education and spent a few years in the family business before

switching to securities. Although he headed one of the most respected firms in the business, his comments were not what was expected from a distinguished industry laureate. He was not afraid to speak openly and even cynically about the industry, and particularly its problems with integrity lapses and opportunism.

Mr. Mak was clear about one thing, "the essence of my job is making decisions." When asked about the basis for his decisions, he replied that he gathered as much information as he felt he needed, thought about all the aspects of the situation, and then decided what to do. It seemed that for him, information is converted into intelligence, and then used to make choices in a highly sequential and rational process.

Issue 6 - Internet trading
The emergence of securities trading on the Internet in places like the United States had created a major business issue for Southern China Securities. Their reputation allowed them to generate a large volume of securities trading without deviating from a standard set of commission rates. However, the convenience and lower prices offered by Charles Schwab and others reaching out from the U.S. could hurt the profitability of local securities firms, such as South China Securities.

Mr. Mak remembered becoming aware of securities trading on the Internet through a U.S.-based industry magazine. It had a story about how one of the small brokerage houses was setting up the necessary infrastructure to take the buy and sell orders of retail clients via the Internet. In order to learn more about this emerging IT application and its potential effect on existing practices and commission rates, he bought some other publications and contacted an industry associate in the United States. That associate spent about 10 minutes on the phone talking about the current status and expected growth of this practice, and subsequently faxed him several newspaper clippings and one or two articles. Mr. Mak read these items and believed that they gave him a better understanding of Internet trading in general as well

as potential impact on the securities industry. However, he did not fully appreciate this new "channel" until he logged onto the Internet and tried out one of these services for himself.

Mr. Mak mentioned that securities firms in Hong Kong typically introduced practices that had been proven to be successful in the United States. He had some difficulty citing an example on the spur of the moment, but finally mentioned the Central Clearing and Settlement System, which is a book-entry system that automates the settlement of securities trades.

However, local people have somewhat different investment attitudes and behaviours that their American counterparts. For example, decisions tend to be made by families rather than individuals. As a result, some practices from the U.S. may be transferred directly into the Hong Kong market, but others must be adapted to the local market and a few rejected entirely.

In order to assess the prospects for Internet-based trading in Hong Kong, Mr. Mak commissioned a small-scale survey of local retail investors. Based on the results, he told his senior IT people to look into setting up an Internet trading capability. At the time this case study was conducted. Mr. Mak was awaiting the results of their investigation so that he could develop an appropriate action plan.

This issue involved primarily the technological sector and secondarily the competitive sector of the environment. The CEO acted primarily in the role of disturbance handler and secondarily in the role of entrepreneur. During the diagnosis of this strategic issue, he acquired information from various sources, including trade publications, electronic services, business associates, customers, and subordinates in the IT area.

Interestingly, Mr. Mak commented that "when it came to making big decisions involving new technologies, I tend to spend a lot of my own time learning about the issue. I also stay informed about

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new regulations in the pipeline and their significance to our business. However, before deciding on regulatory or legal issues, I make a point of getting a lot of advice from our lawyers. I also often talk to my cousin, who is a solicitor. On the other hand, for decisions about the market, I do not get as directly involved, because I feel that my people know more about our customers and competitors than I do."

Issue 7 - Professionalism

The recent growth of the securities industry in Hong Kong had created a shortage of experienced brokers and traders. The cyclical nature of share trading volumes in Hong Kong meant that traders could make an enormous amount of money by joining the industry when the market is hot. For example, many people switched to the securities industry during the market boom in 1992 and 1993.

This labour inflow made it difficult to assess the competence and trustworthiness of new employees. The Securities and Futures Commission in Hong Kong had taken some steps to develop a detailed framework of securities legislation that brings Hong Kong in line with international standards of market regulation and practice. In fact, Mr. Mak was part of the committee in the early 1990s that developed codes of conduct for members of both the stock and futures exchanges.

More recently, he had worked with other leading members of the Stock Exchange Hong Kong (SEHK) as well as one of his own assistants to explore the issue of professional accreditation for securities brokers and traders. These activities had led him to review the codes of conduct and accreditation practices in the United Kingdom and the United States. Similar to the Internet trading issue, the potential benefits of adapting practices that had emerged elsewhere encouraged Hong Kong chief executives to seek out information from overseas. For this issue, securities regulators in the U.K. and the U.S. were key information sources.

Complaints of unprofessional, unethical and potentially illegal practices were commonly reported by the media as the Hong Kong market cooled down after 1993. These reports troubled Mr. Mak, who worried that a "few bad apples" could again tarnish the reputation of the SEHK and the securities industry in Hong Kong. As a result, he became more actively involved in hiring each new broker and trader at his company. He cited this as an example of the strategic decision making that is the essence of his job. This sense of moral responsibility is consistent with the Confucian perspective on leadership. The evidence suggested that Mr. Mak kept in close touch with the external environment not only so that he could improve the performance of his own business, but also to help preserve the image of his industry.

This particular strategic issue involved the customer sector of the environment, and specifically their perceptions of the industry's professionalism and ethical standards. In addressing this issue, the CEO was acting in the role of entrepreneur and relied on information from four different types of sources - business associates, regulators, a subordinate, and customers.

6.4.2   HL Securities

HL Securities was started up by Mr. Chan in early 1988. Mr. Chan was born and raised in Hong Kong but went to the United States to study for his degree in economics. Shortly after university, he returned to Hong Kong and worked for a couple of major brokerage firms until the financial market crash of October 1987. His American employer had then declared him redundant and sent him on his way with a healthy severance package. He was 37 years old at the time and it proved difficult to find a job with another securities firm in the aftermath of the market crash.

However, Mr. Chan remembered being confident that the financial crisis would be short lived. He was optimistic that Hong Kong investors would soon return to the stock markets. He also thought that if he had enough faith to remain in the industry, he should have enough faith to benefit as an owner rather than

just a broker. "I couldn't work any harder than I was already doing, so why not do it for myself."

Supported only by his severance payment, he quickly set up his own securities firm. He convinced many of his old clients - small business owners and professionals - to switch their trading accounts to his new firm. He admitted that he found it difficult to avoid the pitfalls of an entrepreneur who wanted to do everything himself. He had hired a few people over the years, but still saw himself as the "business development guy" and the "financial control guy". He spent much of his time with current and potential clients. "Business relationships are just like personal relationships, they must be nurtured all the time."

In addition to the securities trading conducted by his firm, Mr. Chan had started to provide some financial planning services to his clients. He personally did most of the planning work to ensure that his clients' investments fit their needs. Since 1992, he had hired three professional employees, and they had progressively assumed the responsibility for the buy-and-sell order taking part of his business.

Mr. Chan admitted that his company's performance had its peaks and valleys, just like the trading volumes and index levels on the Hong Kong stock market. "I have managed to keep it limping along, but I've paid a high price. I rarely see my wife and daughter, except on Sundays." Even though many of his relatives also run their own companies (in different lines of business), he had thought about going back to work for someone else, "but I think that would be very difficult now that I have been running my own show for many years."

Issue 8 - Intensified and internationalised competition
As the share trading volumes on the Hong Kong market increased during the bull market of 1992 and 1993, the major players in the global securities industry have been paying more attention to Hong Kong. Few of them could ignore the listing of China shares,

as the mainland government opened up its largest state enterprises to foreign investment. Mr. Chan become aware of this internationalization process by reading local media reports, scanning an electronic new service, and talking to industry associates. He recognised that this development would change the competitive dynamics of the securities industry in Hong Kong.

As a result, Mr. Chan wondered how much room there would be for the "little fish" as Hong Kong became a "very big pond", just like London and New York. He had read (in the newspapers) and heard (from business colleagues) that there had been quite a few mergers and acquisitions among Western securities firms. Mr. Chan foresaw a similar type of shakeout taking place in Hong Kong as soon as market sentiment became less positive and some of the initial hyperbole over China shares had subsided.

He hoped that he will not be among those who have to close up their business. To this end, he had reviewed his internal documents and taken steps to strengthen his relationships with key customers. This included promising a high degree of reliability and providing higher value-added services. His most tangible action was to help his clients plan their finances as well as execute their trades of corporate shares.

This strategic issue involved the competitive sector of the environment and had Mr. Chan acting in the role of disturbance handler. While diagnosing and addressing this issue, he had acquired information from the local mass media, electronic services, business associates, and internal documents.

Issue 9 - Considering computerisation
Largely as a result of personal observation, Mr. Chan realized that computerisation was becoming more and more important in his industry. His previous employer had already installed a lot of computing and telecommunications equipment shortly before the 1987 market crash. Mr. Chan had subsequently monitored developments in this area by reading media reports and talking

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to a few industry associates.

Probably as a result of this environmental scanning, Mr. Chan was able to remember that an automatic order matching system had been introduced about four or five years ago. He was aware that this system had greatly reduced the time and effort required to enter orders and confirm trades, and that it provided a useful audit trail for securities transactions.

Mr. Chan also kept in touch with a friend from school who was now in the computer business. Almost every time they talked, this friend chided Mr. Chan for not making greater use of IT to modernize his business. In response, Mr. Chan often expressed his desire to talk directly to both his clients and employees and to keep his own mental or hand-written notes. As a result, he had little need for electronic communications or highly structured databases.

Nevertheless, his company had been using a personal computer to keep accounting and customer records almost since it was started. Recently, a trading terminal had been installed in the office to supplement the one that was available to him on the trading floor. However, Mr. Chan was not sure whether his small business would benefit from other applications. Anyway, this was a moot point at the moment; he indicated that he was unable (or perhaps unwilling) to invest any more money into his business.

The computerisation issue involved the technological sector of the environment and had the CEO acting in the role of entrepreneur. Information was acquired from the mass media, business associates, a friend, and trade publications.

More generally, Mr. Chan stressed that he did not have time to read any single publication on a regular basis. Instead, he tended to skim over one of the local newspapers each day and business magazines a few times a month. This approach enabled him to develop impressions about trends and maintain a good sense

of the current environment. Information from an article "rarely makes me go out and do something, but it sticks in my mind". When it was time to make a big decision, he already had a good mental image of "what was happening, and what could happen as a result of my decision." This suggests a common lag between the acquisition of information about external developments and its use in strategic decision making.

6.5 Newspaper industry

6.5.1 Leading Paper

Leading Paper was the producer of one of the longest-established and best-selling daily newspapers in the Hong Kong market. The company also published an international Chinese language newsmagazine on a weekly basis and different newspaper editions for Chinese communities overseas. The largest of these, in terms of sales volumes, were the eastern Canada edition (published in Toronto), the eastern U.S. edition (published in New York), and the western Canada edition (published in Vancouver).

The ownership of Leading Paper was controlled by a single family even though its shares had been publicly listed on the local stock exchange for many years. One industry analyst told me that this equity structure had helped the company to maintain a healthy balance between short-term performance and long-term viability.

The chief executive at the time of the case study was Mr. Leung. He had been with the firm for nearly 10 years, and had nearly 25 years of experience in the newspaper industry. He had a reputation as a talented and fairly progressive business leader. Under his leadership, the company had introduced a number of content and production ideas to Hong Kong that were subsequently adopted by other local newspapers. During the interview, Mr. Leung identified two very different strategic concerns - one was a lingering regulatory issue while the other was a recent development that had shaken up the local marketplace.

Issue 10 - Potential ban on tobacco advertising in newspapers

Tobacco companies in Hong Kong spent between HK$ 300 and 800 million per year on advertising and promotion during the last decade. After 1991, they were no longer permitted to advertise on television. Although they continued to sponsor sporting events, such as the Marlboro and Salem tennis tournaments and Camel motorcycle races, most of their television advertising budgets were shifted to other mass media outlets.

The newspaper industry had been a major beneficiary of this shift. Mr. Leung indicated that the value of tobacco advertisements in Hong Kong newspapers had grown by HK$40-50 million from 1990 to 1994. Despite the segmented market, newspaper ads were quite cost effective when compared to their radio and outdoor counterparts or on-site promotion. However, by 1993, consumer advocacy pressure had reached the stage where the Hong Kong Government was actively considering additional restrictions on tobacco advertising.

The possibility of a ban on print advertisements represented a significant threat to the newspaper industry, since somewhere between 5 and 10 per cent of all its advertising revenues came from placements by tobacco firms. For many newspapers, this ban could be a killer blow, given that it could come on the heels of a drastic reduction in China property advertisements (a drop of more than 60 percent from its peak in early 1993), and intense price competition initiated by a bold newcomer, the *Apple Daily*.

Mr. Leung could not recall exactly when or how he first became aware of a possible ban on tobacco advertising in newspapers. This had been a critical concern for a long time. When the government banned tobacco advertising on television, he became worried that it would only be a matter of time before the ban would be extended to newspapers.

Several years ago, Mr. Leung had asked his accountants to work out the expected impact on Leading Paper's financial position if

there was no advertising revenue from the tobacco industry. The results were more negative than he had imagined. This together with his own smoking habit and a strong belief in a free market, where the consumer was left to decide what to buy or not buy, motivated Mr. Leung to actively lobby any proposal to ban tobacco advertising in newspapers.

Mr. Ho had spent quite a bit of time gauging the sentiments of other business leaders in the industry. Some seemed indifferent to this threat, but many supported Mr. Leung's stance and encouraged him to talk to the relevant government officials. He initially attempted to persuade the officials to accept his point of view, but this effort was unsuccessful. Mr. Leung came to the conclusion that some restrictions on tobacco advertising in the print media were inevitable.

However, he believed that he could influence the nature of these restrictions as well as the timeframe for implementation. In this regard, he directed his management lieutenants to initiate a polite dialogue with the leaders of the major anti-tobacco consumer groups. Meanwhile, he continued to lobby senior civil servants and legislators. He argued that restrictions on tobacco advertising would hurt newspaper industry profits and force some firms to cease operations. Industry consolidation would not only raise unemployment, but also hinder the publication of alternative viewpoints, and thus impair the freedom of the press.

The CEO also recalled a talk with his brother, who lives in Canada. The brother had mentioned that Canada had gone through the same step-wise process of shutting down tobacco and alcohol advertising. The details of this process proved enlightening to the chief executive. They prompted him to reformulate his business strategy and were helpful in persuading the Hong Kong government to follow a gradual approach in restricting tobacco advertising in the print media.

On this issue, which involved the political/legal sector of the

environment, Mr. Leung had acted primarily as a disturbance handler and secondarily as a negotiator. Issue-relevant information was acquired from the following sources - subordinates, government officials, customers, and family (brother).

Issue 11 - Retail price war

Newspaper firms obtain nearly all of their revenue from two sources: the sales of newspaper copies (circulation) or advertising. Most newspapers rely on both sources of income, and there is commonly a dynamic tension between them. Reducing the selling price of a paper will tend to increase the circulation volume but decrease the total amount of revenue from circulation.

Although more copies are sold, this will not normally compensate for the loss resulting from the lower profit per copy. Price elasticities in the newspaper industry tend to be rather small. However, an increase in circulation will tend to raise advertising revenue, because a given advertisement will be seen by more people if the newspaper is more widely distributed. Conversely, an increase in selling price will tend to decrease both circulation numbers and advertising revenues, but increase the revenue from retail sales of newspapers.

In pre-handover Hong Kong, co-operation was often as important as competition within the Chinese language newspaper industry. The Newspaper Society of Hong Kong (NSHK) acted as a medium whereby representatives from every company met annually to discuss pricing policy. As a result, a nearly-uniform pricing policy had been maintained for over twenty years. For example, the price of all but one of the Chinese language newspapers rose from four to five Hong Kong dollars in October 1994.

This uniformity was rudely disturbed in June 1995. At that time, the *Apple Daily* entered the newspaper industry and widely circulated coupons that enabled the purchase of its new product at two Hong Kong dollars. This was less than half the price of

all the existing Chinese language newspapers in Hong Kong. Such an entry strategy prompted a newspaper price war.

As an immediate action to counter its aggressive new rival, several newspapers announced reader competitions with various types of attractive prizes. A few also made product modifications so as to more closely resemble the style and content of *Apple Daily*. However, one strong rival to LP moved quickly to acquire additional printing facilities and to accumulate a huge amount of newsprint. Once its facilities were ready, it responded by cutting its price to HK$ 2.

Mr. Leung became aware of this market shock from multiple sources. It was publicized by the mass media, including his own newspaper. Meanwhile, a steady stream of phone calls from industry associates and news reporters both provided information and posed questions about a competitive response. The management of *Leading Paper* had to decide whether its price would also be reduced to the HK$ 2 range. Alternatively, it could stay out of the price war and concentrate on improving content quality.

Mr. Leung had consulted other members of the his management team and his peers from other newspapers on this issue. They were divided with respect to which course of action should be pursued. However, intelligence gathered from industry associates indicated that his firm was in a comparatively favourable financial position. The chosen strategic response was based largely on an assumption that many of the less financially-endowed mass market players could not afford to cut their prices. It was also influenced by the results of a quick-and-dirty market survey.

By December 1995, the Leading Paper had used a series of promotional programs and discount pricing to boost its circulation to new record levels. It was again among the market leaders, even though its monthly revenue had declined by about HK $3 million from November 1995 to January 1996. Most of the major existing papers lost readers and/or revenue during the

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first six months after the launch of the *Apple Daily*. Nevertheless, by the spring of 1996, the industry leaders had re-established a nearly-uniform pricing structure, with most of the surviving newspapers selling in the four to six dollar range. *Leading Paper* was among them.

On this issue, which involved the competitive sector of the environment, Mr. Leung had acted in the role of disturbance handler. He had acquired key information about the issue from the mass media, business associates, and customers.

Both the potential ban on tobacco advertising and the retail price war threatened the business performance of the Leading Paper. While Mr. Leung became aware of these issues through various sources, his strategic responses were based largely on consultations with business associates. As the CEO of an industry leader, he not only had privileged access to critical data and the informed opinions of key insiders, but also the available resources to make an effective response.

6.5.2 Apply Daily

The *Apply Daily* was launched on 20 June 1995. It was the brainchild of Mr. Jimmy Lai, a maverick businessman who made his fortune selling casual clothing like t-shirts, socks and jeans. Jimmy Lai was born in Guangzhou (Canton) just as the Communists took control of mainland China. He fled to Hong Kong in 1961. After working in the garment industry and setting up a sweater manufacturing firm that was unsuccessful, he established Giordano Holdings. This mass market chain of retail clothing stores became very successful in Hong Kong and subsequently expanded across much of East and Southeast Asia.

In the spring of 1989, Mr. Lai donated the proceeds from the sale of t-shirts with pro-democracy slogans to the students who were leading the anti-government protests in and around Tiananmen Square in Beijing. Shortly after the Tiananmen massacre, he started up *Next*, a weekly newsmagazine with a strong anti-

Communist editorial policy. In one of its first issues, Lai personally insulted the Chinese Premier of the day, Li Peng.

Based upon the success of his *Next* newsmagazine, Lai invested several billion Hong Kong dollars (estimated at US$250-500 million) of his own money to enter the already-fragmented Chinese language newspaper market in Hong Kong. The resulting *Apple Daily* was independent of the Next Media Group that Mr. Lai also controls. Closely following the formula used by *USA Today*, it has tried to appeal to a comparatively young and liberal audience that has little time to read traditional newspapers.

Apple Daily included many experienced newspaper people, and its CEO, Mr. Ho, had spent much of his working life in the mass media field before being recruited by this upstart. Mr. Ho claimed that the local industry had changed a lot in recent years, because "most newspapers (now) try to flatter the Chinese government; they do not want problems after 1997". He produced three different editorials that characterized Hong Kong's handover in remarkably similar terms - of a wayward son returning to the bosom of the motherland.

The *Apple Daily* aimed to create a market niche by providing a different point of view with its reporting and analysis of events in Hong Kong and China. The success of *Next Magazine* and some market research indicated that there was an opportunity to capitalise on the pre-1997 uncertainty among Hong Kong people, and their growing eagerness for reliable information.

Apple Daily launched an intensive pre-launch publicity campaign in other media outlets in order to create a high degree of recognition in the marketplace. An often-aired television commercial featured Jimmy Lai surrounded by masked men firing arrows at him. Apples and t-shirts with the Apple Daily logo were also given away to create consumer awareness and induce product trial. This advertising and promotion campaign ensured that the Hong Kong public was very familiar with the new

entrant's slogan "An *Apple* a day keeps the lies away". Meanwhile, a discounted price of HK$ 2 (with a coupon) for an introductory period was offered in order to directly attack the well-established industry cartel price of HK$ 5. As indicated previously, this tactic sparked a bitter price war in the industry.

On its first day of publication, readers snapped up the entire print run of the *Apple Daily* --- more than 220,000 copies. It grabbed a 15 per cent share of the Chinese language newspaper market in Hong Kong during its first two months of operation and its circulation surged past the 300,000 mark within six months of its launch. After one year in business, the Apple Daily was generating consistent profits. Its daily sales of more than 250,000 copies placed it second among Chinese language newspapers in Hong Kong, hot on the heels of the Oriental Daily News (*Survey Research Hong Kong*, 1997).

Issue 12 - Freedom of the press
Both of the key informants in the industry indicated that many of the Chinese language newspapers in Hong Kong were not in competition for circulation or advertising revenue. The researcher also contacted a representative from a third newspaper who stated that its mission was the scholarly criticism of government. He further asserted that his company had maintained this mission for nearly 60 years. Profit making was identified as a means toward the end in this case. Several other senior managers in the industry also claimed that their newspapers were "ethical products" rather than "commercial products".

As a result, the editors in most Chinese language newspaper firms had a considerable amount of organisational power. Their scope of authority and influence included corporate policy, business direction, and information systems strategy. The strategic objectives cited by the newspaper chief executives who were interviewed mirrored their paper's editorial objectives or appeared to be shaped by them. They cited objectives such as "to

educate readers", "to criticise the Government" (both the colonial British administration in Hong Kong and the national government of the PRC in Beijing) and "to express reader opinions". It was also acknowledged that several Chinese language newspapers in Hong Kong took an editorial stance that favoured the national government in Beijing.

Several of these pro-Beijing newspapers were in fact supported by the PRC government, with much of their advertising coming from mainland Chinese enterprises. This may be considered an indirect form of patronage from Beijing. These papers had a secure advertising income and, as a result, they were *not* in competition with the other Hong Kong newspapers for advertising revenue. Nor were they in competition for circulation. Starting in late 1995, most of the Chinese language newspapers in Hong Kong participated in a price war. However, the pro-Beijing newspapers did not cut their prices and, perhaps surprisingly, their sales were not affected significantly by the price war between other newspapers. Remarkably, the Hong Kong newspaper market had lacked a strong anti-Beijing voice in the early 1990s.

The establishment and rapid success of the *Apple Daily* filled this gap. It also enabled Mr. Jimmy Lai to promote his strong anti-Communist stance which had already made him a well-known local personality. The early issues of the *Apple Daily* criticised the attitude of the PRC government towards Hong Kong on issues such as Chris Patten's political reforms and proposed changes in the post-handover sedition laws. However, it also offered a sufficient degree of exclusive news and quality editorials to tempt hundreds of thousands of readers away from other newspapers in Hong Kong.

The *Apple Daily* had openly accused its competitors of self-censorship on events and issues that could be considered sensitive by the mainland Chinese government. Meanwhile, it had vowed to report the truth and stand up for the rights and freedoms of Hong Kong people. Given this context, it is not

surprising that the freedom of the press was *the* strategic issue for the *Apple Daily* --- the CEO claimed that "we can't survive without it".

Mr. Ho admitted that he had developed "a good understanding" of this issue by reading reference books about its historical development and more recent ebbs and flows. He had been monitoring overseas developments related to the freedom of the press and talked to other newspaper executives around the world since stepping into this top management position. He was also obviously proud to mention that the *Apple Daily* was itself a constant source of information about this issue and a benchmark for its future status in Hong Kong.

Mr. Ho had acted in the role of disturbance handler on this strategic issue that involved the political/legal sector of the environment. He had acquired key information about the issue from the following types of sources - mass media, internal documents, and business associates.

Issue 13 - Technology leadership
Many of the people interviewed said that the newspaper industry in Hong Kong was scholar-led. Editors tended to be very well-educated and had a very high social status. They tended to see themselves as continuing a Chinese scholarly tradition and inheriting the prestige that scholars had in the time of the Chinese Empire. Many of their editorial staff also considered themselves to be artists following in the great Chinese tradition of calligraphy. This resulted in very formal writing styles and considerable resistance to the introduction of Chinese word processors. Many Hong Kong journalists continued to handwrite their articles, which were then entered into the computerised system by typists or typesetters.

In contrast, the *Apple Daily* aimed to be at the forefront of newspaper industry technology. The external environment had been thoroughly scanned in order to identify leading-edge tools and

techniques. As a result, Mr. Ho proudly claimed that the *Apple Daily* was the only newspaper in Hong Kong (with the possible exception of the English-language *South China Morning Post*) that had applied IT to all four core newspaper processes: production, editorial, distribution, and sales.

On-screen layout and computerised colour separation now represented the cutting edge for the copy/plate/print production process while on-line data bases provided an important new source of editorial support. AD had also begun to *publish* a version of its product on the Internet. This form of distribution saved time and greatly reduced (or even eliminated) the consumption of ink and paper. Finally, *tele-ad* sales (telephoning in a classified advertisement) were being supplemented by the electronic submission of artwork for display advertisements. The widespread application of IT enabled the newspaper to be created quickly and also resulted in a highly-differentiated product.

In sharp contrast to the stodgy pro-Beijing mouthpieces in Hong Kong, the *Apple Daily* featured colourful, lifestyle-oriented reporting. The paper provided timely news items that were tightly edited and concisely written in colloquial language. Big headlines, full colour photos, and innovative graphic designs created an unmistakable resemblance to *USA Today*.

Despite its improvements on the traditional production cycle times, the CEO expressed concern about the emerging commercialisation of the Internet, and the potential competition from new forms of electronic media. He stated that "the Internet was no longer just a technological tool used by you academics, but it is quickly changing Hong Kong business and society." His opinion was based on personal observations, the opinions of trusted associates and information from other mass media sources.

Mr. Ho had acted in the role of entrepreneur on this strategic issue, which involved primarily the competitive sector and secondarily the technological sector of the environment.

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Information about the issue had been acquired from business associates, technology vendors, the mass media, and trade publications.

As a brash newcomer to the local newspaper industry, it was clear that the *Apple Daily* was determined to distinguish itself in terms of two major characteristics - its anti-Beijing editorial policy and modern product appearance. The viability of such a differentiation strategy had been established by acquiring information from an interesting combination of sources. Local industry and political insiders had indicated that its proposed editorial stance would be tolerated before and after the handover. Meanwhile, it had sought out overseas experts, and particularly people connected to *USA Today*, in order to develop a technological leadership position in the local market.

6.6 Higher Education

6.6.1 The University of Hong Kong

The University of Hong Kong (HKU) is one of the oldest universities in the dependent territories of the British Commonwealth, and by far the oldest tertiary education institution in Hong Kong. From modest beginnings, it had grown to embrace almost all the major teaching and research disciplines and could realistically claim to be among the premier universities in the Asia-Pacific region.

The university had drawn on the cultural traditions of both China and the West, and according to its mission, had always strived "to offer the highest standards of teaching, research, and scholarship as practised in the wider, international academic community". Before the outbreak of the Second World War, which temporarily arrested its steady progress, the university had four Faculties - Arts, Engineering, Medicine, and Science. Since the end of the War, it had expanded its student intake totals, teaching staff numbers, and scope of intellectual activity.

By 1996, the University had a student population of about 14,000,

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including nearly 5,000 postgraduates. They were registered in nine Faculties - Architecture, Arts, Dentistry, Education, Engineering, Law, Medicine, Science, and Social Sciences. Under the terms of their contracts, each of the nearly 900 teaching staff was expected to contribute to scholarship by undertaking research as well as fulfil their student-related duties. More than 1,400 research projects with an overall budget of nearly HK $400 million were conducted in the University during 1995-1996. Academic staff were involved in a further 700 identifiable projects that did not receive dedicated funding support.

The University had developed many linkage agreements and collaborative projects with leading universities around the world, and was a member of *Universitas 21*, a loosely-coupled network that includes many of the world's major research-based universities.

The Vice-Chancellor, Professor Cheng was born and raised in Hong Kong, but went to North America to receive his university education in engineering. He worked overseas for a few years before returning to Hong Kong to take up an associate deanship. He had served as the President of another university in Hong Kong for about five years before taking up his present position.

Issue 14 - International reputation and linkages
Professor Cheng stated that as 1997 approached, a lot of people overseas had asked "whether we can keep doing what we are doing." They had expressed specific concerns about the ability to maintain academic freedom and attractive academic compensation levels in post-handover Hong Kong, because professors in mainland China faced research restrictions and received much lower salaries.

The core issue seemed to be whether HKU would be able to retain (let alone enhance) its standing in the international academic community. Professor Wang, the previous Vice-Chancellor, had sought to assure those concerned that little would change at the

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university. Professor Chang was sustaining this theme and highlighting the facts that HKU would continue to teach in English, would still seek out the best faculty from all over the world, and had plans to enhance both its research activities and international linkages. Significantly, it would continue to be an active partner in the world-wide *Universitas 21* association.

The Vice-Chancellor claimed that at least one major change was imperative - far more multi-lingual and multi-cultural graduates were essential for Hong Kong's externally-oriented, service-based economy. He had personally observed the benefits that these graduates provided to Australia and Singapore, and had also read studies from those and other countries. The UGC institutions had started to provide developmental English courses for their students, but he did not feel that the issue of being comfortable in both Eastern and Western cultures had been addressed in an adequate manner.

Professor Cheng felt that higher education in Hong Kong would benefit from taking on a more international focus, and becoming a regional centre for higher education. In particular, he hoped that the limit on non-Hong Kong undergraduate students could be relaxed at his university. As a result, he had initiated several discussions on this particular issue, with the UGC, with Hong Kong Government policy makers, and even with officials from the Ministry of Education in mainland China. He admitted that these discussions had not altered his fundamental view nor achieved a breakthrough to date, but they had significantly enhanced his understanding of this multi-faceted issue.

He knew that recruiting very good students from mainland China and other countries would require additional funds, probably from the Hong Kong taxpayer, but that it would provide substantial benefits. In the short-term, such recruitment would help to internationalize Hong Kong students. He further reasoned that some students would remain in Hong Kong, and add to the skilled labour pool. Meanwhile, those returning to their own countries

would be likely to maintain links with Hong Kong, thereby
providing mutual benefits. He had asked his assistants (internal
staff) to gather evidence about the costs and benefits of foreign
students in order to help support (or refute) his contentions.

The Vice-Chancellor had acted primarily in the role of
disturbance handler and secondarily in the role of negotiator on
this issue. He had acquired information about aspects of the
issue from published articles, regulators, government officials,
business associates, and his own subordinates. Although this was
primarily a competitive issue, it also involved the
political/legal sector of the environment.

Issue 15 - Riding the wave of information technology

During the past decade, a variety of IT-mediated learning
environments had emerged, including stand-alone computer-assisted
instruction applications, networked information resources,
teleconferencing and videoconferencing, and assorted means of
distance learning. Internet-based applications, such as e-mail,
gophers and WWW servers, had been widely adopted by universities
in Hong Kong. These applications had expanded the range of
possibilities in communication, collaboration, and information
delivery. The rapid pace of technological development and the
emergence of the information age presented opportunities,
challenges and threats to universities in Hong Kong.

Professor Cheng identified this as a strategic issue, but added
that the aims of higher education were quite universal and
unlikely to change in the foreseeable future. Based on his own
experimentation with different IT applications, he agreed with
a recent article that while technology could alter the essence
of the university as a social institution and quicken its pace
of discovery and invention, the electronic environment would not
replace the physical and human elements.

Nevertheless, he also concurred with the dominant view expressed
in a recent "Future of Universities" forum - that international

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virtual campuses would enable students to have on-line access to the best teachers and scholars anywhere in the world. Those virtual campuses had already appeared, at least in embryonic form. It was widely agreed that their numbers would explode during the coming decade. While virtual universities might supplement or even replace existing institutions, the full range of long-term implications was far from clear.

From his discussions with academic colleagues both in Hong Kong and overseas, Professor Cheng was aware that quality assurance was a key issue with the part-time programmes and short courses offered by non-traditional means. Where these were provided by respected and established higher education institutions, there can be a good level of assurance for potential students. However, some of these programmes in Hong Kong were offered by overseas institutions with uncertain or dubious reputations. The problems posed by "virtual campuses" established on an international scale were likely to be even greater.

Based upon discussions with other university leaders, he believed that IT could be both an opportunity and a threat for higher education institutions in Hong Kong. The world-class telecommunications infrastructure would be helpful as local universities developed on-line courses and academic interactions, enabling access beyond the boundaries of a physical campus and even the borders of Hong Kong. He mentioned that the Hong Kong Academic and Research Network (HARNET) was being improved all the time while the technological support for libraries and computer centres was substantial. This would enable Hong Kong to open up its universities for students and institutions across China. Despite some concerns about the impact on local students, he perceived that there would be positive spin-offs.

By reviewing internal documents and talking informally to hundreds of students over the years, Professor Cheng was also aware that Hong Kong, like other developed societies, was moving away from the traditional model of education. People no longer

completed their studies before devoting themselves solely to work. Initiatives such as IT-enabled distance learning offered "a way of meeting the need for more flexibility, by allowing people to dip in and out of education and periodically updating their knowledge". HKU was moving in this direction, but he felt that it should "do much more, and do it much more quickly".

Nevertheless, Professor Cheng expressed his personal concerns about another aspect of this issue - whether a university in Hong Kong could compete successfully against the richest, best-established and most famous educational institutions in the world. He believed that it could if it invested its resources in selective areas of excellence. The danger was that Hong Kong universities could become side-lined as overseas schools harnessed the technological advances before they did, and created sustainable first-mover advantages. Since several universities in the U.S. and Canada were well-advanced in this area, he had sought to learn from the North American experience.

There was little doubt in his mind that IT was already changing how many academics work. A new generation of faculty were coming into academic positions with little or no secretarial assistance. They used their own PCs to prepare teaching materials, conference presentations, grant proposals, manuscripts, and other documents. Meanwhile, the experiences of overseas universities indicated that IT could be used to revamp cost structures and gain efficiencies, without sacrificing educational quality.

The HKU campus was already routinely using IT in many administrative areas. Its Vice-Chancellor stated that leveraging expensive faculty time in both teaching and research was the natural next step. He hoped that IT applications would improve productivity and achieve cost savings. The results of several reported studies and some research that he had commissioned were inconclusive. However, he thought that many IT applications were now starting to benefits the university. "I don't have the hard numbers but I think IT is helping to increase productivity and

reduce operating costs." He cited improvements in areas like data management, personnel files, course schedules, library catalogues, budgets and accounts receivable, student transcripts, and admissions information. We went on to discuss the IT productivity paradox at some length.

The electronic storage of, and networked access to, library resources was another area where his university had already "done quite a bit", but much more could be achieved. The Internet offered the possibility of an alternative to traditional academic publishing, through the development of electronic journals and mailing lists. Some of these were already available. However, given the difficulties of verifying the authenticity and originality of such publications, and of finding and citing them, he felt that their status remained uncertain.

He realized that the omnipresence of technology would require new models for institutional policies and practices. For example, staff evaluation and reward systems would have to be changed. He knew that some U.S. schools had overhauled their guidelines for peer review and evaluation of teaching, scholarship, and services that utilise information technology.

Professor Cheng concluded that this was a complex and on-going issue, but he was determined that his university would "ride the wave of information technology rather than be swept under by it". He mentioned that he would continue to monitor both the popular media and scholarly journals while taking advantage of any interactions with industry associates to keep learning more about its different facets.

This issue involved the competitive and technological sectors of the environment. The informant acted primarily in the role of entrepreneur and secondarily in the role of disturbance handler. Information about the issue had been acquired from no less than six different sources - published articles, business associates, customers, electronic services, internal documents, and the mass

media.

Issue 16 - Recruiting and retaining staff

Despite the growing role of IT, talented and motivated people remained the key to success in higher education. The Vice-Chancellor seemed to acknowledge this when he mentioned how important it was to "find and keep the best possible people. Experienced people are in short supply". Rapid economic development as well as large-scale emigration had put a lot of pressure on the supply of human resources in Hong Kong. Despite some returnees (former residents coming back to Hong Kong) and the increasing numbers of locally-produced graduates, there had been a significant net loss of skilled personnel from Hong Kong in recent times. This had implications for academic as well as for administrative and support staff.

Professor Cheng stated that "since we depend on the best and the brightest, we are particularly hurt. Unlike the private sector, we have little flexibility to promote people at a faster rate or to offer a higher salary." On the academic side, the plan had been to recruit world-class researchers. It would be important to rejuvenate the faculty by hiring "the best new professors from schools in the United States, Australia, Canada and elsewhere". This clearly hinged on Hong Kong continuing to be perceived as an attractive locale for university teaching and research.

The Vice-Chancellor noted that "seasoned lecturers" had provided a distinct advantage by sharing their wealth of experience and expertise. Unfortunately, he believed that energetic efforts and new initiatives were often dissuaded because many faculty had an *iron rice bowl* (tenured or superannuated terms of employment). As a result, he was eager to institutionalize what he termed a Nike approach: "don't wait, just do it."

The recruitment of administrative officers, research assistants and part-time lecturers was becoming "a big headache for all of us". Professor Cheng had monitored the emergence of this problem

through the mass media and through the reports of his own subordinates. In response, HKU was stepping up its recruitment efforts and committing additional resources to training and development. Meanwhile, the Vice-Chancellor was continuing to maintain dialogues with both the Labour Department and the Institute of Human Resource Management in order to examine other steps that could be taken. As the time of this case study, the staff shortage persisted and the stop-gap measures undertaken by local employers, including HKU, seemed to be inadequate.

This strategic issue involved the economic sector of the environment and had the Vice-Chancellor acting in the role of disturbance handler. He had acquired key information about the issue from the mass media and consultants. Moreover, in contrast to the printing and securities CEOs, he had relied upon information from his subordinates for a second strategic issue.

While the handover was not perceived to be a strategic concern for HKU, two of the issues identified by the Vice-Chancellor were related to it. He and his management team spent a lot of time and effort to understand and address the concerns of overseas associates with respect to the impending change of sovereignty. They also had to deal with the issue of recruiting and retaining staff who were aggravated by concerns of the local work force about the post-handover situation.

6.6.2 New University

New University (NewU) was established as a polytechnic, but it had rapidly taken on the role and responsibilities of a full-fledged university. It had formally received university status and title from the Hong Kong Government in 1994. Its vision is to be widely recognised as a leading university in the region.

By 1997, NewU was offering over 70 taught courses ranging from diploma to master's degree levels and various research degree programmes up to the doctorate level. The student population had grown to nearly 17,000 studying in four degree-level faculties

and a sub-degree college. In addition, a school of professional and continuing education organised trade, professional or target-specific custom programmes, as well as self-financed University award-bearing courses.

NewU had progressively improved its research ethos, with faculty members undertaking more and more studies of both a basic and applied nature. NewU had established a number of subject-specific research centres while encouraging staff to undertake both contracted studies and consultancy projects. By 1996, NewU had become an academic leader within Hong Kong in areas such as business finance, electronic engineering and mathematics.   It also benefitted from a purpose-built campus that featured modern learning and research facilities with generous technology support.

Professor Tang, the NewU president and CEO, was born and raised in Greater China, but received his graduate degree in the United States. He had worked as a professor and dean in the engineering and/or science faculties of universities in the Canada, U.S. and Hong Kong before accepting his present appointment.

Issue 17 - Transition from a teaching to a research focus
New University had made impressive progress in selected learning and research areas both before and after receiving its official university status. However, it found it difficult to shed its polytechnic heritage. Many staff had been with the organisation for five years or more. They were good teachers and had helped to administer various programs effectively, from the higher diploma to the doctorate degree level. However, few of them had formal training or much experience in academic research. Moreover, many were unenthusiastic about doing research.

Meanwhile, the University Grants Committee (UGC) in Hong Kong had indicated that a growing share of the funding would be based on research performance. The president indicated that "this puts us at a disadvantage in at least two ways. First of all, we

don't have the research momentum of a HKU or a CU (Chinese University). Secondly, our mission forces us to focus on applied topics that some traditional scholars consider less valuable or appropriate for a university. Top journals in many disciplines simply do not publish applied research. I fear that we will not receive full credit for our performance from those judging us."

NewU had to compete for the best researchers from around the world and the best students from not just Hong Kong, but increasingly from China and the Anglo countries. With the rapid expansion of overall university student numbers in Hong Kong, there were larger numbers of mediocre applicants being accepted. NewU was getting a significant share of these poorer students.

At the same time, it sought to recruit good researchers that might not be as good at teaching or as motivated in the classroom as its existing staff. Professor Tang stated that "although the official university name was long overdue and will help us, we do lose some of our basis for differentiation. Our current image is a weakness. All in all, it is not an ideal situation, but I am excited about the challenge."

The four new universities in Hong Kong, with the possible exception of (what he called) "the Rolls Royce in Sai Kung" (the well-resourced University of Science and Technology) considered themselves to be in similar predicaments. They were fighting an uphill battle for a finite amount of resources against the two older and more established universities. The President stated that he "tried to maintain a regular dialogue with the UGC" and also spent a lot of time reading their written reports and pronouncements. This was necessary so that he could lobby for fairness towards the institution.

He and the leaders of the other less-established universities in Hong Kong "certainly talked to each other quite a bit ... often get(ting) together for lunch to discuss how we can advance our mutual interests." For example, many traditional funding

agencies were reluctant to fund applied research. They believed that such money should come from industry. He also talked regularly to a good friend who was a vice-president of the new Ryerson University in Toronto. Ryerson was also a polytechnic until very recently. He said that "Although the university system in Canada is quite different from ours, it is good to share information and empathise with each other."

This issue involved primarily the competitive sector and secondarily the political/legal sector of the environment. The President acquired information from regulators, competitors and subordinates while acting in the roles of negotiator and disturbance handler.

Issue 18 - Implementing a strategic planning process

In the past, a lot of the decisions and actions in NewU had been imposed in a top-down manner. Teaching staff had rarely coordinated or integrated their plans. However, the President felt that NewU had grown to the point where it had to do things more formally and based on a common purpose. "Part of this is being accountable and delivering value for money, but another part is preparing ourselves to be a successful player in a more competitive environment ... we have to acknowledge our strengths and weaknesses and then move forward in a coordinated manner".

NewU had recently made a decision to move away from triennial planning (based on UGC funding periods) to more strategic planning. Professor Tang began to advocate this idea after a visit to the United States. He had subsequently convinced others that NewU should implement it. The President also mentioned that he had read a number of books on strategic planning. He pulled *Academic Strategy* by George Keller from his bookshelf and said that it had been particularly useful. Consequently, he knew that strategic planning could not be left to a dedicated group of planners. As the chief executive, "I can not say you're in charge of planning and I'm going to delegate the fate of the organisation to you."

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Professor Tang had held lengthy discussions with his management team to ensure that there would be a long-term commitment in order for NewU to achieve this change. After them, the introduction of strategic planning, consistent with the most sophisticated business planning approach conceptualized by Rhyne (1985), was announced.

The President claimed that strategic planning provided an opportunity for involvement by university staff who truly wished to show initiative. They could help shape what the organisation would do, and how it would respond to its changing environment. He believed that by participating, faculty and staff would refine their critical thinking and analysis skills, their writing skills, and their powers of persuasion. It would become important to convince colleagues that a trend or an issue requires a specific action.

Such involvement would also help Professor Tang learn more about NewU in a non-threatening way. He admitted that he talked more often to people at other universities than those at his own. He claimed this reflected his interest in "knowing what others are doing to improve their competitive positions". He specifically expressed a desire "to engage faculty and staff in grappling with external trends and issues that could bring threats and opportunities to the organisation". In higher education, people had a general tendency to look inside at what was going on in the academy and less frequently include significant external influences in their thinking. However, such an introverted perspective would now be disastrous.

One aspect of this is the intended development of "areas of excellence" within the UGC institutions. These were to be formed by building upon perceived strengths to produce groups that would be recognised internationally as worthy of substantial investment in state-of-the-art facilities. It was hoped that many of these groups would focus on areas of direct interest to industry and commerce in Hong Kong and the region, and that they would play

a lead role in teaching as well as research. As a result, New U would have to recognize its comparative strengths and weaknesses and also understand what the local and regional business community was interested in.

This created a critical need to absorb and organize information about the external environment, classify and review areas of change, and then develop intelligent strategic responses. For example, IT and the popularity of distance learning meant that almost any university in the world could set up shop in Hong Kong. There were already more than 100 MBA programs on offer. Professor Tang mentioned that "more and more really good universities, like Northwestern, MIT and Toronto, are coming into Hong Kong and leveraging their strong international reputations". He had been browsing both the English and Chinese language newspapers and magazines to find out which new competitors were entering the local market and what they were offering. However, he mentioned his own limitations in judging developments outside the science and engineering field.

There was a need to focus the university's efforts and reduce the chance of reacting randomly or committing major resources on peripheral areas. The biggest difficulty would be extracting value from a chaotic flow of information. The president stated that he often perceived the university environment to be just like `white noise'. He stated that environmental scanning "should become part of the planning process, ... undertaken through a concerted effort". He remembered reading that a university in the U.S. state of Georgia was doing a good job in this area, and that a high level of organisational discipline seemed to be a key success factor.

This issue involved the competitive sector of the environment. The President had acquired information from business associates, subordinates, internal documents and academic publications while acting in the role of entrepreneur.

Issue 19 - Improving business processes and management systems
The President also stated that "we teach TQM (total quality management) and BPR (business process re-engineering) in our business programs, but until recently very few organisations in Hong Kong have applied these principles". He had read (or at least browsed) books and articles on these principles/concepts and was convinced that New U's operations could be improved substantially. "I am optimistic about using information technology and modern management systems, certainly in the classroom, but even more so in the administrative end of things."

He noted that universities in Hong Kong were shifting their focus from quantity to efficiency and quality. Rapid expansion tended to be a rather inefficient process in terms of value for money, and New U had become very bureaucratic as a result of the fast growth during the last decade. "When I came here, I was amazed at the amount of paperwork." In a more stable situation, tighter controls and better resource usage could reduce unit costs while some expansion-related tasks would no longer have to be done.

Professor Tang was aware that the UGC would be adopting a new financial model for grant assessment and distribution. To this same end, it would carry out a series of management reviews in each institution under its jurisdiction. He was determined that NewU would be a step ahead of the game. This would mean "adopting a more systematic approach to management so that processes could be documented and improved". He admitted "that many (faculty) feel that I am trying to curb their traditional autonomy. Some probably think that I am simply grabbing more power for myself. However, there is a big difference between academic freedom and responsible resource management."

This issue involved primarily the competitive sector and secondarily the technological sector of the environment. Professor Tang had acquired information from books and articles, business associates, internal documents, and regulators while acting in the role of entrepreneur. Such a reliance on different

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sources was more evident among university CEOs than the others.

6.7 Mapping the Strategic Issues

The preceding sections have profiled descriptive profiles of both the strategic issues faced by the CEOs and their acquisition and use of information about the external environment in addressing these issues. Further analysis of the case study data was enabled by mapping these issues using an approach outlined by Miles and Huberman (1984/1994).

Each strategic issue was mapped on three different dimensions based upon how it was identified, framed and described by the eight CEOs. The three dimensions were: 1) the environmental sector(s) relevant to the issue, 2) the decisional role(s) of the informant with respect to the issue, and 3) the information sources that make the informant aware of the issue and/or improved his understanding or interpretation of the issue. This mapping of the strategic issues is shown in **Table 6.4**.

Table 6.4

Mapping the Strategic Issues

CEO	Strategic Issue	Environmental Sector(s)	Decisional role	Information source(s)
Mr. Li	**Responding to labour shortage**	Economic (Socio-cultural)	Disturbance handler	Mass media Subordinate Internal documents Business associates
	Reviewing and revising the product focus	Competitive (Customer)	Resource Allocator	Trade event Business associates Mass media
	Assuring quality standards (ISO 9000 certification)	Customer	Entrepreneur	Customers Business associates Consultants
Mr. Chow	**Finding (and grooming) a successor**	---	Entrepreneur	Business associates Family and friends Customers
	Maintaining competitiveness	Competitive (Technological)	Disturbance handler	Mass media Business associates

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Mr. Mak	**Responding to the emergence of Internet trading**	Technological (Competitive)	Disturbance handler (Entrepreneur)	Trade publications Electronic services Business associates Customers (survey)
	Promoting professionalism in the industry	Customer	Entrepreneur	Business associates Regulators Subordinates Customers
Mr. Chan	**Responding to growing competition**	Competitive	Disturbance handler	Mass media (local) Business associates Electronic services Internal documents
	Considering computerisation	Technological	Entrepreneur	Mass media Business associates Friend Trade publications
Mr. Leung	**Responding to a potential ban on tobacco advertising**	Political/Legal	Disturbance handler (Negotiator)	Subordinates Government officials Customers Family (brother)
	Responding to a retail price war	Competitive	Disturbance handler	Mass media Business associates Customers
Mr. Ho	**Preserving freedom of the press**	Political/Legal	Disturbance handler	Mass media Internal documents Business associates
	Ensuring technology leadership	Competitive (Technological)	Entrepreneur	Business associates Technology vendors Mass media Trade publications
Prof. Cheng	**Maintaining/ enhancing reputation and linkages**	Competitive (Political/legal)	Disturbance handler (Negotiator)	Published articles Regulators Government officials Subordinates Business associates
	Riding the wave of information technology	Competitive (Technological)	Entrepreneur (Disturbance handler)	Published articles Business associates Customers Electronic services Internal documents Mass media
	Recruiting and retaining staff	Economic	Disturbance handler	Subordinates Mass media Consultants

Prof. Tang	Managing the transition from a teaching to a research focus	Competitive (Political/legal)	Negotiator (Disturbance handler)	Regulators Competitors Subordinates
	Implementing a strategic planning process	(Competitive)	Entrepreneur	Business associates Subordinates Internal documents Books and articles
	Improving business processes and management systems	Competitive (Technological)	Entrepreneur	Books and articles Business associates Internal documents Regulators

The mapping process for the 19 issues involved some difficult choices in terms of assigning them to appropriate environmental sectors, decisional roles, and information sources. In particular, more than one environmental sector or decisional role was considered to be relevant for several of the issues. The role of IT accounted for many of these difficulties. For example, it was often difficult to distinguish between the Entrepreneur and Disturbance Handler roles as well as between the Competitive and Technological sectors; a firm could react to a foreign *Technological* development and the globalization of competition (Disturbance Handler role), but still gain a *Competitive* edge by becoming a local technology leader (Entrepreneur role). As each issue was mapped to different sectors and/or roles, the *most* relevant and hence primary sector and/or role was decided by an arbitrator (as outlined in Chapter 4). The other sector or role was classified as secondary (denoted by brackets in **Table 6.4**).

The mapping of issues onto the different information sources was less contentious, although two minor difficulties were encountered. First, the mentions of consultants and technology vendors could not be accommodated by this scheme, and so a twelfth category was created. Second, the descriptions provided by two CEOs failed to distinguish clearly between competitors and business associates. This led to a couple of arbitrated choices.

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6.8 Environmental Sectors and Decision Roles

All but one of the identified strategic issues was mapped successfully onto at least one specific environmental sector and one specific decisional role. The exception was the "search for a successor"; no environmental sectors were found to be directly relevant for this issue. An example may be useful to illustrate how the general mapping process was employed. One of the issues identified by Mr. Leung, the Leading Paper CEO, was the price war that had been sparked by the bold entry of the *Apple Daily* into the local newspaper market. Mr. Leung and his firm had to deal with an issue in the role of *Disturbance handler*, responding to changing conditions in the *Competitive* sector of the environment.

6.8.1 Environmental sectors

The issue descriptions provided by the informants also enabled a mapping to relevant environment sectors. **Table 6.5** shows the number of times that each environmental sector was relevant to the identified issues. Boldface type in the table represents sectors with a primary relevance to the issue while italics denote those having a secondary relevance. For example, the customer sector was of primary relevance to two strategic issues, and of secondary relevance to a third issue.

Eleven of the nineteen issues involved the Competitive sector of the environment. This included eight issues where it was the primary sector. Remarkably, a large percentage of these issues involved the adoption or upgrading of technology in order to maintain or enhance competitiveness. The Technological sector was the second relevant sector for five of the eleven issues involving the Competitive sector.

Given that the case studies took place with the Hong Kong handover on the horizon, it was surprising that only four issues could be related to the Political/legal (or regulatory) sector of the external environment. Moreover, two of these issues, the potential ban on tobacco advertising in newspaper and NewU's transition from teaching to research, were not related to the impending transfer of political sovereignty.

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Table 6.5

Environmental Sectors

Industry Sector	Printing	Securities	Newspapers	Universities	Total
Customer	1 + *1*	1	-	-	2 + *1*
Competitive	2 + *1*	1 + *1*	2	3 + *1*	8 + *3*
Technological	*1*	2	1	2	2 + *4*
Political/legal	-	-	2	1 + *1*	3 + *1*
Economic	1	-	-	1	2
Socio-cultural	*1*	-	-	-	1
Unclassified	1	-	-	1	2

Bold numbers represent the number of issues where a sector was of primary relevance
Italic numbers represent the number of issues where a sector was of secondary relevance

Only the freedom of the press in the newspaper industry and the international reputation for the University of Hong Kong could be considered as "handover" issues. However, it should be noted that the two human resource shortage issues (identified by the chief executives of Leading Printer and the University of Hong Kong) could also be attributed to the "brain draining" emigration from Hong Kong that was associated with post-handover concerns.

Although the socio-cultural sector was not of primary relevance for any of the identified issue, the growing preference for service sector jobs among the Hong Kong labour force was a sociological phenomenon that helped to explain the staffing shortages experienced in the printing industry.

6.8.2   Decisional roles

The 19 issues were also mapped onto the four decisional roles proposed by Mintzberg (1973) and considered in Chapter 1. The distribution of roles for these issues is shown in **Table 6.6**.

Table 6.6

Decisional Roles

Industry Role	Printing	Securities	Newspapers	Universities	Total
Entrepreneur	**2**	**2** + *1*	**1**	**2**	**7** + *1*
Resource Allocator	**1**	-	-	-	**1**
Disturbance Handler	**2**	**2**	**3**	**2** + *2*	**9** + *2*
Negotiator	-	-	*1*	**1** + *1*	**1** + *2*

Bold numbers represents the number of issues where a decisional role was primary

Numbers in italics represent the number of issues where a decisional role was secondary

Nine of the 19 issues were related primarily or exclusively with the Disturbance Handler role. Seven of the issues had a similar relationship with the Entrepreneur role. In total, eleven and eight of the issues, respectively, involved the Disturbance Handler and the Entrepreneur roles. These totals were much larger than the number of issues with the Negotiator role (3 instances) and Resource Allocator role (1 instance). This implies that information about the external environment was used mostly to decide about how to *react* to an external disruption (Disturbance Handler) or to decide *proactively* about "improvement projects" (Entrepreneur role), such as introducing a new technology, formulating a new marketing approach, or finding a successor to help ensure the future success of the organisation.

Significantly, each informant sought out some information about the external environment while acting in the role of Entrepreneur. Such a strong linkage between environmental scanning and this decisional role is predicted by Mintzberg (1973, p. 78), who stated that "Entrepreneurial work begins with scanning activity, where the manager uses information from scanning the environment to identify opportunities or problems,

and then to design and select improvement projects." Each CEO regularly scanned for new opportunities. Many also followed the application of emerging technologies in other countries while the printing and securities CEOs also tended to look into the adoption of products that had been developed elsewhere.

Figure 6. 1
Decisional Role - Environmental Sector Matrix

Role / Sector	Entrepreneur	Disturbance Handler	Negotiator	Resource Allocator
Customer	P S			P
Competitive	S N UUU	P S N UU	UU	P
Technological	S UU	P S		
Political/legal		NN U	N U	
Economic		P U		
Socio-cultural		P		

> Bold letters indicate primary quadrant of a strategic issue, and
> Non-bold letters indicate secondary quadrant of a strategic issue for:
> P = Printing CEO   S = Securities CEO
> N = Newspaper CEO   U = University CEO

In **Figure 6.1**, each strategic issue is represented by a letter (corresponding to an industry) and mapped onto a matrix formed from the four decisional roles and six environmental sectors. As a result, each letter relates two aspects of each issue: the informant's decisional role and the environmental sector about which the information was acquired and/or used. Remarkably, issues where the decision maker acted in the Entrepreneur role typically involved the Competitive *and* Technological sectors or the environment while the Competitive *and* Political/legal sectors were prominent for Disturbance Handling issues.

6.9 Information Sources

As the informants recalled recent strategic issues, they mentioned a wide variety of sources from which they had received or sought information. A total of 68 sources of information were cited for 19 issues. **Table 6.7** lists the frequency with which different types of information sources were cited. Significantly, at least two sources were used for each and every issue. Information from at least four different sources was received with ten issues. Complementary information sources were commonly used to first become aware, and to later develop a better understanding of a particular issue.

Personal and external sources of information were the most frequently cited by the informants in these case studies. Forty one of the 68 information sources (60 percent) were classified as personal while fifty two of them (76 percent of the total) were classified as external sources. Four of the six most frequently cited sources were external to the organisation while four out of the six most cited sources were also personal rather than impersonal in nature.

Meanwhile, a classification of the information sources used in the strategic issues identified by the CEOs from each of the four industries are shown in **Tables 6.8 through 6.11**.

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Table 6.7

Frequency of Information Source Use

Information Source	Number of Citations	Citation Percentage (out of 19 issues)
Business associates	16	84
Mass media	10	53
Trade/industry publications	7	37
Subordinates/employees	7	37
Customers	6	32
Government/regulatory officials	5	26
Internal documents	5	26
Consultants/vendors	3	16
Family/friends	3	16
Electronic services	3	16
Other sources	3	16
Total	**68**	

Table 6.8

Classification of Information Source Use by Printing CEOs

Printing	Internal	External
Personal	1	9
Impersonal	1	4

Table 6.9

Information Sources Used by Securities CEOs

Securities	Internal	External
Personal	2	7
Impersonal	3	5

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Table 6.10

Information Sources Used by Newspaper CEOs

Newspapers	Internal	External
Personal	1	7
Impersonal	1*	4*

* mass media was cited twice, but one of the citations was to the CEO's own newspaper

Table 6.11

Information Sources Used by University CEOs

Universities	Internal	External
Personal	4	10
Impersonal	3	6

The overall classification of the 68 information sources is shown in **Table 6.12**.

Table 6.12

Overall Classification of Information Source Use

	Internal	External	
Personal	8	33	41 (60%)
Impersonal	8	19	27 (40%)
	16 (24%)	52 (76%)	68

Further analysis of the data revealed that impersonal sources were most often used in the early stages of strategic issue diagnosis, while personal sources rose in importance as the diagnosis proceeded. As shown in **Table 6.13**, the chief

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executives commonly became aware of a strategic issue through an impersonal source of information, such as the mass media, or through self-realisation. In contrast, they tended to seek out information directly from other people during the subsequent interpretation stage of the diagnosis. External sources, such as business associates, government/regulatory officials and consultants/vendors, were commonly used to gain a better understanding of a strategic issue.

Table 6.13
Most Commonly Cited Information Sources for ...

Creating Awareness		Improving Understanding	
Mass media	6	Business associates	9
Self-realisation	4	Government/regulatory officials	4
Business associates	3	Subordinates/employees	4
Trade publication/event	3	Consultants/vendors	3

In **Figure 6.2**, strategic issues are again represented by a letter corresponding to the industry of the case study: **P** for printing; **S** for securities; **N** for newspapers; and **U** for university. This figure maps the issues onto a matrix formed by the various environmental sectors and information sources. Consequently, the positioning of each letter represents two aspects of an issue: the relevant environmental sector and the source from which information about the issue was acquired or received.

This mapping shows that issues related to the Competitive sector of the environment dominated the strategic agendas of the eight Hong Kong Chinese CEOs. Meanwhile, business associates (included suppliers, distributors and bankers) and the mass media were the most popular sources of information, both overall and for Competitive sector-related issues. However, **Figure 6.2** suggests that the CEOs called upon a fairly wide range of information sources as part of their strategic diagnosis activities.

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Figure 6. 2

Figure 6. 2
Environmental Sector - Information Source Matrix

Sector \ Source	Customer	Competitive	Technological	Political/ legal	Economic	Socio-cultural
Customers	P S		S U	N		
Competitors						
Business associates	P S	PP SS / NN UU	S U	N	P	
Family and friends			S	N		
Public/mass media		PP SS / NN U		N	P U	
Government and regulators	S	UUU		N		
Trade assoc./events		P S / N UUU	U			
Superiors/ mentors						
Subordinates	S	UU		N	P U	
Internal documents		U	U	N	P	
Electronic services		S U	S U			
Consultants and vendors	P	N	N		U	

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In **Figure 6.3**, each strategic issue is once more represented by a letter (corresponding to its industry) and mapped onto a matrix formed from the various decisional roles and information sources.

Figure 6. 3
Decisional Role - Information Source Matrix

Role / Source	Entrepreneur	Disturbance Handler	Negotiator	Resource Allocator
Customers	PP S / U	S / N		
Competitors			U	
Business associates	PP SS / N UUU	PP SS / NN U		P
Family and friends	P S / N			
Mass media	S / N U	PP S / N U		P
Government officials/ regulators	S / U	N U	U	
Trade shows/ publications	N UUU	S / U		P
Consultants/ vendors	P / N	U		
Subordinates	S / U	P / N UU	U	
Internal documents	UUU	P		
Electronic services	U	S		

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Consequently, each letter in **Figure 6.3** relates two aspects of the strategic issue: the decisional role in which the CEO acted and the source from which information about the issue was acquired or received. There are no easily identifiable clusters in the matrix, but the figure does reinforce the prominence of the entrepreneur and disturbance handler roles with respect to the strategic issues identified in the case studies.

6.10 Perceived Characteristics of Information Source

Each of the chief executives was also asked to produce three different "top five" lists of information sources. From a list of eleven sources, they were requested to list the top five sources in terms of the following:

1) perceived frequency of use;
2) perceived accessibility; and
3) perceived quality of information provided.

Remarkably, the frequency of use rankings produced by the chief executives were highly consistent with both the details of the identified strategic issues and the rankings made by their personal secretaries (PSs). Six of the PSs logged a week's worth of their bosses' interactions, including scheduled and unscheduled meetings; letters from outside the organisation and memos from within it; and incoming telephone calls. As a result, their rankings of information source use were informed by these week-long logs.

An aggregation of the individual rankings of CEOs and PSs enabled a composite ranking (have a greater degree of reliability) to be constructed for each of the four industries. This composite ranking was complied by assigning 5, 4, 3, 2 or 1 points depending on their ranking by each CEO and PS. These industry rankings for the perceived frequency of use, the perceived accessibility, and the perceived quality of the information sources are shown in **Tables 6.14, 6.15** and **6.16**, respectively.

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Table 6.14

Perceived Frequency of Use of Information Sources

Printing	Securities	Newspapers	Universities
Business associates	Mass media	Business associates	Subordinates
Customers	Internal documents	Mass media	Business associates
Trade publications	Business associates	Consultants/vendors	Govt./regulators
Mass media	Electronic services	Subordinates	Trade publications
Family/friends	Trade publications	Internal documents	Internal documents

Table 6.15

Perceived Accessibility of Information Sources

Printing	Securities	Newspapers	Universities
Mass media	Mass media	Mass media	Mass media
Family/friends	Subordinates	Subordinates	Internal documents
Internal documents	Internal documents	Internal documents	Subordinates
Subordinates	Electronic services	Business associates	Trade publications
Business associates	Trade publications	Family/friends	Electronic services

Table 6.16

Perceived Quality of Information Sources

Printing	Securities	Newspapers	Universities
Business associates	Customers	Business associates	Subordinates
Customers	Business associates	Internal documents	Business associates
Trade publications	Internal documents	Mass media	Govt./regulators
Subordinates	Electronic services	Customers	Trade publications
Family/friends	Govt./regulators	Subordinates	Customers

The overall rankings for the perceived frequency of use, perceived accessibility, and perceived quality of the information sources are shown in **Table 6.17**.

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Table 6.17

Overall Ranking of Information Sources

Frequency of Use	Accessibility	Quality
1. Business associates	1. Mass media	1. Business associates
2. Trade publications	2. Internal documents	2. Customers
3. Mass media	3. Subordinates	3. Trade publication
4. Customers	4. Family/friends	4. Government/regulators
5. Subordinates	5. Trade publications	5. Consultants/vendors

The results of the case studies are largely consistent with those from the survey in terms of the relative frequency with which CEOs from the securities and printing industries employed different types of information sources as well as their rankings of the sources in terms of both perceived accessibility and perceived quality.

The case studies supplement the survey results by portraying how CEOs in four industries acquired and used information as they diagnosed strategic issues. It was found that the chief executives from each industry (and indeed each organisation) faced a unique set of strategic issues despite the common phenomenon of an impending political discontinuity in their external environment. Nevertheless, the CEOs displayed a common tendency to acquire information from impersonal sources as they became aware of or identified a strategic issue and then rely upon more personal (and primarily external) sources as their diagnosis proceeded to the understanding or interpretation stage.

The results from the survey and the cases raise a number of issues for discussion. The next chapter considers these issues, and puts the overall results into the larger context of knowledge within the fields of strategic management, information management, and cross-cultural management.

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Chapter 7
DISCUSSION

The survey results presented in Chapter 5 indicate how Chinese chief executives in pre-handover Hong Kong perceived their external environment and acquired information about it. Significant differences from as well as some similarities with the studies reviewed in Chapter 2 were found. The case studies in Chapter 6 profile the gathering and use of external information by the Hong Kong Chinese chief executives as they engaged in strategic issue diagnosis. Taken together, these cognitive and behavioural data provide a solid basis for not only characterising, but also explaining the meaning behind the observed pattern of strategic intelligence in Hong Kong.

This chapter will move towards such an explanation by analysing and interpreting the quantitative and qualitative data that was presented in the previous two chapters. This analysis and interpretation takes the form of a discussion that will be underpinned by the cultural and institutional factors that were introduced in Chapter 3.

The major aim of this chapter is to advance our understanding of the strategic intelligence phenomenon in the Hong Kong Chinese business context. This is to be achieved by discussing a number of issues that arise from the results of this study. These issues will be considered under the following headings: perceived uncertainty in the pre-handover environment; the use and characteristics of information sources; strategic decision making in Hong Kong Chinese businesses; and the relationship between environmental scanning and decision-making roles.

This discussion will highlight many of the characteristics that, taken together, distinguish strategic information management in the Hong Kong Chinese business culture. Finally, the limitations of the study are mentioned. These add to the limitations of the research design that were considered in Chapter 4.

7.1 Perceived Uncertainty

The survey results indicated that the CEOs from both the printing and securities industries perceived a substantial degree of uncertainty in the pre-handover Hong Kong environment. The customer and competition sectors of the environment were among the most important sources of that uncertainty in both industries. The standard deviations on the perceived strategic uncertainty (PSU) scores for these two sectors were also comparatively low, especially in the securities industry. This indicates that the chief executives had a high degree of agreement on the perceived importance, complexity and rate of change of these sectors.

In contrast, there were significant industry differences in terms of the uncertainty posed by the economic and political/legal sectors of the environment. These two sectors were a significant source of uncertainty for the securities CEOs, but not for those from the printing industry. This suggests that the impending handover was more important for some industries (and organisations) than others.

7.1.1 The handover: Threat, opportunity or non-issue

From the perspective of chaos theory, businesses in Hong Kong are likely to have experienced *bounded instability* as a result of the political handover (see Legge, 1990; Stacey, 1993). It undoubtedly created uncertainty and trepidation for those potentially affected, but this occurred within the broad scope of an orderly system. Many aspects of the handover may have been puzzling or troubling, but the fundamental event could be analysed and understood.

A smooth transfer of political power in Hong Kong was in the interests of nearly all the major stakeholders. Moreover, progressively growing similarities between the economic and social systems in Hong Kong and on the Chinese mainland follow naturally from the convergence hypothesis mentioned in Chapter 3. As a result, the modernisation of China (and perhaps also its

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integration with the *international community* of nations) may be seen as inevitable development that is only subject to variation, and perhaps volatility, in the short and medium term.

Nevertheless, the type of environmental change that took place in Hong Kong during 1997 is expected to have strategic implications that may be interpreted as an opportunity by some and a threat by others (Dutton & Jackson, 1987). As noted in Chapter 1, the strategic management literature suggests that these labels are rich in meaning and significance. A threat represents a negative situation over which decision makers have little control and few degrees of freedom in resolving the issue. Conversely, an opportunity is a more positive situation, with decision makers perceiving that they have both the necessary amount of control and resources to resolve the issue.

These distinctive labels are important, because they can determine how an issue is framed and what type of action is taken in response to an issue (Dutton et al., 1983; Dutton & Jackson, 1987; Schneider & DeMeyer, 1991). For example, Dutton (1993, p. 340) suggested that "different interpretations of issues engage different individual and collective processes for dealing with them".

A major finding of this study was that the ethnic Chinese chief executives in Hong Kong did not share a uniform or even common perception of the upcoming transfer of sovereignty. They had a range of perspectives on the 1997 handover and its implications for their organisations. Their responses (both realised and intended) to the impending handover also varied greatly.

It is suggested that *what you saw* may have depended on *where you stood*. One group of Hong Kong Chinese CEOs considered the handover to be a business threat, a second group perceived it to be a business opportunity, while a third considered it to be an insignificant issue for their organisations. The findings from this study suggest significant industry-based differences.

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The case studies revealed that some CEOs, most notably those heading up newspaper and securities firms, perceived the handover as a serious threat to their business prospects. Several noted that recent confidence crises had already created labour shortages and adversely affected input costs. In an extreme case, the *Apple Daily* CEO suggested that the very survival of his firm after 1997 would depend on the incoming administration keeping its promise to maintain the current social and economic systems in Hong Kong for a further 50 years. In essence, he viewed continued freedom of the press as a business imperative. A distrust of the Chinese Communists and the national government in Beijing by both the owner and CEO of the *Apple Daily* was a primary source of perceived environmental uncertainty for their organisation. In this case, the nature of business-government relations was identified as the key to the newspaper's prospects in post-handover Hong Kong.

A second group of CEOs perceived the handover as a business opportunity. Some cited the overnight growth of the *domestic* market by more than a billion people. Others mentioned that it would become easier to combine local financial resources and professional expertise with the natural and human resources that were plentiful north of the border. Quite a few believed that the government policies of Hong Kong and mainland China would be better coordinated after June 1997, and that this would make it easier for them to do business.

Improved cross-border relationships in the pre-handover period had already provided benefits to many Hong Kong firms. For example, printing firms had been able to relocate their operations and take advantage of more plentiful resources in mainland China, newspaper firms had been able to expand their markets beyond Hong Kong, and securities firms were cultivating new business from PRC government-backed "red chip" firms and other China-related listings. Many of the interviewed CEOs echoed the ideas expressed by Sung (1997), which were noted in Chapter 3, in that they expected to benefit from even closer

contact with a large population while avoiding the typical downside of such a relationship.

Perhaps most surprisingly, many CEOs did not expect any significant change in their business environments as a result of the handover. For this group, including many CEOs of printing firms, the transfer of Hong Kong sovereignty was a non-issue at the strategic level, since their businesses were already straddling the border between the territory and mainland China. Several mentioned that the reforms attempted by Governor Chris Patten notwithstanding, the British were `lame duck' administrators in Hong Kong. They perceived that the PRC government was already exerting its control, by forcing the hand of the British administration in Hong Kong or declaring its intention to rollback and/or ignore several measures introduced by the pre-handover government.

In contrast to the dire scenarios for post-handover Hong Kong that were common in foreign media reports and several major books, the CEOs who were surveyed and/or case studied generally expressed their guarded optimism about the future of the Special Administration Region. None of them foresaw significant changes for the economy or society of Hong Kong, or for their own business. Many of these informants mentioned that the successful implementation of the "one country, two systems" concept was critical to the international credibility of the PRC.

They further noted that China was changing rapidly, and that major urban centres were becoming more and more like Hong Kong. Significantly, the popularity of this perception supports the author's belief that the results of the study reported here may be generalisable to Chinese business contexts beyond Hong Kong.

7.1.2 Sectors and layers of the external environment
More generally, the study of strategic intelligence in Hong Kong highlights the industry-specific nature of the external environment. As noted in Chapter 2, the external environment has

been classified as consisting of two layers - an inner task layer and outer general layer (Andrews, 1971; Dill, 1958). Following from this, recent environmental scanning studies (such as Auster & Choo, 1993; Sawyerr, 1993) have employed a typology whereby the remote environmental layer consists invariably of four sectors - the political, the economic, the socio-cultural, and the technological.

This perspective can be traced back to the PEST model of Andrews (1960) and is taught in many (if not most) business schools. It implies that neither political, economic, socio-cultural or technological events or changes will be directly relevant to organisational goal setting and goal achievement (see for example Dill, 1958; Hunger & Wheelen, 1997); only customers, competitors, and resource suppliers will *directly* affect the organisation.

A dissenting view stems back at least to Bourgeois (1980). It holds that the division of the sectors between the task and remote layers of the environment depends on the particular business domain. The evidence from Hong Kong suggests that CEOs in different industries can have very different interpretations and reactions to an external event such as the political handover. This contingency is evident when the securities and printing industries are compared.

Conventional securities firms earn commission income by executing transactions on behalf of investors. More aggressive firms would engage in various investments and speculative activities (e.g. futures and warrants) in order to increase the expected rates of return. However, these activities were greatly influenced by economic and political/legal factors in pre-handover Hong Kong.

First of all, the industry is subject to a high degree of regulatory control. The enactment and enforcement of regulations by the Stock Exchange of Hong Kong, the Securities and Futures Commission, and different branches of the Hong Kong Government may be expected to shape the securities industry. The ability

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to influence regulatory changes or even to receive quality information about such changes would provide a securities firm with a competitive advantage.

Secondly, although many of the post-1997 arrangements for Hong Kong had been finalized at the time of this study, as result of Sino-British negotiations, several areas of dispute did remain. Continuing arguments between the outgoing and incoming sovereigns raised the level of economic (and to a lesser extent, social) uncertainty in the territory. The large-scale infrastructure projects that were in progress or about to begin in Hong Kong created additional worries about inflationary pressures.

These concerns about inflation would have a significant effect on investment flows in and out of an open economy like Hong Kong. Developments associated with the economic and political/legal sectors would thus be likely to strongly and rapidly if not directly influence the securities industry. Hence, it would seem useful for both management practitioners and researchers to consider these two sectors as part of the task environment for the securities industry and similar economic sectors.

In contrast, the survey data indicated that the CEOs of printing firms were more interested in and concerned about customer issues and technological developments than economic and political events. The political/legal sector ranked only fifth in terms of its PSU value and was the least scanned of the six environment sectors. Follow-up interviews with some of these executives confirmed their own perceptions that political factors had neither a strong nor a direct influence on their business prospects. Their interests were on the competitive conditions in their industry, and so their focus was on competitive intelligence (as the term was defined in Chapter 1).

The political handover of Hong Kong would not represent that significant a change for the printing industry, largely because it had already transferred much of its operations to mainland

China. This "business-as-usual" perspective can be contrasted with the alarm and even hysteria expressed by the overseas media, particularly in the United States, and the serious concerns indicated by the CEOs of securities firms in Hong Kong.

The printing firm CEOs were found to be comparatively more concerned about modernising their production methods and maintaining their competitiveness in an industry that was subject to increasing levels of international rivalry. At the time of the study, the printing industry in Hong Kong was introducing new technologies in order to streamline its operations and meet the increasing expectations and requirements of their customers, both locally and overseas.

With a tight supply of workers and rising wage rates, many of those heading up printing firms were looking at the potential of substituting labour with technology by automating key processes. The high PSU score for the technological sector resulted from a combination of high complexity, rapid change and considerable strategic importance, as perceived by the printing firm CEOs. As a result, it is appropriate to include the technological sector in the task environment for printing firms and those in similar industries.

The case studies reinforced the industry- and time-dependent nature of the external environment. Political events, including the actions of governments or public agencies, were perceived to have a substantial influence on both newspaper firms and universities. As a result, the chief executives of these organisations spent comparatively large amounts of time in seeking out information about new initiatives and impending changes in public policy. Some of them were lobbying actively for changes in these policies. Significantly though, the impending discontinuity in government was not a major source of perceived uncertainty for the CEOs nor did it appear to inhibit or alter their political activities.

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7.1.3 Comparison with the results of previous studies

A key assumption in this study was that the handover represented a unique environmental discontinuity that represented an attractive research opportunity. As a result, it was expected that the profile of environmental uncertainty perceived by the CEOs in pre-handover Hong Kong, and particularly that of the political/legal sector, would be a distinctive one. Nevertheless, as indicated in **Table 7.1**, the pattern of results for each of the surveyed industries in Hong Kong was similar to a previous study.

Table 7.1

Environmental Sector Rankings and Scores on Perceived Strategic Uncertainty

United States (Daft et al., 1988)	Canada (Auster & Choo, 1993)	Nigeria (Sawyerr, 1993)	Hong Kong Securities	Hong Kong Printing
1. Customer	1. Customer	1. Economic	1. Economic	1. Customer
2. Economic	2. Technological	2. Political/legal	2. Political/legal	2. Technological
3. Competition	3. Competition	3. Suppliers*	3. Customer	3. Competition
4. Technological	4. Regulatory	4. Customer	4. Competition	4. Economic
5. Political/legal (regulatory)	5. Economic	5. Competition	5. Technological	5. Political/legal
6. Socio-cultural	6. Socio-cultural	6. Socio-cultural	6. Socio-cultural	6. Socio-cultural
		7. Technological		

*Sawyerr (1993) used the term "Sources of Resources"

The findings from the printing industry in Hong Kong resembled those reported by Auster & Choo (1993) for Canadian chief executives in the publishing and telecommunications industries[1]. Both data sets revealed that the three environmental sectors with the highest perceived strategic uncertainty were, in order, the

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[1] The Canadian study did not report the results by industry

customer, the technological, and the competition sectors. These
results suggest that market-based competition plays a key role
in these industries. As a result, information about customer
needs, relevant technological developments and competitive
initiatives can be highly beneficial to strategic decision makers
facing this type of business environment.

Meanwhile, the results from the securities industry resembled
those reported by Sawyerr (1993) for manufacturing CEOs in
Nigeria. In both cases, the economic and political/legal sectors
were perceived to have the highest levels of perceived strategic
uncertainty. This suggests that the securities industry in Hong
Kong is subject to a comparatively strong institutional influence
(in the form of government oversight and regulatory bodies) akin
to that felt by the manufacturing sector (and other parts of the
economy) in an underdeveloped economy like Nigeria.

Information about regulatory and economic changes can be highly
beneficial to strategic decision makers in industries where there
is such a strong institutional influence. Significantly though,
even in the pre-handover period, the strategic uncertainty of the
political/legal sector in Hong Kong (as perceived by the CEOs of
securities firms) remained substantially lower than that
perceived in Nigeria (by manufacturing chief executives).

The numeric values of the PSU measures were not directly
comparable to those from Nigeria due to the use of different
measurement scales[2]. However, the strategic uncertainty levels
perceived in Hong Kong were significantly higher than those
reported in studies conducted in Canada and the United States.
In particular, the perceived rate of environmental change was
found to be much higher in Hong Kong than in North America. The
perceived complexity, which is related to the diversity and total
number of external events, of the environment in Hong Kong was
actually lower (but insignificantly different) than that found

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[2] For example, Sawyerr (1993) employed 7-point Likert scales
while the other studies used 5-point scales

in Canada and the U.S., and similar to that found in Nigeria.

Further insights can be drawn by considering the rankings of the different sectors within each study, based on their PSU scores, as well as the ratios of those PSU scores. The customer and economic sectors were consistently ranked near the top by the CEOs in all these studies. This implies that despite the considerable efforts of market researchers and economists/ econometricians, strategic decision makers in many different contexts continue to lack quality information about their customers and the general economy.

Meanwhile, the socio-cultural sector was the sector with the least strategic uncertainty in all the recent environmental scanning research that employed comparable methods and measures. Its slow perceived rate of change has consistently distinguished it from the other sectors in these studies. This provides empirical support for the argument made by Hofstede (1980) and others, that the societal culture is very stable over time.

7.2 Information Source Use

The acquisition of information about the external environment is often an antecedent to the interpretation of and response to a strategic issue. The organisational responses to a particular issue will be based largely on how their top managers come to understand and interpret the issue (Dutton & Jackson, 1987; Schneider & DeMeyer, 1991; Thomas & McDaniel, 1990). The understanding and interpretation of an issue will in turn depend upon the information sources the managers choose to rely on.

When presented with similar stimuli, chief executives in different organisations may form different interpretations of the same issue. When presented with different stimuli, even chief executives in similar positions may be expected to interpret and respond to an issue in different ways. As a result, the selection of information sources will have a central role in shaping the strategic issue diagnosis effort.

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The chief executives in all four industries used both personal and impersonal as well as internal and external sources of information. These findings were expected, because Daft and his colleagues (1988, p. 136) concluded that "Managers use multiple media, and media may complement one another. A weak signal detected from a personal source may be supplemented with objective data". The high levels of competition and market discipline that characterised the pre-handover Hong Kong economy (see Chen, 1995; Mushkat, 1990) would be likely to further encourage the use of many (rather than few) information sources.

The results from Hong Kong were also consistent with a conclusion reached by Henry Mintzberg. After he observed North American managers more than two decades ago, Mintzberg (1973) concluded that they strongly favour verbal media. Hong Kong Chinese managers also espoused an overall preference for personal sources. In contrast to impersonal sources, they could provide a rich verbal account of a given situation and, if necessary, augment it with their own interpretation.

Just like in the West, top managers in Hong Kong gained much of their information about the external environment from other people. Personal communications are rich in context and enhance the CEO's ability to detect weak signals and make sense of subtle aspects of important issues (Daft & Lengel, 1986). The evidence from this study, and particularly from the eight cases, indicated that Hong Kong Chinese CEOs were inclined to rely on personal sources of information, especially during the later part of the strategic issue diagnosis process.

Remarkably though, in contrast to the findings of the environmental scanning studies conducted in Anglo cultures, the CEOs in Hong Kong exhibited a strong preference for external sources of information. The chief executives from the printing industry, arguably the most traditional of the four industries under investigation, had the greatest reliance on personal and external sources of information. They had a particularly strong

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tendency to seek out information by interacting personally with customers, business associates and subordinates.

The CEOs of more *modern* sectors of the Hong Kong economy, such as securities trading and universities, tended to make comparatively more use of impersonal sources. The most frequently used sources in the securities industry - the public media and electronic information services - were not surprising, given that the economic and legal/political sectors were rated as the most important. Information about economic and regulatory changes can be communicated most quickly and efficiently by these impersonal sources.

7.2.1 Information: Competence or commodity?

The results imply that gaining access to strategic information in a traditional industry, such as printing, may be largely a competence that is cultivated and developed over time. In contrast, strategic information in a more modern industry may be largely a commodity that can be purchased when it is needed. This distinction has implications for managing information in different industries. Based upon this line of reasoning, a *management-oriented* IT application, such as a computer-based decision support system or an executive information system, would be more beneficial to a securities firm than a printing firm. The existence and nature of these differences in industries beyond those studied here and in places other than Hong Kong could be a focus for further useful research.

The emphasis on external rather than internal personal sources may be appropriate given the information biases of subordinates. Western studies have shown that subordinates have a consistent tendency to downplay both the negative aspects and uncertainty of a given situation so as to avoid displeasing their boss (see Taylor, 1984, pp. 16-17). As suggested in Chapter 3, Chinese employees have a comparatively high need to demonstrate their loyalty to the organisation and deference to their boss. Chinese leaders (unlike their Japanese counterparts) are also unlikely

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to admit their dependence on subordinates (Fukuda, 1984). The combination of two factors would increase the tendency to distort information as it was passed upwards in the organisation *and* decrease the likelihood of the CEO seeking out such internally-available information. External sources, such as customers and business associates, may find it easier to talk to the CEO, and be less motivated to filter their messages when doing so.

Pre-handover Hong Kong could also have been considered an *unanalysable* business environment. As a result, the information searching and interpretation methods used by successful CEOs there may have become "more personal, less linear, more ad hoc and improvisational" (Daft & Weick, 1984, p. 287). For example, a rationale offered by Boyd & Fulk (1996) implies that the impending transfer of political sovereignty will raise the perceived levels of both *strategic variability* and *complexity*. Consistent with media richness theory (Daft & Lengel, 1986), the increased environmental complexity faced by the Hong Kong CEOs may have led them to rely more on external personal contacts.

However, the strength of this tendency in the pre-handover Hong Kong environment together with the differences found between industries suggests that this is more than a temporal phenomenon. Instead, it is likely to stem from the traditional nature of Chinese business. In the Chinese culture, there is comparatively little encouragement for independent thinking among *subordinates* (Martinsons & Martinsons, 1996). Educational systems emphasise rote learning while the socialisation process instills great respect for elders and superiors.

The social tendencies to follow existing guidelines and respect leaders combine to inhibit the proactivity of subordinates. More relevant to this study, their capability to provide their bosses with meaningful information is severely limited. As a result, peer-to-peer communications and top-down directives will be more common forms of Chinese organisational communications than the bottom-up transfer of information or ideas.

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7.2.2 Family and friends

Family and friends have been identified as important sources of information and advice for both the top executives of Chinese businesses (Redding, 1990; Siu & Martin, 1992) and smaller U.S. firms (Johnson & Kuehn, 1987; Smeltzer et al, 1988; Specht, 1987). However, both the survey and the case studies indicated that they were not used very often by Hong Kong Chinese CEOs.

This tendency was particularly evident among the chief executives of securities firms and universities. Even when family members were perceived to be the most accessible sources, their domain of knowledge was not considered to be particularly useful by the CEOs. It may be that as blood relations and social colleagues become more educated, their tendency to *migrate* (moving to other countries or accepting work in unrelated industries) reduces the relevancy of their knowledge base.

The educational level of the general population in Hong Kong has continued to increase rapidly and consistently in recent decades. Over the same time frame, people have been less willing to work in a family business, particularly if it is a small industrial firm (see Lau & Kuan, 1988). Young people armed with educational qualifications have become increasingly intent on employment with a large corporation that offers a higher compensation and better prospects for career advancement. This applies even if the potential employer is in an industry unrelated to the family business. As a result, a continued decline in the role of family and friends as business information sources may be expected in Hong Kong, and perhaps also in other modernising societies.

7.2.3 Business associates

Personal networks based on family, kinship or regional ties have served as the key channel for information exchange in the traditional Chinese business culture (see Bond, 1986). Redding (1990) even identified the reliance on interpersonal bonding as one of the three defining characteristics of Chinese capitalism. This is consistent with commentaries such as Boisot (1987) and

Martinsons (1991), which suggest that in contrast to the bureaucracies and markets that prevail in Western economies, information fiefdoms are common to Chinese societies.

For example, Boisot and Child (1996) assert that even after decades of central planning by the Communist Party in mainland China, the codified behaviour and impersonal transactions that characterise the diffusion of information within a bureaucratic hierarchy remain rare. Instead, Chinese organisations depend to a large extent on personal relationships and connections, or *guanxi*. Rules and procedures continue to reflect personal will and preference (or perhaps the ideological orientation of the Communist elite) rather than being the outcome of a rational or deliberate analytical process. Boisot (1987, p. 186) suggested that "relationships in Chinese culture are intensely hierarchical, but they are not of the impersonal kind that one associates, following Weber, with modern bureaucracy".

The growth of the Chinese family business (CFB) has been found to follow comparatively simple and well-tested formulae (Redding, 1990; Warrington, 1982). For example, fast-follower and focus strategies have been common in Hong Kong. Not surprisingly, many of the informants espoused a strong commitment to a single, narrowly-defined industry. This type of specialisation, sometimes termed *downscoping*, may be expected to raise the potential value of information obtained from customers, suppliers, and business associates. This is also consistent with the results of previous studies (e.g. Johnson & Kuehn, 1987; Yeung et al., 1995) which indicate that customers, subordinates and suppliers are key sources of environmental information for small businesses.

Following from this, many of the Hong Kong Chinese CEOs were found to have cultivated long-term relationships with these parties, thereby creating intra-organisational in-groups. In some cases, these in-groups amounted to an extensive yet informal business network based upon mutual interests and personal ties.

7.3 Business networks and boundary spanners

Networks of social interactions in the business context may be classified as either inter-organisational or intra-organisational. Traditionally, business interactions have been conceived as consisting exclusively of links inside the organisation (e.g. Fombrun, 1983). However, the role of external information sources found in this study highlights the potential importance of ties that cross the organisational boundary and link to outsiders.

As Dollinger (1984) has pointed out, the flow of information through boundary spanning can be critical to the performance of an organisation in that it helps it make sense of, and respond to environmental changes. This is consistent with Fombrum (1983), who found that centrality in the organisation's communication network was related to an individual's influence after controlling for the effect of their formal position.

The information processing perspective outlined in Chapter 2 holds that organisational designs follow from information processing requirements. Consequently, those who have access to or control of key information should be highly influential members of the organisation. Ties crossing the organisational boundary raise the influence of the individuals who maintain them, because of the critical gatekeeping role that boundary spanning personnel take on in receiving and processing environmental information.

Outside interactions may be not only an important channel for obtaining key information about the external environment, but also a means to enhance and sustain personal status in a society where being respected and maintaining one's good reputation are paramount concerns. As a result, information gatekeepers are likely to exert significant influence within the organisation and perhaps also significant control over critical resources.

Mintzberg (1973) has noted that CEOs spend a large share of time

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in the externally-oriented functions of figurehead, spokesperson, and monitor. Therefore, top management would be expected to maintain a large number of external ties. As part of a social elite, chief executives may be expected to prefer interactions with others who are part of the same lofty social strata.

The findings not only indicate a strong external orientation among the Hong Kong Chinese chief executives, but also suggest that many of their intra-organisational ties are quite stable and long-lasting. These CEOs could be seen as important boundary spanners, interacting with their peers and *outsiders* so that their organisation can maintain a deep engagement with the external business environment.

This implies that the traditional conceptualisation of a network internal to an organisation should be extended to include intra-organisational ties. Building upon the term "boundary spanning", this new conceptualization of the organisational network literally spans its boundaries, extending to all those people outside who are important to the activities of the organisation. These outsiders may even be connected among themselves, although the evidence from the case studies only suggested significant connections between the information source outsiders in the higher education industry.

Nevertheless, with the increasing acknowledgement of strategic linkages between firms and sets of organisations rather than individual companies, it is important to view the flow of business information from a broad perspective. The locus of organisational communications is no longer circumscribed by its traditional boundaries, but rather spans them to include outsiders. To be influential and effective, managers must extend their networking beyond their own organisation, and stretch these efforts across its boundaries. Top managers all around the world will need to identify an appropriate mix of personal connections and establish information sourcing arrangements within and across organisational boundaries.

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For example, in pre-handover Hong Kong and especially within the service sectors of the economy, these personal business networks were augmented by reliable impersonal channels. The results support the notion of an equilibrium being maintained between *personal trust* (trusting only those people that you know well) and *systemic trust* (trusting the political, economic and social systems in general). Wong (1991) related these two contrasting forms of trust to the *rule by man* and the *rule of law* discussed in Chapter 3. He further suggested that in Hong Kong, they stem from a Chinese cultural tradition and the more than 150 years of British administration, respectively.

Increased competitive pressures, market disciplines and technological progress are also likely to have encouraged diversification in terms of the information sources used by CEOs. The effect of a new political administration in Hong Kong on this equilibrium is subject to speculation and a potential area for future investigation.

7.4 Strategic decision making in Hong Kong

It has been theorised and widely accepted that an increase in the perceived level of environmental uncertainty will lead to a greater amount of environmental scanning and a more frequent use of information sources (see Weick & Daft, 1983 for a detailed rationale). The evidence from recent studies provided strong support for the existence of these relationships among the CEOs in Canada, Nigeria, and the United States (see Daft et al., 1988; Auster and Choo, 1993; Sawyerr, 1993).

Daft et al. (1988) reported correlation coefficients ranging from 0.37 and 0.65 between the perceived strategic uncertainty (PSU) levels in different environmental sectors and the frequency with which different types of information sources were used (FISU). The overall correlation coefficient in that U.S.-based study was 0.58. Auster and Choo (1993) found comparable correlation coefficients, ranging between 0.30 and 0.46, with an average of 0.37. They also collected data on the CEO's level of interest

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in keeping informed of trends in different sectors. This enabled them to calculate correlation coefficients between PSU and the interest measure of scanning. These coefficients were found to range from 0.36 to 0.58, with an average of 0.44. Sawyerr (1993) also found positive correlations between PSU and both the frequency and interest measures of scanning. The coefficients with the frequency measure ranged from 0.02 to 0.40, while those for the interest measure ranged from 0.30 to 0.63.[3]

The data from Hong Kong offered more equivocal evidence for a relationship between the perceived level of strategic uncertainty and either the amount of scanning or the frequency with which information sources would be used. Most of the correlation coefficients between the PSU of different environment sectors and the amount of scanning related to those sectors ranged between -0.05 and 0.21.

Further data analysis indicated that *only* the use of three information sources in the securities industry - business/professional associates, family and friends, and subordinates - and two sources for printing firms - government publications and electronic services - had significant positive correlations with the relevant PSU score. This implies that CEOs in Hong Kong do not tend to increase nor focus their scanning in response to higher levels of environmental uncertainty.

7.4.1 Scanning and information sourcing

The study found that Hong Kong Chinese CEOs do a considerable amount of environmental scanning in their roles as strategic decision makers. However, their scanning appeared to be less formal and less systematic than that undertaken by CEOs in North America or Nigeria. Even with the comparatively high levels of environmental uncertainty that existed in pre-handover Hong Kong, information sources were used selectively to deal with strategic

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[3] In contrast to both Daft et al. (1988) and Auster & Choo (1993), Sawyerr (1993) did not report average scores for the correlation coefficients.

issues that arose or environmental uncertainties that were perceived. The ethnic Chinese CEOs did not intensify their scanning efforts in a uniform manner. Moreover, most information sources, and particularly impersonal ones, were used less frequently by the sampled CEOs in Hong Kong than their counterparts in North America.

The absence of formal scanning systems and the rarity of having an employee with explicit environmental scanning responsibilities (only three of 53 surveyed organisations, all in the securities industry) further suggests that the CEOs in Hong Kong relied extensively on their personal experience and informed intuition, perhaps based largely on their own accumulated intelligence. The CEOs appeared to interpret each strategic issue and to develop an understanding of it as the need arose.

Consistent with an adaptive or co-evolving orientation, there were few attempts to predict or forecast environmental changes, let alone their implications for business. As would be expected with the strong correlation between the use of an information source and its perceived quality, there was little or no evidence that the CEOs were *pumping* easy-to-access information sources. Instead, the inputs of a few key *in-group* members were critical for the handling of many strategic issues.

7.4.2 Managerial autocracy
The case studies were helpful to resolve many of the *how* and *why* questions of a complex human situation - the acquisition and use of information about the external environment during the diagnosis of strategic issues. They provided particularly useful insights in terms of the relationships between the chief executives and their subordinates. For example, the eight CEOs were found to have a limited involvement with the operational level. Their subordinates would defer to them to make a specific decision, but the CEOs would not meddle in the steps leading up to the decision making point. Contrary to some of the Chinese management literature (e.g. Redding, 1990; Siu & Martin, 1993),

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few of the case studied CEOs could be characterised as "hands-on" managers. They did not seem to be overly familiar with the operational details of their organisation, and in several cases, where hesitant to talk about them.

On the other hand, consistent with the form of corporate governance noted by Tricker (1994), strategic issues were handled almost exclusively by the CEO of the Hong Kong Chinese organisation. Few of the CEOs in the study had decentralised or delegated any significant aspects of the strategic decision making process. Only one of the 53 firms in the survey had a staff member with a dedicated responsibility for environmental scanning. Meanwhile, only the heads of the two universities among the eight CEOs in the case studies were starting to encourage subordinate participation in strategic planning. However, even this may be seen as a behavioural change that merely mimics a trend that is evident in Anglo societies.

The Hong Kong Chinese CEOs appeared to commonly go through the process of strategic issue diagnosis without involving or consulting their subordinates and made key business decisions by themselves. As a result, the evidence strongly suggested that Hong Kong Chinese organisations followed the *managerial autocracy* model (see Shrivastava & Grant, 1985), in that the entire decision making process revolved around the preferences and actions of the chief executive.

Group decision making can be useful to combine (and perhaps synergise) bits of information that are not known by any single individual and to coordinate collective resources in order to solve or resolve a large issue quickly. However, there does not appear to be much gain in terms of decision quality, "even when knowledge and competency are adequate in the group as a whole" (Carroll & Johnson, 1990, p. 28). Both individuals and groups are prone to error, behave inconsistently, and neither has much self-cognition of a good or a bad decision.

Several studies have compared group versus individual performance on a common set of problems (see Argote, Seabright & Dreyer, 1986; Bazerman, Giuliano & Appelman, 1984). These studies have found little difference in terms of susceptibility to errors and biases. Groups also have their own drawbacks, such as the tendencies to reach a premature consensus via the phenomenon of *groupthink* (Janis, 1982), to become extremely polarized based on initial leanings (Lamb & Myers, 1978), and to consume tremendous amounts of time and resources (Argote et al., 1986). Meanwhile, an attempt to build a group consensus within an organisation before responding to an external change can be just as futile as waiting for all the information to become available. Such efforts can also be highly detrimental in dynamic business environments (see Bourgeois & Eisenhardt, 1988).

Finally, strong correlations were found between the overall level of environmental uncertainty and the reliance of CEOs on certain sources of information. This provided some empirical support in the Hong Kong Chinese context for the `single informant' line of reasoning offered by Donald Schön (1983) that was noted in Chapter 2.

7.5 Persisting with Successful Approaches

Explanations for an observed pattern of environmental scanning may need to consider not only the characteristics of particular issues at hand, but also the habits derived from the past. Milliken & Lant (1991) argued that an organisation's recent experiences with success and failure activate psychological and inertial processes that influence the way top managers interpret their environments and respond to strategic issues. Simply stated, chief executives of organisations buffeted by recent successes will be more predisposed to sustain existing practices, will build a form of psychological slack represented by overconfidence, will tend to see new issues as opportunities, and will find it comparatively more difficult to recognise emerging threats (Milliken & Lant, 1991). These CEOs would thus be less likely to respond effectively to an emerging threat.

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If the organisation has performed well in the recent past, top managers are expected to persist with an approach that they have been using to manage strategic issues. A couple of popular phrases - "don't mess with success" and "don't fix it if it is not broken" reflect this perspective. Conversely, poor performance results would be more likely to lead to substantial changes in their approach.

The rapid economic development of Hong Kong in recent decades, and in particular the success enjoyed by the organisations that were part of this study, could have encouraged their CEOs to address strategic issues by persisting with previously used approaches. As a result, management habits may be hard to change unless the performance of an organisation (however it may be measured and evaluated) drops off substantially.

Indeed, the seeds of failure for a business are often sown in past success. For example, Miller (1990) posits that organisations achieve superior performance through a focus on a few distinctive competences and winning strategies. They react to their success by reinforcing the same competencies and strategies, and thus embark on a trajectory that ultimately leads to their demise.

New environmental conditions and competitive pressures often require managers to *unlearn* the practices that they have used successfully in the past. Any attempt at such unlearning may have to begin with understanding what has been done and what has happened in the past. From this perspective, this study may provide an important reference for Hong Kong Chinese managers as they adjust to new conditions in the wake of the Asian financial crisis and the resumption of Chinese sovereignty over Hong Kong.

Milliken and Lant (1991) argue that a recent failure will be the most likely impetus for introducing a new process or altering an existing one. Poor business performance may be expected to encourage the top managers of an organisation to seek out new

information or ideas, and to increase the reach and range of their interpersonal connections by involving more people in the strategic decision making process.

At the same time, the bounded rationality argument outlined in Chapter 2 would suggest that a given manager will continually seek to reduce the cognitive effort involved in making a given decision by relying upon heuristics (gained from previous experience) and standardised procedures (Hogarth, 1983; Lord & Maher, 1990). It can be argued that a chief executive will prefer to resolve a strategic issue by relying on established guidelines and heuristics rather than working from first principles.

The first-principles approach would involve gathering large amounts of relevant information about each strategic issue as it arises. This would elevate the role of environmental scanning. Approaches at the other extreme will ultimately lead to mindlessness, whereby a decision maker does not acquire any new information to make a decision, but instead closes the mind to such stimuli and makes an automatic response.

7.5.1 Managing the knowable and the unknowable

Stacey (1992) has argued that organisations face two contradictory tasks: managing the knowable *and* managing the unknowable. He suggested that managing the knowable, which is captured in routine issues and decisions, requires tight control. Conversely, managing the unknowable, which would seem to be at the core of strategic decision making process described in Chapter 1, requires flexibility and openness.

It was suggested earlier that Chinese family businesses achieve a high degree of organisational flexibility by staying small, retaining a narrow product/market focus and making liberal use of informal communication channels. The CEO nurtures personal trust in order to reduce internal frictions, align individual goals with those of the firm, and cultivate extra-organisational

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networks (Ko, 1995; Redding, 1990). This combined with a centralisation of management authority enables the top manager to make appropriate decisions and rapid responses in dynamic environments. Significantly, it also is helpful to ensure that other organisational stakeholders, and particularly subordinates, will be supportive of these decisions and responses.

By staying small and maintaining a narrow focus, the CEO avoids the cognitive strain that would arise if there were too many issues to be addressed and decisions to be made. The data collected in this study suggests that Hong Kong Chinese CEOs make most of their strategic-level decisions on a piecemeal basis. They do not seem to waste much time or energy collecting data or otherwise processing decisions that may or may not need to be made.

The case studies indicated that Hong Kong Chinese CEOs tended to move forward incrementally on most strategic issues, and rarely considered all the options that might be available. This approach seemed to be quite appropriate given the general nature of the issues that they confronted. Many of these 19 issues identified in the case studies were simple and/or straightforward and often similar to ones that had been dealt with in the past.

Nevertheless, there was a low degree of procedural rationality, as evidenced by the limited use of structured analytic techniques or decision *systems* to support the process. It was rare for the Hong Kong Chinese CEOs to employ a rational-deductive model (see Chapter 1), whereby an issue is identified and understood quickly, so that relevant information may be collected in order to generate and evaluate options, and then an appropriate response can be selected from these options.

The results are consistent with an adaptive rather than a highly rational style of strategy making. The case studies revealed that the chief executives rarely evaluated solution or resolution alternatives, and often they did not even mention generating

them. Strategy making in Hong Kong Chinese businesses was found to be highly incremental and iterative, and hence consistent with the subjective-intuitive view of strategy making outlined in Chapter 1 and the *logical incrementalism* reported by Quinn (1980). There was little evidence of the *grand strategy* or comprehensive corporate plans that would be expected with the traditional Western views of strategic management mentioned in the opening chapter of this dissertation.

The Hong Kong Chinese businesses in this study (excluding the universities from the public sector) were also found to have remarkably few rules or standard operating procedures. However, the employees in these firms seldom made their own decisions even on routine matters. This was not because they were able to follow pre-programmed routines, specified rules or standard operating procedures, but rather because they habitually deferred to their bosses for guidance on the appropriate course of action.

The private sector firms in Hong Kong thus appeared to have entrenched mechanisms for managing both the knowable and the unknowable --- handling both strategic and operational issues. The informal mechanisms for both types of issues appear to be based upon a managerial autocracy model. Such a model may enable their CEOs to see more strategic issues as opportunities rather than threats, while their relative independence from rules may help them to deal effectively with these issues. However, the rarity of operating procedures and the reluctance of subordinates to make decisions could impair efficiency and delay the pursuit of selected courses of action.

7.6 Information Source Accessibility Versus Quality

Similar to a recent Canadian study (Auster & Choo, 1993), the perceived accessibility of an information source was not highly correlated to the frequency with which it was used by the Hong Kong Chinese CEOs. For example, an analysis of the data from the securities industry found that only two of the eleven sources - competition and public media - had significant correlation

coefficients. More importantly, the regression modelling indicated that quality was a much better predictor of information source use than either perceived environmental uncertainty or source accessibility.

This consistency among recent studies suggests that information source accessibility is not a serious problem for CEOs in contemporary business environments. However, the standardised regression coefficients for source quality in both Hong Kong industries were found to be significantly higher than those reported by Auster and Choo (1993). This implies that source quality is an even more important factor in predicting information source usage in Hong Kong than in North America.

As indicated in Chapter 2, several studies had concluded that source accessibility was of paramount importance in determining the use of an information source. However, all of these were conducted before 1985. At that time, computer-based information systems were not well developed and so seeking quality information incurred social and economic costs (O'Reilly, 1982). Under these conditions, more accessible sources were more likely to be used.

However, it appears that there is now an abundance of accessible information sources. As a result, it is no longer difficult to identify accessible information sources. Instead, the selection among various accessible sources and the perceived quality of the information provided by selected sources are now the critical challenges. In addition, the novelty and unpredictability of strategic issues is likely to mean that the ability of a source to provide quality information (e.g. that reduces noise) will override its accessibility.

Both Western and Hong Kong Chinese managers now seem able to select among information sources of differential quality rather than worrying about a lack of data. Significantly though, this study is among the first to demonstrate the context-specific

nature of information quality perceptions. The survey results illustrated how the industry of the CEO has a significant influence on their ranking of information sources in terms of perceived quality (and, to a lesser extent, perceived accessibility). The case study evidence went further, showing how the specific nature of the strategic issue shapes the type(s) of information that will be sought at different stages of diagnosis, and what information sources will be favoured by the chief executive at each stage of that process.

Despite the abundance of raw information, the study indicated that, consistent with Redding (1990) and Warrington (1982), formal strategic planning in Hong Kong Chinese businesses was still impeded by factors such as the tendency towards informal and centralised decision-making as well as the prominence of business networks and personal relationships. Previous studies indicate that formal planning was rare in both small U.S. firms (Robinson & Pearce, 1984; Sprecht, 1987) and Chinese family businesses (Redding, 1990; Warrington, 1982). Instead, success was reputed to result from "gifted readings" of environmental clues that led to the identification of business opportunities (see Johnson & Kuehn, 1987; Welsh & White, 1981).

This perspective is reinforced by a steady stream of anecdotal reports from Hong Kong in recent years as well as the data collected in this study. Even amidst the uncertainties of the pre-handover business environment, the ethnic Chinese CEOs were found to favour selective and informal modes of scanning rather than the comprehensive or systematic gathering of information about the external environment that could be considered a critical part of their business planning efforts.

Although Hong Kong, unlike Singapore, does not have a comprehensive government policy for information infrastructure development, economic sectors such as financial and transportation services have aggressively invested in IT so as to remain competitive on a global basis. IT now plays a

substantial role in communications between suppliers and customers. The structural transformation of the Hong Kong economy was mentioned in Chapter 3. This shift, from primarily manufacturing to almost exclusively services, has also contributed to the increased frequency of communications within and between organisations.

7.7 Environmental Scanning and Decision-Making

Decision making may be defined as a process whereby choices or judgments are made by gathering and evaluating information about alternatives, and then selecting from among those alternatives (Carroll & Johnson, 1990; Tversky & Kahneman, 1981). The Hong Kong Chinese CEOs were commonly found to gather information for one of two purposes: 1) to relate a current situation to their own previous experience, or 2) to determine the nature and effectiveness of responses taken elsewhere (often in Anglo cultures) to similar situations.

Very few of the CEOs in the case studies sought out information to identify the attributes or properties of specific decision alternatives that were under consideration. There was a tendency towards a reactive form of strategic issues management rather than proactive or forward-looking strategy making. The comparatively lengthy experience of these CEOs in their current positions, and particularly in their respective industries may enable decision-making efficiency.

However, the ingrained habits arising from this extensive experience may also explain the surprisingly small number of decision alternatives or the limited "consideration set" (Bettman, 1979) that attracted their attention. The findings indicate that their decisions were commonly based on subjective judgments, a kind of comparison or matching (often to favourable attributes) rather than choice, which would consist of comparisons among alternatives (see Einhorn & Hogarth, 1981; Tversky & Kahneman, 1981).

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Information about the external environment typically helped them to determine *how* to do something rather than *what* to do. They rarely appeared to make explicit decisions by considering either a complete or even a limited set of alternatives (as in Einhorn & Hogarth, 1981). A significant amount of non-specific information search activity, such as reading newspapers or talking to colleagues, was evident. This was undertaken in order to prepare for the future rather than as part of a specific decision-making process. Such environmental scanning activity may be termed "pre-decisional" behaviour (see Payne, Braunstein & Carroll, 1978).

The results also challenge an implicit assumption of economics - that more information will lead to a better decision (which follows from the need to compare the marginal cost of gathering information with the marginal benefits it is expected to provide). Despite the relatively high levels of strategic uncertainty perceived by the Chinese CEOs, the PSU scores were not consistently or significantly related to either the amount of scanning or the frequency with which information sources were used. This finding may follow from a comparatively low need to avoid uncertainty among the Chinese (see Hofstede, 1993).

Top managers in Hong Kong may rely on their own expertise (rather than other information sources) or work to increase organisational flexibility (rather than predict environmental changes) to cope with such uncertainty. It is known that they have been effective in identifying niche markets and then using their personal networks and specialized business skills to capitalize on them (see for example Redding, 1990). With the growing dynamism of international markets, this area merits further exploration in both the Chinese and global business contexts.

Both the survey and case study results indicated that environmental information was used most frequently in the roles of *entrepreneur* and *resource allocator*. The salience of the

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entrepreneurial role is consistent with previous findings from Anglo-dominated societies (Auster & Choo, 1993; Fann & Smeltzer, 1989). Meanwhile, the importance of the resource allocator role may be associated with the care that Chinese managers exercise with their resources, especially financial ones.

7.8 The Limitations of the Study

The limitations of the research design were discussed in Chapter 4. However, it is also appropriate to mention the limitations of the study as it was executed. The demographics and nature of the business population in Hong Kong precluded the generation of a large sample size (at least by the standards of Anglo-American social science) or even a modest non-Chinese sample. As a result, the focus of this study was on the environmental perceptions and scanning activities of Chinese CEOs in pre-handover Hong Kong. Its findings will have differing levels of applicability beyond this context.

The distinctive nature of Chinese capitalism, especially as it is manifested in Hong Kong, restricted the sample size. Small, family-owned businesses accounted for more than 98 percent of the firms and 90 percent of the economic activity in most pre-handover Hong Kong industries, including the two that were selected for this study. As suggested in Chapters 3 and 4, these types of firms are notoriously reluctant to disclose information to outsiders.

Redding (1990) is among those who have attributed this secrecy to a deeply-rooted insecurity that is argued to prevail among ethnic Chinese capitalists. A high degree of confidentiality has been a necessary defense mechanism for them in hostile and uncertain environments. Such information hoarding was likely to be amplified in pre-handover Hong Kong, where increasing competition for timely and accurate information was forecast in advance of the political change (e.g. Martinsons, 1993; Siu & Martin. 1992).

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Many Hong Kong Chinese printing plant owner/managers also had moved their operations to the PRC in order to take advantage of the lower wages and rentals. Their stays in the Hong Kong head office were short and unpredictable, making interviews difficult to arrange. Many of the informants (like the stereotypical Hong Kong resident) also professed to be extremely busy making money. Several explicitly mentioned that being interviewed was both time consuming and irrelevant to their profit making activities. They would prefer to spend their time doing business or relaxing. Significantly, Ghoshal (1988, p. 71) was given similar rationales by Korean *chaebols* that declined to participate in his study.

The comparatively small samples from the two surveyed industries limited the statistical power of the data analysis. As a result, it was a pleasant surprise to find such clear differences between the two industries as well as significant differences between the Hong Kong data and those from earlier studies conducted elsewhere.

Based upon the high levels of confidence for many of the survey findings, the analysis indicated that both the perceptions and behaviours of those studied were truly distinctive. The case studies were helpful not only to make sense of the similarities and differences found in the survey, but also to examine how external information was used to diagnose specific strategic issues.

The results of this study lead to several key conclusions. These conclusions have significant implications for both management theory and practice, and they also prompt recommendations for additional research. The conclusions and implications of this study as well as the recommendations for further investigation are all presented in a final chapter, which follows.

CONCLUSIONS AND IMPLICATIONS

This final chapter recaps the major results of the study in order to draw key conclusions. The implications of these conclusions for theory, practice and further research are considered.

8.1 Summary of Hypothesis Testing

The study used a survey of two industries and eight case studies to examine the nature of strategic intelligence in pre-handover Hong Kong. The variety and richness of the data reported here strongly indicates that synergistic value can be achieved by combining quantitative and qualitative research methods. This represents the first conclusion of this study.

As reported in Chapter 5, the survey enabled seven hypotheses to be tested. A summary of these test results appears in **Table 8.1**.

Table 8.1

Summary of Hypothesis Testing

	Securities	Printing	Overall
Hypothesis 1. Economic and political/legal sectors have the highest PSUs for service firms.	Supported.		Largely supported.
Economic, political/legal and technological sectors have the highest PSUs for manufacturing firms.		Weakly supported. Political/legal sector has a comparatively low PSU	
Hypothesis 2. PSU is positively related to the amount of scanning.	Supported.	Weakly supported.	Partially supported.

Hypothesis 3. PSU across different environmental sectors is positively related to the frequency of using both personal and impersonal sources.	Weakly supported. Three personal sources have a statistically significant positive relationship.	Not supported. One personal source and one impersonal source have a statistically significant positive relationship.	Not supported.
Hypothesis 4. Perceived quality is a better predictor of source usage than perceived accessibility or PEU.	Strongly supported.	Strongly supported.	Strongly supported.
Hypothesis 5. Education level is positively correlated with the frequency of using both personal and impersonal information sources.	Strongly supported.	Weakly supported.	Partially supported.
Hypothesis 6. Decision makers acquire the most information about the external environment in the entrepreneur role.	Strongly supported.	Not supported.	Partially supported.
Hypothesis 7. Personal sources are used more frequently than impersonal ones in decision making.	Weakly supported.	Strongly supported.	Fairly strongly supported.

8.2 Environmental perceptions

As hypothesised, the chief executives from the two industries were found to differ in how they perceived their business

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environments in pre-handover Hong Kong. The CEOs of securities firms perceived the economic and political/legal sectors of the environment to have the highest levels of strategic uncertainty. Meanwhile, those from the printing industry rated the customer and technological sectors as the most strategically uncertain.

The overall levels of strategic uncertainty perceived by the CEOs from both Hong Kong industries were similar to those reported in Canada, the United States and Nigeria (see Auster & Choo, 1993, Daft et al., 1988; Sawyerr, 1993). However, the pre-handover Hong Kong environment was generally perceived to have a faster rate of environmental change. As a result, it may be appropriate to characterise Hong Kong Chinese organisations as a part of a comparatively simple but very dynamic socio-economic system.

The case studies revealed that the Hong Kong Chinese CEOs had assorted perspectives on the political handover. Some of the chief executives perceived the handover as a serious threat to their business prospects while others believed that it represented a significant business opportunity. Remarkably, many of those surveyed and case studied indicated that it was not a significant issue in terms of their strategic decision making.

To be more specific, the transfer of political sovereignty and its potential impact was *the* strategic issue for one newspaper industry CEO and a significant worry for many top managers in the securities industry. In contrast, it was generally a non-issue for the CEOs from the printing industry, whose operations already tended to straddle the border between Hong Kong and mainland China. They were more concerned with their industry-specific task environment, because of their direct influence on business.

It is concluded that, despite the alarmist tone set by the international media, the impending handover was neither a major nor uniform source of environmental uncertainty for Hong Kong Chinese chief executives. The case studies further suggest that while the transfer of political sovereignty was an important

consideration for many CEOs, it was not a universally problematic issue. More generally, it is concluded that the characteristics of the industry, the organisation, and the CEO combined to shape the perceptions of, and preparations for this event.

8.3 Strategic issues

While the handover was a strategic issue for only some CEOs in some industries, concerns about maintaining or improving competitiveness existed in all four industries. More than half of the 19 strategic issues recounted by the eight chief executives involved the Competitive and/or Technological sectors. Two types of issues were particularly common: increasing competition (often from overseas) and improving organisational performance through the application of information technology. These issues are likely to top management agendas all over the world rather than being unique to Hong Kong.

The Hong Kong Chinese CEOs most commonly addressed strategic issues by taking on one of two decision making roles (based upon the typology of Mintzberg, 1973): Entrepreneur or Disturbance Handler. The Entrepreneur role often involved upgrading technology in order to improve competitive position while the Disturbance Handler role tended to result from regulatory changes (involving the Political/legal sector) or emerging competitive challenges. Again, this pattern is not expected to be peculiar to Hong Kong or Chinese CEOs, although there are few if any reported studies from other locations and cultural contexts.

8.4 Differences in environmental scanning

The survey results indicate that the CEOs from the two industries in Hong Kong differed in their patterns of environmental scanning. The chief executives from the securities industry tended to acquire information about external developments using a fairly balanced mix of sources - personal and impersonal as well those outside and inside the organisation. In contrast, the CEOs from the printing industry were found to maintain closer contact with their customers and suppliers, including the vendors

of production and information technologies. More generally, they tended to rely extensively on people outside their own organisation for information about their external environment.

In response to higher levels of environmental uncertainty, the CEOs from both industries were found to sharpen their scanning focus and increase their information sourcing from selected sources. The survey and the case studies both strongly indicated that information sources were chosen largely for their ability to provide timely and relevant insights rather than their accessibility to the chief executive. Written sources generally received the lowest ratings because they lacked both timeliness and relationship-building capabilities.

Even so, the specific information source preferences of the CEOs were found to depend greatly on not only the industry context, but the nature of the strategic issue that they were addressing. The survey results presented in Chapter 5 highlight a major shortcoming of the existing environmental scanning literature, which has tended to downplay the nature of the industry environmet. Meanwhile, the case studies show how the particular details of a strategic issue will shape the process which is applied to its diagnosis.

The correlations between perceived strategic uncertainty (as defined by Daft et al., 1988) and various measures of scanning activity and information source use were weaker in Hong Kong than those found elsewhere. About half of the correlation coefficients from the two-industry survey were insignificant at the $p<.05$ level. Moreover, greater levels of environmental uncertainty did not invariably raise *either* the interest in scanning *or* the frequency of information source usage.

These results highlight the limited external validity of conclusions from earlier studies while challenging the common wisdom that gathering more information will inevitably reduce uncertainty. Despite the comparatively high overall level of

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environmental uncertainty in pre-handover Hong Kong, it was *not* significantly or consistently related to the frequency with which information sources were used. It is concluded that Hong Kong Chinese CEOs responded differently to changes in perceived strategic uncertainty than CEOs in North America and Nigeria.

The comparative management literature (see Kiggundu et al., 1983; Schneider, 1989) suggests that since environmental uncertainty and environmental scanning activities occur at the organisation-environment interface, differences across countries and cultures should be expected. The results of this study provide strong support for this theoretical perspective. However, the richness of the data also provided a clear demonstration of how both strategic management and information management are embedded in context-specific norms (see Boisot, 1987; Martinsons, 1991; Schneider, 1989).

The environmental scanning process in a given locale will thus be influenced by institutional factors and the prevailing culture. The previous chapter discussed how specific aspects of the Hong Kong economy and the traditional Chinese business culture help to explain many of the differences in results between this study and earlier ones conducted elsewhere. However, the findings of this study also establish the salience of industry context.

There were significant differences in environmental scanning behaviours between the CEOs from the securities industry and those from the printing industry. Combined with the conclusion drawn in section 8.2, it is clear that the business context is not only a fundamental determinant of how the environment is perceived, but it also interacts with the nature of a specific strategic issue to determine what information about the external environment is acquired as well as how it is acquired and used. Consequently, both management practitioners and researchers are advised to develop an understanding of (and take into account) the specific *industry environment* rather than just the general

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business environment in any given locale, not just Hong Kong.

8.5 Information sourcing during strategic issue diagnosis

The case studies revealed that Hong Kong Chinese CEOs commonly became aware of important developments in the external environment as a result of information from an impersonal source, such as the mass media. At that point, the chief executive decided whether the development constituted a strategic issue. For a strategic issue, the CEO would go on to gather additional information in order to make better sense of the issue, determine its strategic implications for the organisation, and to evaluate the likely results of alternative responses/actions.

At the sense-making stage of the diagnosis, personal sources, such as business associates, were more often than impersonal ones. Based on the framework for strategic issue diagnosis presented by Jane Dutton and her colleagues (Dutton et al., 1983; Dutton & Duncan, 1987), it is concluded that impersonal sources are more likely to create awareness and enable the timely identification of a strategic issue while personal sources are more likely to support the sense-making stage of the process.

The Hong Kong Chinese chief executives were found to serve as the primary processors of external information and also the major sources of information for other employees within the organisation. The results also strongly suggest that Hong Kong Chinese CEOs tend to employ adaptive rather than rational styles of strategic issues management. This supports the subjective-intuitive view of strategy making outlined in Chapter 1.

Strategic courses of action tend to emerge incrementally and iteratively rather than in the form of the grand plan that is implied by the traditional strategic management literature. Consistent with the entrepreneurial strategy making type proposed by Mintzberg and Waters (1985) and the managerial autocracy model advanced by Shrivastava and Grant (1985), the strategic intent of Hong Kong Chinese organisations tended to exist as an

unarticulated (and hence adaptable) personal vision.

Perhaps encouraged by a high tolerance for uncertainty (see Hofstede, 1980), the CEOs in the study appear to have heeded the advice of von Clausewitz (see Collins, 1962) and responded to environmental uncertainty by maintaining a high degree of organisational flexibility and relying upon experience-based judgment in the absence of reliable business forecasts.

Personal experience and regular contact with an informal network of associates were found to compensate for an underdeveloped institutional framework and to substitute for formally-sourced information. Consistent with the cybernetic law of requisite variety (see Ashby, 1958), the relative simplicity of the external environment has enabled Hong Kong Chinese CEOs to achieve business success with an autocratic management style.

The expert model of decision making (from Chapter 1 and Lord & Maher, 1990) was commonly employed by the CEOs in the study. They relied upon familiar aspects of a given situation and proven heuristics to help them process information and address strategic issues. Most of the chief executives, and particularly those from the printing industry, relied greatly on uncodified knowledge gained through a lifetime of learning experiences, both their own and those of key associates. This knowledge is comparatively more contingent and contextual than hard copy or digital information, and therefore less of a commodity that can be bought and sold as needed.

A large overlap in the experiences of senior executives in affiliated organisations was particularly evident in the goods-producing industry that was studied. This overlap enabled a shared discourse among these top managers, and meant that they were in effect an *in-group*. They kept each other informed about relevant developments in their business environment and often worked together to resolve strategic issues that were of mutual interest. Since this phenomenon was less evident in the more

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modern, service-producing industries, it is expected to decline over time. This would support the convergence thesis mentioned in Chapter 3, whereby management practices around the world become more similar over time as technical needs are met regardless of culture.

A notable exception to the perspective of information as a distinctive competence (rather than a commodity) was found with foreign business practices and technologies. Operating in a relatively late-developing and open economy, Hong Kong firms have been able to transfer and adapt many tools, techniques and methods from places like North America and Western Europe. The case studies clearly indicated that the Hong Kong Chinese CEOs in different industries kept abreast of new developments overseas and, where appropriate, they oversaw the assimilation of these practices and technologies into their own organisations.

Conversely, remarkably little information about external developments was acquired through informal, internal information networks or by wandering around the work environment. Most of the CEOs tended to communicate directives and ideas to their subordinates while remaining detached from the office *grapevine* and similar communication channels within their own organisations.

It is concluded that Hong Kong Chinese businesses have thrived in a comparatively simple but rapidly changing socio-economic system partly because their CEOs have maintained rich connections with the external environment. Since the rate of environmental change is arguably increasing all around the world while underdeveloped institutional frameworks and business environments remain common, these propositions merit further exploration in not only the Chinese case, but also in other business contexts.

8.6 Information sources: Characteristics and use
The results from Hong Kong were consistent with those from a recent Canadian study (Auster & Choo, 1993) in that the quality

of the information source, rather than its accessibility or the perceived uncertainty of the environment, best explained the frequency with which it was used. As discussed in Chapter 7, this suggests a recent shift in terms of the key obstacle to the acquisition of quality information by managers. Largely due to advances in IT, managers are increasingly able to focus on selecting the best information from a surplus of available sources rather than worrying about how to access information from a surfeit of sources. This conclusion reinforms the mainstream literature on information management and implies a growing need for information evaluation and filtering technologies.

The frequency of use for an information source, especially in the securities industry, was found to depend significantly on the specific type of decision making activity. For example, much more information was sought out for entrepreneurial decisions than for those that involved disturbance handling. Industry differences were also detected. Information about the external environment was used most frequently in the entrepreneurial role by CEOs of securities firms and in resource allocator role by the chief executives of printing firms. Therefore, it is concluded that information sourcing behaviour will be highly contingent on the strategic management context.

Future studies could investigate what patterns of environmental scanning and information source usage are associated with specific generic business strategies or particular strategic issues and decisions. The value of an information source may depend on the importance, urgency and type of the strategic issue being considered as well as organisational and environmental characteristics. However, there has been little study of the relationships between these variables. This implies that while reliable and useful information is a prized asset in a competitive and international business centre like Hong Kong, the *best* means to acquire it remain poorly understood.

Since managers undertake scanning activities in order to make

sense of an uncertain external environment, further research could examine the detailed processes by which they seek and use information. These processes would go beyond specific job-related functions, and raise questions such as: How do decision makers detect, recognise and frame strategic issues from a fast-flowing stream of environmental signals and messages? How do they determine what information is necessary and sufficient to address a particular strategic issue? How do they select among different sources (or combinations of sources) that provide necessary and sufficient information about the topic of interest?

The use of the phrase "necessary and sufficient" highlights another characteristic of information that has methodological implications. The building and maintenance of personal relationships is a core element of the traditional Chinese business culture. An important aspect of long-term relationship building is showing respect for the other party. This implies that some personal information sources may not be contacted because of their expected utility (i.e. the ability to provide necessary and sufficient information), but rather to give *face* or show respect to the individual.

While this type of symbolic behaviour may be (nearly) universal, it is expected to be more prominent in a high power distance society like Hong Kong. Not surprisingly, several strategic issues in the case studies featured such information sourcing. The CEOs consulted their mentors and peers partly out of a sense of duty rather than because of an instrumental expectation.

Previously reported studies have tended to assume that environmental scanning is conducted in order to collect information that will reduce uncertainty by creating awareness or helping sense-making. However, the results from this study suggest that it is critical to account for both the instrumental and symbolic value of information in research designs. This in turn favours more intensive methods, such as case studies, to augment or replace extensive methods, such as surveys.

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8.7 Trust, tradition and information technology

The nature of strategic intelligence is also important from an information systems perspective. The Hong Kong Government does not have a comprehensive or even explicit IT policy, but industries such as banking, finance and transportation have made substantial IT investments. The findings support a proposition that the CEOs of more modern, service-oriented firms undertake more environmental scanning and have a greater reliance on impersonal information sources than their counterparts in more traditional, goods-producing firms. The top managers tend to trust their long-time associates and their own instincts rather than arms-length data and rational analysis.

The results further suggest that the structural transformation of the Hong Kong economy, from manufacturing to services, has raised both the role of environmental analysis and the potential to formalise these activities. This transformation and the growing levels of competition (noted in section 8.3) have undoubtedly increased the demand for IT applications even before taking account of supply side changes, such as continual improvements in the performance-price ratios of hardware and software.

Nevertheless, the traditional Chinese focus on *particularistic* or *personal trust* may be expected to impede the adoption of computer-based IS. This study confirmed personal networks as the key channel for acquiring and exchanging information in the traditional Chinese business culture. The top managers of affiliated organisations were found to have built up personal relationships for both communications and economic transactions. In contrast, it was remarkable that no more than two of the eight CEOs in the case studies included electronic services on their list of "top five" information sources in terms of *either* perceived quality, perceived accessibility *or* frequency of use.

The results suggest that in Hong Kong, systemic trust stemming from British colonialism and economic modernisation has moderated

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the personal trust which is based on family and regional ties among the Chinese. It is concluded that pre-handover Hong Kong featured a dynamic equilibrium between the Chinese tradition of personal trust and the Western tendency towards systemic trust.

Within this context, the Hong Kong Chinese CEOs acquired key data as well as deep insights about the external environment directly from other people. These people were sometimes family or friends. More commonly though, they were professional colleagues and business associates. In Chapter 3 it was noted that business in Chinese societies is conducted between individual people rather than impersonal firms. The results indicate that business information is also communicated largely from principal to principal rather than through intermediaries or impersonal media.

Consequently, the growing use of IT by Chinese managers will hinge not only on their confidence in the more narrowly-defined *information system*, but also on their trust in the broader *system*, including the impersonal and often anonymous sources that provide data inputs to the IS. Based on the discussion in Chapter 3, this trust can only be built up patiently and gradually.

Meanwhile, the conclusion made in the previous section suggests that the marketing of an IS to a Hong Kong Chinese CEO should emphasise the quality of the information that it can provide rather than its ability to make information accessible. The capacity for on-going adjustments and accommodations will also be a critical part of any IS solution provided to a Hong Kong Chinese manager, since this is an invariable part of a personal relationship.

More generally, the *management-level* use of IT will be an important benchmark for determining the extent to which modern management approaches have supplanted traditional Chinese management practices. It is recognised that IT may be used either to modify a traditional business practice or to reinforce

it.   For example, electronic mail could loosen the social
hierarchies found among the Chinese by enabling people at any
level and in any location to communicate directly and agree to
work together.   However, electronic tracking and surveillance
could help to sustain these same hierarchies by supporting a
command-and-control management model.

With respect to environmental scanning, IT may be able to absorb
certain information-intensive tasks, giving a manager more time
to concentrate on the less-structured aspects of conceptual and
decision-making activities.   However, the potential use of IT by
Hong Kong Chinese chief executives may be constrained by their
relatively simple and unstructured style of strategic decision
making and an emphasis on pre-decisional information acquisition,
to interpret issues rather than to select among specific choices.

Electronic communication systems can potentially enhance an
organisation's responsiveness to environmental changes while
formal information systems can facilitate both control and
coordination.   However, these IT applications are most effective
when data sets are routine and relatively unambiguous (Daft &
Lengel, 1986).   Tacit, intuitive and subjective information are
not as well-suited for electronic databases or highly-structured
telecommunication systems.

Based on a growing body of empirical evidence, it has been
theorised that Chinese management *systems* constrain the use of
formal and integrated MIS (see Martinsons, 1991; Tricker, 1988).
In fact, there may be a basic misfit between the computer-based
management information systems (that prevail in places like the
United States) and the organisational behaviours of the Chinese
(see Martinsons & Westwood, 1997).

Personal communication technologies, such as cellular phones,
appear to be much more suited to the Chinese business context.
This issue of fit merits further investigation.   Specific studies
could consider the types of IT applications that could best

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support the scanning activities of Chinese managers and others who are confronted by dynamic and uncertain environments.

8.8 An Agenda for Additional Research

In addition to the topics already mentioned in this chapter, several other areas related to strategic intelligence are also worthy of further study. At present, little is known about how specific characteristics of the recipient, rather than those of the information source or the external environment, influence environmental perceptions and scanning behaviours. This study found partial support for a relationship between higher education levels and greater use of both impersonal and personal information sources. However, the influence of specific cognitive characteristics and *management styles* on scanning behaviours is worthy of further investigation.

It is expected that different aspects of strategic issue diagnosis and decision making will depend on the cognitive style of the manager. Cognitive style is a multi-faceted concept with several dimensions that can potentially influence information seeking and use (Rouse & Rouse, 1984). Among the most important may be *ambiguity tolerance* and *locus of control*.

Ambiguity tolerance is the capability to accept or live with situations that are perceived or interpreted as being ambiguous, while ambiguity intolerance is the tendency to perceive or interpret such situations as sources of threat (Budner, 1962). However, only one previous study appears to have investigated this variable in the context of environmental scanning. Boyd (1989) found tentative support in the U.S. for his hypothesis that managers with a higher tolerance for ambiguity will engage in higher levels of scanning activity. Based on the results of this study, Hong Kong or another Chinese-dominated society would provide an attractive site for testing the external validity of this finding.

Given the traditional Chinese belief in fatalism, it would also

be useful to study how the *locus of control* influences environmental scanning practices. Locus of control refers to the perceptions of people about the factors responsible for what happens to them. People with an *internal* locus of control tend to believe that what happens to them is under their own control. In contrast, those with an external locus of control tend to view what happens to them as determined by circumstances and events beyond their influence.

All other factors being equal, those with an external locus of control may be less inclined to seek out information about the environment because of their self-perceived inability to act upon it. This tendency may moderate the amount of scanning and the frequency of information source use in Chinese societies. Unfortunately, there does not appear to be any empirical study of this variable in the context of environmental scanning.

As mentioned in Chapter 2, several studies conducted in the United States have investigated the relationship between environmental scanning patterns and business performance. Chief executive scanning in higher-performing U.S. firms has been found to have a broader base, be more frequent, rely more on personal sources, and have a more positive correlation with PSU (Daft et al, 1988; Dollinger, 1984; Schafer, 1990). This stream of research could be extended to consider the performance implications of different scanning patterns in places like Hong Kong and China. The more general question of causality between scanning behaviour and business performance also remains to be addressed.

This chapter has identified several promising lines of research. However, those who pursue a recommended area of research that involves performance variables should be aware of at least two key issues that arise from the Chinese business culture:
1. It is comparatively difficult to obtain financial data from Chinese organisations in Hong Kong and elsewhere; and
2. Chinese businesses (both family-controlled and larger state-

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owned enterprises on the mainland) do not necessarily aim to maximise their performance in the Anglo-American sense of shareholder value. The interests of workers and business associates may be more important than those of shareholders (or other "owners") of the enterprise.

These obstacles, or at least considerations, and the previously mentioned limitations of this study imply that research on strategic intelligence in places like Hong Kong will be challenging and fraught with uncertainty. In these circumstances, it is critical that investigators not be bound by either tradition or preconception. They may find it useful to heed the advice of Sun Zi, and be prepared to adapt to an infinite variety of circumstances. This advice has certainly been taken to heart by many a successful CEO in Hong Kong.

8.9 Looking Back and Looking Ahead

The study reported here involved addressing many challenges, but it is hoped that its results and conclusions will benefit management researchers, educators and practitioners. While the investigation was motivated primarily by a scholarly quest, it is expected to be of value to many of those whose own businesses are competing against or co-operating with Hong Kong Chinese organisations. An understanding of how their CEOs perceive the external environment, how they acquire and use information about it, and why they favour particular approaches and sources should benefit both potential adversaries and collaborators.

The "strategy as practice" perspective advocated by Whittington (1988, 1996) involves a shift in focus from organisations and their strategies to strategists and their strategising. There is now a broad consensus in the management literature that variations in personal attributes will lead to differences in what individuals will pay attention to and how they will perceive and act upon certain information.

The autocratic tendencies of Hong Kong organisational leaders

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suggest that those seeking to understand and perhaps even predict their strategic moves and directions would be well-advised to learn about their values, attitudes, perceptions and behaviours. Knowledge about the environmental perceptions and scanning patterns of Hong Kong Chinese CEOs would represents a useful starting point in such a learning process.

The discussion in Chapter 7, taken together with the conclusions and implications identified in this chapter, indicates that this study has made a significant contribution to several aspects of the literature. From a methodological perspective, it has shown not only the value of combining complementary approaches, but specifically the benefits of following up a large-scale survey with a small number of case studies.

In the American management research tradition, the case study, and qualitative research in general, has been relegated to a peripheral role. Even when a case study method is used, it is typically employed during the early stages of a research project, as part of a grounded, interpretive approach that leads to the development of a preliminary model. It is then common to subsequently test the nature and strength of the relationships in that model by gathering quantitative data and subjecting it to statistical analysis.

In contrast, the design of this study was based on an assumption that strategic intelligence is a multifaceted phenomenon. Consequently, a multifaceted approach was deemed to be appropriate. A survey yielding general descriptive data (suitable for comprehensive statistical analysis) was followed by case studies providing a combination of quantitative and qualitative data (suitable for explaining and elaborating on the survey observations).

It is hoped that the framework of this study may serve as an exemplar for future research of multifaceted phenomena in the field of organisational and management studies, much as Mintzberg

et al. (1976) and Daft et al. (1988) shaped the designs of many strategic decision making and environmental scanning studies, respectively, that were undertaken after their work was published.

This study profiled the environmental perceptions and scanning behaviours of ethnic Chinese CEOs in pre-handover Hong Kong, derived explanations for the observed patterns, and ultimately considered the implications of the results and the conclusions drawn from them. The perceptions of environmental uncertainty and scanning behaviours found in Hong Kong had many similarities but also several significant differences compared to those found in Canada, Nigeria and the United States. The industry-specific nature of environmental uncertainty was also very evident in the distinctive rankings of environmental sectors by the CEOs from two industries that were surveyed as well as their range of perspectives on the impending transfer of political sovereignty.

With the passage of time, more of the answer to the question of "What will happen to Hong Kong after 1997?" is revealed and the pre-handover uncertainty is relegated to the history books. Nevertheless, it is believed that this study will continue to interest management scholars in the future because it has documented how organisational leaders in Hong Kong perceived the impending discontinuity in their external environment and what information sources were relied upon to shape those perceptions and address strategic issues in the pre-handover period.

Remarkably, the study of how information about the external environment was acquired and used by the CEOs in pre-handover Hong Kong pointed towards a dynamic tension between traditional Chinese business practices and more modern management approaches. Many key aspects of overseas Chinese management were confirmed or reinforced by the results of this research.

Nevertheless, the results suggest that, consistent with the convergence hypothesis, the application of information technology

and more systematic approaches to environmental scanning may be expected as the Hong Kong business community responds to a combination of internal and external forces. Although this was not a longitudinal study, the surveying of both a relatively traditional industry (printing) and a more modern one (securities) revealed a contrast that may be reflective of general "before" and "after" profiles in a modernising economy.

This research has described and explained the fundamental nature of strategic intelligence in Hong Kong. As a pioneering effort, the author is confident that represents a beginning rather than an end, and that it will provide a strong foundation for additional investigation. This chapter has identified many topics that merit further study and suggested useful approaches for such investigations.

Those with research interests in the fields of strategic management and/or information management as well as the energy and motivation to take on a formidable challenge are encouraged to build upon this study in order to further advance our knowledge of both strategic intelligence phenomena and the nature of organisational management in different contexts.

REFERENCES

Adler, N.J. (1997). _International dimensions of organizational behavior_, 3rd ed., Cincinnati, OH: South-Western Publishing.

Aguilar, F.J. (1967). _Scanning the business environment_, New York: Macmillan.

Ahituv, N., Zif, J. and Machlin, I. (1998). Environmental scanning and information systems in relation to the success in introducing new products, _Information & Management_, 33, 201-211.

Aldrich, H.E. (1979). _Organizations and environments_, Englewood Cliffs, NJ: Prentice Hall.

Andrews, K.R. (1971/1980). _The concept of corporate strategy_, (revised edition), Homewood, IL: Irwin.

Angell, I.O. (1993). Intelligence: Logical or biological, _Communications of the ACM_, 36(7), 15.

Angell, I.O. & Smithson, S. (1991). _Information systems management: Opportunities and risks_, Blasingstoke, UK: Macmillan.

Ansoff, H.I. (1965). _Corporate strategy_, New York; McGraw-Hill.

Ansoff, H.I. (1979). _Strategic management_, New York: Wiley.

Araujo, L. and Easton, G. (1996). Strategy: Where is the pattern?, _Organisation_, 3, 361-383.

Argote, L., Seabright, M.A. and Dyer, L. (1986). Individual versus group use of base-rate and individuating information, _Organizational Behavior and Human Decision Processes_, 38, 65-75.

Argyris, C. and Schön, D. (1978). _Organizational learning: A theory of action perspective_, Reading, MA: Addison Wesley.

Arrow, K. (1964). Control in large organizations, _Management Science_, 10, 397-408.

Ashby, W.R. (1958). Requisite variety and its implications for the control of complex systems, _Cybernetica_, 1, 83-99.

Attewell, P. and Rule, J.B. (1991). Survey and other methodologies applied to IT impact research: experiences from a comparative study of business computing, in Kraemar, K.L. (ed.), _The information systems challenge: Survey research methods - Volume 3_, Boston: Harvard Business School Press, 299-315.

Auster, E. and Choo, C.W. (1993). Environmental scanning by CEOs in two Canadian industries, Journal of the American Society for Information Science. 44, 194-203.

Auster, E. and Choo, C.W. (1994). How managers acquire and use information in environmental scanning, Information Processing and Management. 30, 607-618.

Barnes, J.H. (1984). Cognitive biases and their impact on strategic planning, Strategic Management Journal. 5, 129-137.

Bazerman, M.H., Giuliano, T., and Appelman, A. (1984). Escalation in individual and group decision making, Organizational Behavior and Human Performance. 33, 141-152.

Beer, S. (1981). Brain of the Firm. 2nd ed., New York: Wiley.

Bell, D. (1973). The coming of postindustrial society: A venture in social forecasting. New York: Basic Books.

Bernhardt, D.C. (1994). "I want it fast, factual, actionable" - Tailoring competitive intelligence to executives' needs, Long Range Planning. 27(1), 12-24.

Bettman, J.R. (1979). An information processing theory of consumer choice. Reading, MA; Addison-Wesley.

Blandin, J.S. and Brown, W.B. (1977). Uncertainty and management's search for information, IEEE Transactions on Engineering Management. 24(4), 14-19.

Bond, M.H. (Ed.) (1986). The psychology of the Chinese people. Hong Kong: Oxford University Press.

Bond, M.H. (1987). Chinese values and the search for culture-free dimensions of culture, Journal of Cross-Cultural Psychology. 18, pp. 143-164.

Bond, M.H. and Hwang, K.K. (1986). The social psychology of Chinese people, in M.H. Bond (Ed.) The psychology of the Chinese people. Hong Kong: Oxford University Press, pp. 213-266.

Born, M. (1950) <cited by Krippendoff, K., personal communication> Content analysis. Beverly Hills, CA: Sage.

Bourgeois, L.J. (1985). Strategic goals, perceived uncertainty and economic performance in volatile environments, Academy of Management Journal. 28, 548-573.

Boyd, B.K. (1991). Strategic planning and financial performance: A meta-analytic review, Journal of Management Studies. 28, 353-374.

Boyd, B.K. and Fulk, J. (1994). Environmental scanning and perceived uncertainty: A multi-dimensional model, Journal of

Management. 20, 335-359.

Brannen, J. (Ed.) (1992) Mixing methods: Quantitative and qualitative research. Aldershot, UK: Avebury.

Brislin, R. (1970). Back-translation for cross-cultural research, Journal of Applied Psychology. 1, pp. 185-216.

Brunsson, N. (1985). The irrational organisation: Irrationality as a basis for organizational action and change. New York: Wiley.

Bryman, A. (1989). Research methods and organisation studies. London: Unwin Hyman.

Buchko, A.A. (1994). Conceptualization and measurement of environmental uncertainty: An assessment of the Miles and Snow perceived environmental uncertainty scale, Academy of Management Journal. 37, 410-425.

Burn, J.M. and Martinsons, M.G. (1997). Information technology and the challenge for Hong Kong. Hong Kong: Hong Kong University Press.

Burn, J.M. and Szeto, C.K.H. (1997). Strategic use of IT in port management, in J.M. Burn and M.G. Martinsons (Eds.), Information Technology and the Challenge for Hong Kong. Hong Kong University Press, 357-379.

Burns, T. and Stalker, G.M. (1961). The management of innovation. London: Tavistock.

Burrell, G. and Morgan, G. (1979). Sociological paradigms and organisational analysis. London: Heinemann.

Burn, J.M., Saxena, K.B.C., Ma, L. and Cheung, H.K. (1993). Critical issues of IS management in Hong Kong: A cultural comparison, Journal of Global Information Management. 1(4), 28-37.

Carlin, W.B. and Strong, K.C. (1995). A critique of Western philosophical ethics, Journal of Business Ethics. 14, 387-396.

Carroll, J.S. and Johnson, E.J. (1990). Decision research: A field guide. London: Sage.

Chan, K.B. and Chiang, C. (1994). Stepping out: The making of Chinese entrepreneurs. Singapore: Simon & Schuster.

Chandler, A.D. (1962). Strategy and structure: Chapters in the history of industrial enterprise. Cambridge, MA: MIT Press.

Checkland, P. (1981). Systems thinking, Systems practice. Chichester, England: Wiley.

Checkland, P. (1994). Conventional wisdom and conventional ignorance: The revolution organisation theory missed, Organisation. 1, 29-34.

Chen, E.K.Y. (1995). The economic setting, in D. Lethbridge (Ed.), The business environment of Hong Kong. 3rd ed., Hong Kong: Oxford University Press.

Chen, M. (1995). Asian management systems. London: Routledge.

Chetham, A. (1997). Revolution on the line in the telecoms industry, South China Morning Post. 27 June, 27.

Child, J. (1972). Organizational structure, environment and performance: The role of strategic choice, Sociology. 6, 1-22.

Child, J. (1981). Culture, contingency and capitalism in the cross-national study of organizations, in L.L. Cummings and B.M. Staw (Eds.), Research in Organizational Behavior. 3, Greenwich, CN: JAI Press, 303-356.

Choo, C.W. (1991). Toward an integrated model of organizations, Canadian Journal of Information Science. 16(3), 32-62.

Choo, C.W. (1994). Information management for the intelligent organisation: The art of scanning the environment. Medford, NJ: Information Today.

Churchman, C.W. (1971). The design of inquiring systems: Basic concepts of systems and organizations. New York: Basic Books.

Collins, E.M. (Ed. and trans.) (1962). Karl von Clausewitz. war. politics. and power: Selections from "On war" and "I believe and profess". Chicago: Henry Regnery.

Coombs, R., Knights, D. and Willmott, H. (1992). Culture, control and competition: Towards a conceptual framework for the study of information technology in organizations, Organisation Studies. 12, pp. 51-72.

Cover, T.M. and Thomas, J.A. (1991). Elements of information theory. New York: Wiley.

Culnan, M.J. (1983). Environmental scanning: the effects of task complexity and source accessibility on information gathering behaviour, Decision Sciences. 14, 194-206.

Cyert, R.M. and March, J.G. (1963/1992). A behavioural theory of the firm. Oxford: Blackwell.

Daft, R.L. and Lengel, R.H. (1986). Organizational information requirements, media richness and structural design, Management Science. 32, 554-571.

Daft, R.L., Sormunen, J. and Parks, D. (1988). Chief executive scanning, environmental characteristics and company performance: an empirical study, Strategic Management Journal. 9, 123-139.

Daft, R.L. and Weick, K.E. (1984). Toward a model of organizations as interpretive systems, Academy of Management Review, 9, 284-295.

Das, T.K. (1986). The subjective side of strategy making: Future orientations and perceptions of executives. London: Praeger.

D'Aveni, R.A. (1994). Hypercompetition: Managing the dynamics of strategic maneuvering. New York: Free Press.

Davenport, T.H. (1993). Process innovation: Reengineering work through information technology. Cambridge, MA: Harvard University Press.

Davenport, T.H. (1997). Information ecology: Mastering the information and knowledge environment, New York: Oxford University Press.

Davenport, T.H., Eccles, R.G. and Prusak, L. (1992). Information politics, Sloan Management Review. 34(1): 53-63.

Dawes, R. (1988). Rational choice in an uncertain world. New York: Harcourt Brace Jovanovich.

Deacon, R. (1969). A history of the British secret service, New York: Taplinger.

Dedijer, S. and Jequier, N. (1987). Intelligence for economic development: An inquiry into the role of the knowledge industry. Oxford: Berg.

Denzin, N.K. (1984). On understanding emotion. San Francisco: Jossey-Bass.

Desai, B.H. and Bawden, D. (1993). Competitor intelligence in the pharmaceutical industry, Journal of Information Science. 19, 327-338.

Dess, G.G. and Beard, D.W. (1984). Dimensions of organizational task environments, Administrative Science Quarterly. 29, 52-73.

Dess, G.G. and Rasheed, A.M.A. (1991). Conceptualizing and measuring organizational environments: A critique and suggestions, Journal of Management. 17, 701-710.

Deutsch, E. (1973). Interpreting across cultures. Honolulu: University of Hawaii Press.

Deyo, F.C. (1983). Chinese management practices and work

commitment in comparative perspective, in L.A.P. Gosling and L.Y.C. Lim (eds.), The Chinese in Southeast Asia. 11, Manila: Maruzen Asia, 27-48.

Diffenbach, J. (1983). Corporate environmental analysis in large U.S. corporations, Long Range Planning. 16(3), 107-116.

Dill, W.R. (1958). Environment as an influence on managerial autonomy, Administrative Science Quarterly. 11, 409-443.

Dollinger, M.J. (1984). Environmental boundary spanning and information processing effects on organizational performance, Academy of Management Journal. 27, 351-368.

Donaldson, G. and Lorsch, J.W. (1983). Decision making at the top. New York: Basic Books.

Downey, H.K., Hellreigel, D. and Slocum, J.W. (1975). Environmental uncertainty: The construct and its application, Administrative Science Quarterly. 20, 613-629.

Drucker, P. (1959). Long range planning: Challenge to management, Management Science. April, 242-244.

Dulles, A.W. (1965). The craft of intelligence. New York: New American Library.

Duncan, R.B. (1972). Characteristics of organizational environments and perceived uncertainty, Administrative Science Quarterly. 17, 313-327.

Dupuy, R.E. and Dupuy, T.W. (1970). The encyclopaedia of military history. New York: Harper & Row.

Dutton, J.E. (1993). Interpretations on automatic: A different view of strategic issue diagnosis, Journal of Management Studies.
30, 339-357.

Dutton, J.E. and Duncan, R.B. (1987). The creation of momentum for change through the process of strategic issue diagnosis, Strategic Management Journal. 8, 279-295.

Dutton, J.E., Fahey, L. and Narayanan, V.K. (1983). Towards understanding strategic issue diagnosis", Strategic Management Journal. 4, 307-324.

Dutton, J.E. and Jackson, S.E. (1987). Categorizing strategic issues: Links to organizational action, Academy of Management Review. 12, 76-90.

Dutton, J.E. and Ottensmeyer, E. (1987). Strategic issue management systems: Forms, functions and contexts, Academy of Management Review. 12, 355-365.

Earley, P.C. (1989). Social loafing and collectivism: A

comparison of the United States and the People's Republic of China, <u>Administrative Science Quarterly</u>. 34, 565-581.

Einhorn, H.J. and Hogarth, R.M. (1981). Behavioral decision theory: Processes of judgment and choice, <u>Annual Review of Psychology</u>. 32, 53-88.

Eisenhardt, K.M. (1989). Making fast strategic decisions in high-velocity environments, <u>Academy of Management Journal</u>. 32, 543-576.

Eisenhardt, K.M. and Zbaracki, M.J. (1992). Strategic decision making, <u>Strategic Management Journal</u>. 13, 17-37.

El Sawy, O.A. (1985). Personal information systems for strategic scanning in turbulent environments: Can the CEO go on-line?, <u>MIS Quarterly</u>. 9, 53-60.

El Sawy, O.A. and Pauchant, T.C. (1988). Triggers, templates and twitches in the tracking of emerging strategic issues, <u>Strategic Management Journal</u>. 9, 455-473.

Emery, F.E. and Trist, E.L. (1965). The causal texture of organizational environments, <u>Human Relations</u>. 18, 21-32.

Engardio, P. (1991). The Chinese dealmakers of Southeast Asia, <u>Business Week</u>. Issue 3239 (11 November), 60-62.

Ericsson, K.A. and Simon, H.A. (1984). <u>Protocol analysis: Verbal reports as data</u>. Cambridge, MA: MIT Press.

Escobar, A. (1995). Anthropology and the future: New technologies and the reinvention of culture, <u>Futures</u>. 27, pp. 409-421.

Evered, R. (1983). So what is strategy?, <u>Long Range Planning</u>. 16(3), 57-72.

Ewing, R.P. (1990). Moving from micro and macro issues management, <u>Public Relations Review</u>. 16, 19-24.

Fahey, L. and King, W.R. (1977). Environmental scanning for corporate planning, <u>Business Horizons</u>. 20(4), 61-71.

Fahey, L., King, W.R. and Narayanan, V.K. (1982). Environmental scanning and forecasting in strategic planning - the state of the art, <u>Long Range Planning</u>. 14(1), 32-39.

Farmer, R. N. and Richman, B.M. (1965). <u>Comparative management and economic progress</u>. Homewood, IL: Irwin.

Fergusson, T.G. (1981). <u>The development of a modern intelligence organisation: British military intelligence, 1870-1914</u>. unpublished Ph.D. dissertation, Duke University, USA.

Ferraro, G.P. (1990). The cultural dimension of international business. Englewood Cliffs, NJ: Prentice Hall.

Fombrun, C.J. (1983). Attributions of power across a social network, Human Relations. 36, 493-508.

Foster, M.J. (1993). Scenario planning for small businesses, Long Range Planning. 26(1), 123-130.

Frankfort-Nachmias, C. and Nachmias, D. (1992) Research methods in the social sciences. 4th ed., London: Edward Arnold.

Fredrickson, J.W. (1983). Effects of decision motive and organizational performance level on strategic decision processes, Academy of Management Journal. 28, 821-843.

Freeman, L.C. (1979). Centrality in social networks: Conceptual clarification, Social Networks, 1, 215-239.

Fukuda, K.J. (1983). Japanese and Chinese management practices: Uncovering the differences, Mid-Atlantic Journal of Business. 21(2), 35-44.

Fukuda, K.J. (1984). Transferability of computer technology across Asian cultures, Asia Pacific Journal of Management. September, 54-61.

Fukuda, K.J. (1987). Chinese management: From the first emperor to Deng Xiaoping, Leadership & Organisation Development Journal. 8(1), 29-32.

Fukuyama, F. (1992). The end of history and the last man. New York: Free Press.

Fung, Y.L. (1948). A short history of Chinese philosophy. (trans. and ed. by D. Bodde), New York: Macmillan.

Gable, G.G. (1994). Integrating case study and survey research methods: an example in information systems, European Journal of Information Systems. 3, 112-126.

Galliers, R.D. (1991). Strategic information systems planning: myths, reality and guidelines for successful implementation, European Journal of Information Systems. 1(1), 55-64.

Galliers, R.D. (1992). Information systems research: Issues. methods and practical guidelines. Oxford, Blackwell Scientific.

Galliers, R.D., Mingers, J. and Jackson, M. (1997). Organisation theory and systems thinking: The benefits of partnership, Organisation. 4, 269-278.

Garvin, D.A. (1993). Building a learning organisation,

Harvard Business Review. 71(4), 78-92.

Gerstberger, P.G. and Allen, T.J. (1968). Criteria used by research and development engineers in the selection of an information source, Journal of Applied Psychology. 52, 272-279.

Ghoshal, S. (1987). Environmental scanning in Korean firms: Organizational isomorphism in action, Journal of International Business Studies. 18, 69-86.

Ghoshal, S. and Westney, D.E. (1991). Organizing competitor intelligence systems, Strategic Management Journal. 12, 17-31.

Gilad, B. and Gilad, T. (1988). The business intelligence system: A new tool for competitive advantage. New York: Amacom.

Ginter, P.M. and Duncan, W.J. (1990). Macroenvironmental analysis for strategic management, Long Range Planning. 23(6), 91-110.

Godiwalla, Y.M., Meinhart, W.A. and Warde, W.D. (1980). Environmental scanning - does it help the chief executive?, Long Range Planning. 13(5), 87-99.

Gorden, R. (1981). Interviewing: Strategy, techniques, and tactics. Homewood, IL: Dorsey.

Government Information Centre of Hong Kong (1997). <<http:// www.info.gov.hk>>.

Gray, P. (1993). Decision support and executive information systems. Englewood Cliffs, NJ: Prentice-Hall.

Greene, R.M. (1966). Business intelligence and espionage. Homewood, IL: Dow Jones-Irwin.

Griffith, S.B. (1963). Sun-tzu: The art of war. Oxford: Clarendon Press.

Hall, D.L. and Ames, R.T. (1987). Thinking through Confucius. Albany, NY: State University of New York Press.

Hall, E.T. (1976). The silent language. New York: Anchor Press.

Hall, E.T. and Hall, M.R. (1990). Understanding cultural differences. Yarmouth, ME: Intercultural Press.

Hall, P. (1997). Modelling the post-industrial city, Futures, 29, 311-322.

Hambrick, D.C. (1979). Environmental scanning, organizational strategy, and executive roles: A study in three industries, unpublished Ph.D. dissertation, Pennsylvania State University.

Hambrick, D.C. (1981). Specialization of environmental scanning activities among upper level executives, Journal of Management Studies, 18, 299-320.

Hambrick, D.C. (1982). Environmental scanning and organizational strategy, Strategic Management Journal, 3, 159-174.

Hamel, G. and Prahalad, C.K. (1989). Strategic intent, Harvard Business Review, 67(3), 63-76.

Hammond, K.R., McLelland, G.H., and Mumpower, J. (1980). Human judgment and decision making: Theories, methods, and procedures. New York: Praeger.

Harbison, F. and Myers, C.A. (1959). Management in the industrial world: An international analysis. New York: McGraw-Hill.

Hartley, J.F. (1994). Case studies in organizational research, in C. Cassell and G. Symon (Eds.), Qualitative methods in organizational research: A practical guide. London: Sage, 208-229.

Harzing, A.W. (1997). Response rates in international mail surveys: Results of a 22-country study, International Business Review, 6, 641-665.

Hax, A.C. and Majluf, N.S. (1988). The concept of strategy and the strategy formation process, Interfaces, 18(3), 99-109.

Healey, M.J. and Rawlinson, M.B. (1993). Interviewing business owners and managers: A review of methods and techniques, Geoforum, 24(3): 339-355.

Herring, J.P. (1988). Building a business intelligence system, Journal of Business Strategy, 9(3), 4-9.

Herring, J.P. (1992). Business intelligence in Japan and Sweden: Lessons for the U.S., Journal of Business Strategy, 13(2), 44-49.

Hicks, G. (1989). Hong Kong countdown. Hong Kong: Writer's Coop.

Hofer, C.W. and Schendel, D. (1978). Strategy formulation: Analytic concepts. St. Paul, MN: West Publishing.

Hofer, G. (1993). Hong Kong: An insight guide. Singapore: APA Press.

Hofstede, G. (1980). Culture's consequences: International differences in work-related values. London: Sage.

Hofstede, G. (1987). The applicability of McGregor's theories in South East Asia, Journal of Management Development, 6(3),

9-18.

Hofstede, G. (1993). Cultural constraints on management theories, Academy of Management Executive. 7(1), pp. 81-94.

Hofstede, G. and Bond, M.H. (1988). The Confucian connection: from cultural roots to economic growth, Organizational Dynamics. 16(4), 4-21.

Hogarth, R. (1983). Judgement and choice. Chichester: Wiley.

Hong Kong Government (199x). Hong Kong: Annual Digest of Statistics. Census and Statistics Department.

House, R.J., Wright, N.S. and Aditya, R.N. (1997). Cross-cultural research on organizational leadership, in P.C. Earley and M. Erez (Eds.) New perspectives on international industrial/ organizational psychology. San Francisco: New Lexington Press, 535-635.

Hsu, F.L.K. (1970). American and Chinese: Purpose and fulfilment in great civilizations. Garden City, NY: Natural History Press.

Hsu, F.L.K. (1981). American and Chinese: Passage to differences. Honolulu: University Press of Hawaii.

Huber, G.P. (1990). A theory of the effects of advanced information technologies on organizational design, intelligence and decision-making, Administrative Science Quarterly. 15, 1-25.

Huber, G.P. and Power, D.J. (1985). Retrospective reports of strategic-level managers: Guidelines for increasing accuracy, Strategic Management Journal. 6, 171-180.

Huff, A.S. (1979). Strategic intelligence systems, Information & Management. 2, 187-196.

Hulland, J.S. and Kleinmutz, D.N. (1994). Factors influencing the use of internal summary evaluations versus external information in choice, Journal of Behavioural Decision Making. 7, 79-102.

Hunger, J.D. and Wheelen, T.L. (1997). Essentials of strategic management. Harlow, England: Addison-Wesley.

Huntington, S.P. (1993). The clash of civilizations?, Foreign Affairs. 72(3), 22-49.

Huo, Y.P. and Randall, D.M. (1991). Exploring subcultural differences in Hofstede's value survey: The case of the Chinese, Asia Pacific Journal of Management. 8, 159-173.

Isenberg, D. (1984). How senior managers think, Harvard Business Review. 62(6), 80-90.

298

Jain, S.C. (1984). Environmental scanning in U.S. corporations, Long Range Planning, 17, 117-128.

Janis, I.L. (1982). Groupthink, Boston: Houghton Mifflin.

Jauch, L.R. and Kraft, K.L. (1986). Strategic management of uncertainty, Academy of Management Review, 11, 777-790.

Jaworski, R. (1996). Intelligence and decision quality, Journal of Applied Decision Making, 22, 171-184.

Jennings, D.F. and Lumpkin, J.R. (1992). Insights between environmental scanning activities and Porter's generic strategies: An empirical analysis, Journal of Management, 18, 791-803.

Johnson, L. and Kuehn, R. (1987). The small business owner/manager's search for external information, Journal of Small Business Management, 25(3), 53-60.

Johnson-Laird, P.N. (1973). Mental models. Cambridge, MA: Harvard University Press.

Jones, J.W. and McLeod, R. (1986). The structure of executive information systems: an exploratory analysis, Decision Sciences, 17, 220-249.

Jussawalla, M. and Cheah, C.W. (1983). Towards an information economy: The case of Singapore, Information Economics and Policy, 1(2), 161-176.

Kahaner, L. (1996). Competitive intelligence: From black ops to boardrooms. New York: Simon & Schuster.

Kahn, H. (1979). World economic development: 1979 and beyond. New York: Croom Helm.

Kedia, B.L. and Bhagat, R.S. (1988). Cultural constraints on the transfer of technology across nations, Academy of Management Review, 13, pp. 559-571.

Keegan, W.J. (1974). Multinational scanning: A study of the information sources utilized by headquarters' executives in multinational companies, Administrative Science Quarterly, 19, 411-421.

Kefalas, A. and Schoderbek, P.P. (1973). Scanning the business environment - some empirical results, Decision Sciences, 4, 63-74.

Kennedy, C.R. (1984). The external environment-strategic planning interface: U.S. multinational corporate practices in the 1980s, Journal of International Business Studies, 15, 99-108.

Kerlinger, F.N. (1986). Foundations of behavioural research.

(3rd ed.), New York: Holt, Rinehart & Winston.

Kerr, C. (1946). The future of industrial societies: Convergence or continuing diversity. Boston: Harvard Business School Press.

Kerr, C., Dunlop, J.T., Harbison, F.H. and Myers, C.A. (1960). Industrialism and industrial man. Cambridge, MA: Harvard University Press.

Kiggundu, M., Jorgensen, J.J. and Hafsi, T. (1983). Administrative theory and practice in developing countries: A synthesis, Administrative Science Quarterly. 28, 66-84.

King, W.R. (1978). Information for strategic planning: an analysis, Information & Management. 1, 59-66.

King, W.R. (1982). Using strategic issue analysis, Long Range Planning. 15(4), 45-49.

King, W.R. (1983). Planning for strategic decision support systems, Long Range Planning. 16(5), 73-78.

King, W.R. and Cleland, D.I. (1977). Information for more effective strategic planning, Long Range Planning. 10(1), 59-70.

Kluckhohn, R. R., and Strodtbeck, F. (1961). Variations in value orientations. Westport, CN: Greenwood Press.

Knights, D. and Morgan, G. (1991). Corporate strategy, organizations and subjectivity: A critique, Organisation Studies. 12, 251-273.

Ko, A.C.K. (1995). Towards an understanding of Overseas Chinese management, Journal of Management Systems. 7(1), 13-28.

Kogut, B. and Singh, H. (1988). The effect of national culture on the choice of entry mode, Journal of International Business Studies. 19(3), 411-432.

Koniger, P. and Janowitz, K. (1995). Drowning in information, but thirsty for knowledge, International Journal of Information Management. 15, 5-16.

Kotter, J.P. (1982). What effective managers really do, Harvard Business Review. 60(2), 156-167.

Kraar, L. (1995). The death of Hong Kong, Fortune. 131(12), (26 June), 40-52.

Kroeber, A.L. (1952). The nature of culture. Chicago: University of Chicago Press.

Lammers, C.J. and Hickson, D.J. (eds.) (1979). Organisations alike and unlike. London: Routledge.

Land, F. (1992). The information systems domain, in R.D. Galliers (ed.) Information systems research: issues, methods and practical guidelines. Oxford: Blackwell Scientific.

Lasserre, P. (1981). The newly industrializing countries of Asia - perspectives and opportunities, Long Range Planning. 14(3), 36-43.

Lasserre, P. (1993). Gathering and interpreting strategic intelligence in Asia Pacific, Long Range Planning. 26(3), 56-66.

Laszlo, E. (1996). The systems view of the world: A holistic vision for our time. Cresskill, NJ: Hampton Press.

Lau, A. and Snell, R. (1996). Structure and growth in small Hong Kong enterprises", International Journal of Entrepreneurial Behaviour and Research. 2(3), 29-47.

Lau, S.K. and Kuan, H.C. (1988). The ethos of the Hong Kong Chinese. Hong Kong: Chinese University Press.

Lawrence, P.R. and Lorsch, J.W. (1967). Organisation and environment: Managing differentiation and integration. Boston, MA: Harvard University Graduate School of Business Administration.

Lawrence, P.R. (1990) with C.A. Vlachoutsicos. Behind the factory walls: Decision making in Soviet and U.S. enterprises. Boston: Harvard Business School Press.

Lederer, A.L. and Mendelow, A.L. (1988). Information systems planning; top management takes control, Business Horizons. 31(3), 73-78.

Lee, A.S. (1989). A scientific methodology for MIS case studies, MIS Quarterly. 13, 33-50.

Lee, S.K. (1987). A Chinese conception of management - an interpretive approach. unpublished E.D.D. dissertation, University of Massachusetts, USA.

Lee, Y.T., Pepitone, A. and Albright, L. (1997). Descriptive and prescriptive beliefs about justice: A Sino-U.S. comparison, Cross-Cultural Research. 31, 101-120.

Legge, J.M. (1990). Chaos theory and business planning. Melbourne: Schwartz & Wilkinson.

Leidner, D.E. and Elam, J.J. (1993). Executive information systems: their impact on executive decision making, Journal of Management Information Systems. 10, 139-155.

301

Lenz, R. and Engledow, J. (1986). Environmental analysis: the applicability of current theory, <u>Strategic Management Journal</u>, 7, 329-346.

Lester, R. and Waters, J. (1989). <u>Environmental scanning and business strategy</u>. London: British Library, Research and Development Department.

Lewis, M.F. (1982). <u>Sources and uses of external information for smaller firms</u>. unpublished Ph.D. dissertation, University of Arkansas, USA.

Limlingan, V.S. (1986). <u>The overseas Chinese in ASEAN: Business strategies and management practices</u>. Manila: Vita Development.

Lindsay, C.P. and Dempsey, B.L. (1985). Experiences in training Chinese business people to use U.S. management techniques, <u>Journal of Applied Behavioural Science</u>. 21(1), 65-78.

Loebbecke, C. and Blanning, R.W. (1997). Strategic approach to information technology at the Hong Kong Jockey Club, in J.M. Burn and M.G. Martinsons (Eds.), <u>Information technology and the challenge for Hong Kong</u>. Hong Kong University Press, 319-339.

Lorange, P. (1980). <u>Corporate planning</u>. London: Prentice Hall.

Lord, R.G. and Maher, K.J. (1990). Alternative information processing models and their implications for theory, research and practice, <u>Academy of Management Review</u>. 15(1), 9-28.

Lowe, S. (1996). Hermes revisited: A replication of Hofstede's study in Hong Kong and the UK, <u>Asia Pacific Business Review</u>. 2(3), 101-119.

Ma, H. K. (1988a). Objective moral judgment in Hong Kong, Mainland China, and England, <u>Journal of Cross-Cultural Psychology</u>. 19, 78-95.

Ma, H. K. (1988b). The Chinese perspectives on moral judgment development, <u>International Journal of Psychology</u>. 23, 201-227.

Ma, H.K. & Cheung, C.K. (1996). A cross-cultural study of moral stage structure in Hong Kong Chinese, English and Americans, <u>Journal of Cross-Cultural Psychology</u>. 27, 700-713.

MacMullin, S.E. and Taylor, R.S. (1984). Problem dimensions and information traits, <u>Information Society</u>. 3(1), 91-111.

Magnier, M. (1993). Hong Kong's feisty entrepreneurs more adventurous than Singapore's, <u>Journal of Commerce and Commercial Affairs</u>. 395-27889 (7 January), 3A.

Maier, J.L., Rainer, R.K. and Snyder, C.A. (1997). Environmental scanning for information technology, _Journal of Management Information Systems_, 14, 177-200.

Malinkowski, B. (1944). _An ethnographic approach to meaning_. London: Unwin & Allen.

Mansfield, R. (1989). Management research and the development of management practice, in R. Mansfield (Ed.), _Frontiers of management_. London: Routledge, 3-7.

March, J.G. (1988). _Decisions and organizations_. Oxford: Blackwell.

March, J.G. (1994). _A primer on decision making: How decisions happen_. New York: Free Press.

March, J.G. and Simon, H.A. (1958/1992). _Organizations_. 2nd edition, Oxford: Blackwell.

Markus, H. and Kitayama, Y. (1991). Culture and self: Implications for cognition, emotion and motivation, _Psychological Review_, 98, pp. 224-253.

Marshall, C. and Rossman, G.B. (1989). _Designing qualitative research_. London: Sage.

Martin, W.J. (1988). _The information society_. London: Aslib.

Martinsons, M.G. (1991). Management philosophy and IT application: The East-West divide, _Journal of Technology Management_, 18, 207-218.

Martinsons, M.G. (1993). Strategic innovation: a lifeboat for planning in turbulent waters, _Management Decision_, 31(8). 4-11.

Martinsons, M.G. (1994). A strategic vision for managing business intelligence, _Information Strategy_, 10(3), 17-30.

Martinsons, M.G. (1995). Radical process innovation using information technology: The theory, the practice and the future of re-engineering, _International Journal of Information Management_, 15, 253-269.

Martinsons, M.G. (1997). Information technology to enable global banking: The Hongkong Bank and Hexagon, in J.M. Burn and M.G. Martinsons (Eds.), _Information technology and the challenge for Hong Kong_. Hong Kong: Hong Kong University Press, 267-298.

Martinsons, M.G. (1998). Hong Kong government policy and information technology innovation: The invisible hand, the helping hand and the hand-over to China, _IEEE Transactions on Engineering Management_, 45, 366-380.

303

Martinsons, M.G. and Hempel, P.S. (1995). Chinese management systems: Historical and cross-cultural perspectives, Journal of Management Systems. 7(1), 1-11.

Martinsons, M.G. and Hosley, S. (1992). Planning a strategic information system for a market-oriented non-profit organisation, Journal of Systems Management. 44(2), 14-24.

Martinsons, M.G. and Martinsons, A.G.B. (1996). Conquering cultural constraints to cultivate Chinese management creativity and innovation, Journal of Management Development. 15(9), 18-35.

Martinsons, M.G. and Westwood, R.I. (1997). Management information systems in the Chinese business culture: An explanatory theory, Information & Management. 32, 215-228.

Mason, R.O. and Mitroff, I.I. (1981). Challenging strategic planning assumptions. New York: Wiley-Interscience.

McGonagle, J.J. and Vella, C.M. (1996). A new archetype for competitive intelligence. Westport, CN: Quorum Books.

McGrath, J. (1964). Toward a 'theory of method' for research in organizations, in Cooper, W.W., Laved, H.J. and Shelly, M.W. (eds.), New perspectives in organizational research. New York: Wiley.

Mead, M. (1953). Coming of age in Samoa. New York: Modern Library.

Methlie, L.B. and Tverstol, A.M. (1982). External information services: A survey of behavioural aspects of demand, Information & Management. 5, 269-277.

Meyer, H.E. (1988). Real world intelligence. Friday Harbor, WA: Storm King Press.

Miles, M.B. and Huberman, A.M. (1984/1994). Qualitative data analysis: A sourcebook for new methods. London: Sage.

Miller, D. (1982). Evolution and revolution: A quantum view of structural change in organizations, Journal of Management Studies. 19, 131-151.

Miller, D. (1990). The Icarus paradox: How exceptional companies bring about their own downfall. New York: Harper Collins.

Miller, D. and Freisen, P.H. (1983). Strategy-making and the environment: the third link, Strategic Management Journal. 4, 221-235.

Milliken, F.J. (1987). Three types of perceived uncertainty about the environment: State, effect and response uncertainty, Academy of Management Review. 12, 133-143.

Milliken, F.J. and Lant, T.K. (1991). The effect of an organisation's recent performance history on strategic persistence and change: The role of managerial interpretations, In Advances in strategic management. Volume 7, Greenwich, CT: JAI Press, 129-156.

Mintzberg, H. (1973). The nature of managerial work. New York: Harper & Row.

Mintzberg, H. (1979). The structure of organizations. Englewood Cliffs, NJ: Prentice-Hall.

Mintzberg, H. (1983). Structures in fives: Designing effective organizations. Englewood Cliffs, NJ: Prentice-Hall.

Mintzberg, H. (1990). Strategy formation: Schools of thought, in J. Frederickton (ed.), Perspectives on strategic management. Boston: Bellinger, 105-135.

Mintzberg, H. (1994). The rise and fall of strategic planning. Englewood Cliffs, NJ: Prentice-Hall.

Mintzberg, H., Raisinghani, D. and Theoret, A. (1976). The structure of "unstructured" decision processes, Administrative Science Quarterly. 21, 246-275.

Mintzberg, H. and Waters, J. (1985). Of strategies, deliberate and emergent, Strategic Management Journal. 6, 257-272.

Moorman, J. and Lochte-Holtgreven, M. (1993). An approach for an integrated DSS for strategic planning, Decision Support Systems. 10, 401-411.

Morgan, G. (1983). Rethinking corporate strategy: A cybernetic approach, Human Relations. 35, 345-360.

Morgan, G. (1992). Improving your flysight, Business Quarterly. 57(2), 39-40.

Morgan, G. and Smircich, L. (1980). The case for qualitative research, Academy of Management Review. 5, 491-500.

Murphy, J.J. (1989). Identifying strategic issues: development of methodology for environmental scanning, Long Range Planning. 22(2), 101-105.

Mushkat, M. (1990). The economic future of Hong Kong. Hong Kong: Hong Kong University Press.

Nachmias, C. and Nachmias, D. (1989). Research methods in the social sciences. London: Edward Arnold.

Nakamura, H. (1960). The ways of thinking of Eastern peoples: India. China. Tibet and Japan. Honolulu, University of Hawaii Press.

305

Milliken, F.J. and Lant, T.K. (1991). The effect of an organisation's recent performance history on strategic persistence and change: The role of managerial interpretations, In Advances in strategic management, Volume 7, Greenwich, CT: JAI Press, 129-156.

Mintzberg, H. (1973). The nature of managerial work, New York: Harper & Row.

Mintzberg, H. (1979). The structure of organizations. Englewood Cliffs, NJ: Prentice-Hall.

Mintzberg, H. (1983). Structures in fives: Designing effective organizations, Englewood Cliffs, NJ: Prentice-Hall.

Mintzberg, H. (1990). Strategy formation: Schools of thought, in J. Frederickton (ed.), Perspectives on strategic management, Boston: Bellinger, 105-135.

Mintzberg, H. (1994). The rise and fall of strategic planning, Englewood Cliffs, NJ: Prentice-Hall.

Mintzberg, H., Raisinghani, D. and Theoret, A. (1976). The structure of "unstructured" decision processes, Administrative Science Quarterly, 21, 246-275.

Mintzberg, H. and Waters, J. (1985). Of strategies, deliberate and emergent, Strategic Management Journal, 6, 257-272.

Moorman, J. and Lochte-Holtgreven, M. (1993). An approach for an integrated DSS for strategic planning, Decision Support Systems, 10, 401-411.

Morgan, G. (1983). Rethinking corporate strategy: A cybernetic approach, Human Relations, 35, 345-360.

Morgan, G. (1992). Improving your flysight, Business Quarterly, 57(2), 39-40.

Morgan, G. and Smircich, L. (1980). The case for qualitative research, Academy of Management Review, 5, 491-500.

Murphy, J.J. (1989). Identifying strategic issues: development of methodology for environmental scanning, Long Range Planning, 22(2), 101-105.

Mushkat, M. (1990). The economic future of Hong Kong, Hong Kong: Hong Kong University Press.

Nachmias, C. and Nachmias, D. (1989). Research methods in the social sciences, London: Edward Arnold.

Nakamura, H. (1960). The ways of thinking of Eastern peoples: India, China, Tibet and Japan, Honolulu, University of Hawaii Press.

305

Narchal, R.M., Kittappa, K. and Bhattacharya, P. (1987). An environmental scanning system for business planning, Long Range Planning. 20(6), 96-105.

Nasif, E.G. (1991). Methodological problems in cross-cultural research, Management International Review, 31(1), 79-91.

Negandhi, A.R. (1983). Cross-cultural research: Trends and future directions, Journal of International Business Studies. 14(2), 17-28.

Nonaka, I. (1991). The knowledge-creating company, Harvard Business Review. 69(6), 96-104.

Offermann, R. and Hellmann, P.S. (1997). Culture's consequences for leadership behavior, Journal of Cross-Cultural Psychology. 28, 342-351.

O'Reilly, C.A. (1982). Variations in decision makers' use of information sources: The impact of quality and accessibility of information, Academy of Management Journal. 25, 756-771.

Payne, J.W., Braunstein, M.L. and Carroll, J.S. (1978). Exploring pre-decisional behavior: An alternative approach to decision research, Organizational Behavior and Human Performance. 22, 17-34.

Petrazzini, B. and Ure, J. (1997). Hong Kong's communication infrastructure: The evolving role of a regional information hub, in J.M. Burn and M.G. Martinsons (Eds.), Information technology and the challenge for Hong Kong. Hong Kong: Hong Kong University Press, 61-90.

Pettigrew, A.M. (1973). The politics of organisational decision making. London: Tavistock Institute.

Pettigrew, A.M. (1977). Strategy formulation as a political process, International Studies of Management and Organization. 7(2), 78-87.

Phillips, B. (1971). Social research: Strategy and tactics (2nd ed.), New York: Macmillan.

Porter, M.E. (1980). Competitive strategy: Techniques for analysing industries and competitors. New York: Free Press.

Porter, M.E. (1996). What is strategy, Harvard Business Review. 74(6), 61-78.

Porter, M.E. and Millar, V.E. (1985). How information gives you competitive advantage, Harvard Business Review. 63(4), 149-160.

Preble, J.F., Rau, P.A. and Reichel, A. (1988). The environmental scanning practices of U.S. multinationals in the late 1980s, Management International Review. 28(4), 4-14.

Quinn, J.B. (1980). <u>Strategies for change: logical incrementalism</u>. Homewood, IL: Irwin.

Ransom, H.H. (1964). Intelligence: political and military, <u>International Encyclopedia of the Social Sciences</u>. 7, London: Macmillan, 415-421.

Ransom, H.H. (1970). <u>The intelligence establishment</u>. Cambridge, MA: Harvard University Press.

Redding, S.G. (1980). Cognitions as a aspect of culture and its relation to management processes: an exploratory view of the Chinese case, <u>Journal of Management Studies</u>. 17, 127-148.

Redding, S.G. (1982). Cultural effects on the marketing process in Southeast Asia, <u>Journal of the Market Research Society</u>. 24, 98-114.

Redding, S.G. (1990). <u>The spirit of Chinese capitalism</u>. Berlin: DeGruyter.

Redding, S.G. (1992). Capitalist cooking lessons, <u>Asian Business</u>. 28(11), 50-52.

Redding, S.G. (1994). Competitive advantage in the context of Hong Kong, <u>Journal of Far Eastern Business</u>. 1(1), 71-89.

Rediker, K.J., Mitchell, T.R., Beach, L.R. and Beard, D.W. (1993). The effects of strong belief structures on information-processing evaluations and choice, <u>Journal of Behavioral Decision Making</u>. 6, 113-132.

Rhyne, L.C. (1985). The relationship of information usage characteristics to planning system sophistication: an empirical examination, <u>Strategic Management Journal</u>. 6, 319-337.

Ritzer, G. (1992). <u>The McDonalization of society</u>. London: Sage.

Rockart, J.F. and Treacy, M.E. (1982). The CEO goes on-line, <u>Harvard Business Review</u>. 60(1), 84-88.

Rohrbaugh, J. (1979). Improving the quality of group judgement: Social judgement analysis and the nominal group technique, <u>Organizational Behaviour and Human Performance</u>, 28(2), 272-288.

Rohrbaugh, J. (1983). Assessing the effectiveness of expert teams, in J.L. Mumpower, L.D. Philips, O. Renn, and V.R.R. Uppuluri (eds.) <u>Expert judgement and expert systems</u>, Berlin: Springer-Verlag.

Rollier, B. and Turner, J.A. (1994). Planning forward by thinking backward: Retrospective thinking in strategic

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decision making, <u>Decision Sciences</u>. 25, 169-188.

Ronen, S. and Shenkar, O. (1985). Clustering countries on attitudinal dimensions: A review and synthesis, <u>Academy of Management Review</u>, 10, 433-454.

Rouse, W.B. and Rouse, S.H. (1984). Human information seeking and design of information systems, <u>Information Processing and Management</u>. 20, 129-138.

Sammon, W.L. (1984). Strategic intelligence: An analytic resource for decision makers, in Sammon, W.L., Kurland, M.A. and Spitalnic, R. (Eds.), <u>Business competitor intelligence</u>. New York, Ronald Press, 21-38.

Sammon, W.L., Kurland, M.A. and Spitalnic, R. (Eds.) (1984). <u>Business competitor intelligence</u>. New York, Ronald Press.

Saporito, B. and Martin, J. (1994). The world's best cities for business, <u>Fortune</u>. 130(10), 14 November, 68-91.

Sawyerr, O. (1993). Environmental uncertainty and environmental scanning activities of Nigerian manufacturing executives: A comparative analysis, <u>Strategic Management Journal</u>. 14(4), 287-299.

Schein, E.H. (1985). <u>Organizational culture and leadership</u>. San Francisco: Jossey-Bass.

Schneider, S.C. (1988). Information overload: Causes and consequences, <u>Human Systems Management</u>. 7, 143-153.

Schneider, S.C. (1989). Strategy formulation: The impact of national culture, <u>Organization Studies</u>. 10(2), 149-168.

Schneider, S.C. and Barsoux, J.-L. (1997). <u>Managing cultural differences</u>. New York: Prentice-Hall.

Schneider, S.C. and DeMeyer, A. (1991). Interpreting and responding to strategic issues: The impact of national culture, <u>Strategic Management Journal</u>. 12, 307-320.

Schön, D. (1983). <u>The reflective practitioner: How professionals think in action</u>. New York: Basic Books.

Schwenk, C. (1984). Cognitive simplication processes in strategic decision making, <u>Strategic Management Journal</u>. 5, 111-128.

Seldon, A. and Pappworth, J. (1983). <u>By word of mouth: 'Elite' oral history</u>. New York: Methuen.

Sellitz, C., Wrightsman, L.S. and Cook, S.M. (1976). <u>Research Methods in Social Relations</u>. 3rd ed., New York: Holt, Rinehart & Winston.

Shackleton, V.J. and Ali, A.H. (1990). Work-related values of managers: A test of the Hofstede model, Journal of Cross-Cultural Psychology. 21, 109-118.

Shannon, C.E. and Weaver, W. (1949). The mathematical theory of communication. Chicago: University of Illinois Press.

Sharfman, M.P. and Dean, J.W. (1991). Conceptualizing and measuring the organizational environment: A multidimensional approach, Journal of Management. 17, 681-700.

Shenkar, O. and Ronen, S. (1987). Structure and importance of work goals among managers in the People's Republic of China, Academy of Management Journal. 30, 564-576.

Shrivastava, P. and Grant, J.H. (1985). Empirically derived models of strategic decision-making processes, Strategic Management Journal. 6, 97-111.

Simon, H.A. (1960). The new science of management decision. New York: Harper and Row.

Simon, H.A. (1976). Administrative behaviour: A study of decision-making processes in administrative organizations. 3rd edition, New York: Free Press.

Simpson, C.W. and Prusak, L. (1995). Troubles with information overload - moving from quantity to quality in information provision, International Journal of Information Management. 15, 413-426.

Sit, V.F.S. and Wong, S.L. (1989). Small and medium industries in an export-oriented economy: The case of Hong Kong. Centre of Asian Studies, University of Hong Kong.

Siu, W.S. and Martin, R.G. (1992). Successful entrepreneurship in Hong Kong, Long Range Planning. 25(6): 87-93.

Smeltzer, L.R., Fann, G.L. and Nikolaison, V.N. (1988). Environmental scanning practices in small businesses, Journal of Small Business Management. 26(3), 55-62.

Smircich, L. and Stubbart, C. (1985). Strategic management in an enacted world, Academy of Management Review. 10: 724-736.

Smith, G.F. (1992). Towards a theory of managerial problem solving, Decision Support Systems. 8, 29-40.

Smith, N.C. (1989). The case study: a vital yet misunderstood research method for management, in R. Mansfield (ed.), Frontiers of management. London: Routledge, 50-63.

Snell, R. (1996). Personal communication, 27 April.

Sprague, R.H. & Watson, H.J. (1996). Decision support for

management, Upper Saddle River, NJ: Prentice-Hall.

SRI International (1989). Building prosperity: a five-part
economic strategy for Hong Kong's future, Hong Kong: Hong Kong
Ecxonomic Survey.

Stabell, C. (1978). Integrative complexity of information
environment perception and information use: An empirical
investigation, Organizational Behavior and Human Performance,
22, 116-142.

Stacey, R.D. (1992). Managing the unknowable, San Francisco:
Jossey-Bass.

Stacey, R.D. (1993). Strategy as order emerging from chaos,
Long Range Planning, 26(1), 10-17.

Stamper, R. (1974). Information in business and
administrative systems, Chichester: Wiley.

Stanat, R. (1990). The intelligent corporation: Creating a
shared network for information and profit, New York: American
Management Association.

Stanley, C.D.D. (1985). Managing external issues: Theory and
practice, Greenwich, CT: JAI Press.

Starbuck, W.H. (1976). Organizations and their environments,
in M.D. Dunnette (Ed.), Handbook of Industrial and
Organizational Psychology, Chicago, Rand McNally, 1069-1123.

Steinbrunner, J.D. (1974). The cybernetic theory of decision,
Princeton, NJ: Princeton University Press.

Steiner, G. (1979/1989). Strategic planning: What every
manager should know, New York: Free Press.

Stewart, R. (1967). Managers and their jobs, London:
MacMillan.

Stubbart, C. (1982). Are environmental scanning units
effective?, Long Range Planning, 15(3), 139-145.

Subramanian, R., Fernandez, N. and Harper, E. (1993).
Environmental scanning in U.S. companies: Their nature and
their relationship to performance, Management International
Review, 33, 271-286.

Sung, Y.W. (1997). Hong Kong's integration with its
hinterland: A mixture of curses and blessings, Hong Kong
Centre for Economic Research Letters No. 47 (November), 2-7.

Sutcliffe, K.M. (1994). What executives notice: Accurate
percpetions in top management teams, Academy of Management
Journal, 37, 1360-1374.

Taylor, R.N. (1984). Behavioural decision making. London: Scott, Foresman and Company.

Terreberry, S. (1968). The evolution of organizational environments, Administrative Science Quarterly. 12, 590-613.

Thomas, J.B. and McDaniel, R.R. (1990). Interpreting strategic issues: Effects of strategy and the information-processing structure of top management teams, Academy of Management Journal. 33, 286-306.

Thomas, P.S. (1980). Environmental scanning: The state of the art, Long Range Planning. 13, 20-25.

Toffler, A. (1980). The third wave. London: Pan Books.

Triandis, H.C. (1972). The analysis of subjective culture. New York: Wiley-Interscience.

Tricker, R.I. (1988). Information resource management - a cross-cultural perspective, Information & Management. 15, 37-46.

Tricker, R.I. (1989). The management accountant as strategist, Management Accounting. 67(11), 26-28.

Tricker, R.I. (1993). Harnessing information power. Hong Kong: Hong Kong University Press.

Tricker, R.I. (1994). The board's role in strategy formulation: Some cross-cultural comparisons, Futures. 26, 403-415.

Tu, W.M. (1996). Confucian traditions in East Asian modernity. Cambridge, MA: Harvard University Press.

Tversky, A. and Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases, Science. 185, 1124-1131.

Tversky, A. and Kahneman, D. (1981). The framing of decisions and the psychology of choice, Psychological Review. 95, 371-384.

Tye, E.M.W.N. and Chau, P.Y.K. (1997). The use of information technology: Practices and problems, in J.M. Burn and M.G. Martinsons (Eds.), Information technology and the challenge for Hong Kong. Hong Kong: Hong Kong University Press, 121-140.

Ventura, A. (1988). Social intelligence: Prerequisite for the management of science and technology. In J. Annerstedt and A. Janison (Eds.) From research policy to social intelligence. Basingstoke, UK: Macmillan, 163-172.

Visudtibhan, K. (1989). Strategic focus and strategic intelligence systems in multinational corporations. unpublished Ph.D. dissertation, University of Pennsylvania.

Wack, P. (1985). Scenarios: Uncharted waters ahead, Harvard Business Review, 63(5), 72-89.

Wang, G. (1991). China and the overseas Chinese. Singapore: Times Academic Press.

Warrington, M.B. (1982). Will Hong Kong's entrepreneurs move to planning?, Long Range Planning, 15(3), 168-175.

Waterman, R. (1988). The renewal factor. London: Bantam Books.

Watson, H.J. (1995). International aspects of executive information systems, Journal of Global Information Management, 3(2), 3.

Watson, H.J., O'Hara, M.T., Harp, C.G. and Kelly, G.G. (1996). Including soft information in EISs, Information Systems Management, 13(3), 66-77.

Watson, H.J., Rainer, K. Jr. and Koh, C.E. (1991). Executive information systems, MIS Quarterly, 15, 13-20.

Watson, R.T. and Brancheau, J.C. (1991). Key issues in information systems management: an international perspective, Information & Management, 20, 213-223.

Watson, S.R. and Buede, D.M. (1987). Decision synthesis. Cambridge: Cambridge University Press.

Webber, R.A. (1969). Culture and management: Text and readings in comparative management. Homewood, IL: Irwin.

Weber, M. (1930/1985). The Protestant ethic and the spirit of capitalism (trans. T. Parsons), London: Allen & Unwin.

Weber, M. (1951). The religion of China. New York: Free Press.

Weick, K.E. (1969/1979). The social psychology of organizing (2nd ed.), New York: Random House.

Weick, K.E. (1985). Cosmos versus chaos: sense and non-sense in electronic contexts, Organizational Dynamics, Autumn, 50-65.

Weick, K.E (1994). Sensemaking in organizations. London: Sage.

Wensley, R. (1979). The effective strategic analyst, Journal of Management Studies, 16: 283-293.

Werther, W.B. (1996). Towards global convergence, Business Horizons, 39(1), 3-9.

Westwood, R.I. (1997). Harmony and patriarchy: The cultural

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basis for `paternalistic headship' among the overseas Chinese, <u>Organization Studies</u>. 18, 445-480.

Westwood, R.I. and Posner, B.Z. (1997). Managerial values across cultures: Australia, Hong Kong and the United States, <u>Asia-Pacific Journal of Management</u>. 14, 31-66.

White, D.A. (1986). Information use and needs in manufacturing organizations: Organizational factors in information behaviour, <u>International Journal of Information Management</u>. 6, 153-170.

Whitley, R.D. (1991). Eastern Asian enterprise structures and the comparative analysis of forms of business organization, <u>Organization Studies</u>. 11(1), 47-74.

Whittington, R. (1988). Environmental structure and theories of strategic choice, <u>Journal of Management Studies</u>. 25, 521-536.

Whittington, R. (1996). Strategy as practice, <u>Long Range Planning</u>. 29, 731-735.

Wilson, I. (1994). Strategic planning isn't dead - It changed, <u>Long Range Planning</u>. 27(4), 12-24.

Wong, S.L. (1988). <u>Emigrant entrepreneurs: Shanghai industrialists in Hong Kong</u>. Hong Kong: Oxford University Press.

Yasai-Ardekani, M. (1986). Structural adaptations to the environment, <u>Academy of Management Review</u>. 11, 9-21.

Yeung, H.W. (1995). Qualitative personal interviews in international business research: Some lessons from a study of Hong Kong transnational corporations, <u>International Business Review</u>, 4, 313-339.

Yeung, J.K.W., Foster, M.J. and Ogunmokun, G.O. (1995a). Is the microcomputer a `pencil' or a decision support tool in Hong Kong?, <u>Hong Kong Manager</u>. 31(1), 14-19.

Yeung, J.K.W., Foster, M.J. and Ogunmokun, G.O. (1995b). Market information needs and IT usage among very small businesses in Hong Kong, <u>Journal of Management Systems</u>. 7(1), 45-58.

Yin, R.K. (1984/1994). <u>Case study research: Design and methods</u>. 2nd ed., Beverly Hills, CA, Sage.

Zhang, B.X. and Angell, I.O. (1989). <u>Decision support systems in China: A clash of cultures</u>. London School of Economics and Political Science, Department of Information Systems Working Paper 6.

HONG KONG INDUSTRY PROFILES

A.1 The Securities Industry

The services sector has become a progressively more important part of the Hong Kong economy in recent decades. It accounted for less than 60 per cent of economic output in 1970, but had risen to over 80 per cent by 1996 (Hong Kong Government, 1997). Financial services (including insurance and real estate) has been a particularly vibrant sub-sector. It grew at an average annual rate of more than 20 percent in the decade from 1986, and accounted for more than one-quarter of Hong Kong's total GDP in 1996 (Government Information Centre, 1997).

Hong Kong became a major international financial centre by capitalizing on its modern infrastructure, English and Chinese language capabilities, liberal economic policies, and a favourable location near the geographic centre of the Asian continent. It now has an integrated network of financial institutions and markets that provide a wide range of products and services to both local and international clients. Meanwhile, the corporate cathedrals around Victoria Harbour now attest to the role of financial services as the lifeblood of the Hong Kong economy.

The Hong Kong Government has been generally lauded for creating a favourable environment for the financial services industry, with adequate regulation to help ensure systemic confidence and sound business practices while avoiding excess impediments of either a bureaucratic or fiscal nature. For example, it has worked closely with the industry to develop and implement a real-time interbank payment system in Hong Kong that has raised transactions efficiency while reducing settlement risks.

Hong Kong differs from paper centres in the Bahamas and the Caymans, which are merely convenient for book-keeping and tax-avoidance. Hong Kong is a *functional* centre that generates

enormous turnover and employs nearly two hundred and fifty thousand people. In contrast to Tokyo and Singapore, it is also fully integrated, with no artificial barriers between onshore and offshore markets.

Over 400 authorized institutions from nearly 50 different countries conducted business under the Banking Ordinance in 1996 (Howlett, 1997). The absence of currency exchange controls coupled with the presence of a leading-edge telecommunications infrastructure have helped to make Hong Kong one of the most active foreign currency markets, and one of the few with around the clock trading.

A focus of this study was on the securities industry within the financial services sector. Less than three decades ago, Hong Kong had a small and parochial stock market, with trading largely confined to the equity shares of British firms and local utilities. During the 1970s, massive commercial and residential property developments required equally massive financing. This prompted a flurry of initial public offerings by local firms and led to a rapid expansion of the financial markets in Hong Kong.

After weaknesses in those markets and their regulation were exposed by the global crash of October 1987, the Hong Kong Government established the Securities and Futures Commission (SFC) as an oversight body in 1989. Within the next two years, two new ordinances were also enacted, to address insider trading and the disclosure of interest. Taken together, these government initiatives have improved the transparency and credibility of the financial marketplace in Hong Kong.

Nevertheless, the high volatility of regional and global market sentiment as well as periodic regulatory changes remain as major concerns for the broadly-defined securities industry, which consisted of about 2,900 firms employing 37,000 people (Hong Kong Government, 1997).

The listing of shares by state enterprises from the People's Republic of China represented an exciting new development for the securities industry. With mainland China looking to the Hong Kong marketplace for capital to power its economic reforms, the so-called "H" shares and red-chips created a lot of international publicity and contributed to a substantial growth in Hong Kong share trading volumes.

The unified Hong Kong Stock Exchange, established in 1981, is now instrumental in financing the economic development of the PRC. Hong Kong attracts many international investors and foreign financial service providers, but only members of the Stock Exchange of Hong Kong Limited (SEHK) and the Hong Kong Futures Exchange Limited (HKFE) are permitted to trade on the local stock and futures exchanges, respectively. At the end of 1996, the stock exchange had 563 corporate and individual members while the futures exchange had 134 members (Howlett, 1997). By the end of 1996, it ranked eighth in the world and second in Asia (behind Tokyo), with a total market capitalization of about HK $ 3,500 billion (or 280 billion British pounds) (see Howlett, 1997).

A Securities Ordinance has been in place since 1974 to regulate the securities industry. This ordinance provides for the investigation of suspected malpractice in securities transactions and the maintenance of a fund to compensate clients of defaulting brokers. Under this ordinance, dealers in securities, investment advisors, and commodity dealers must register with the Securities and Futures Commission (SFC). At the end of 1996, 17,892 persons and 715 corporate securities dealers (including 291 from overseas) were registered with the SFC (Howlett, 1997). This represented a rapid rate of growth from less than 8,495 persons and 271 corporate dealers (143 from overseas) in 1991 (Roberts, 1992). The case studies reported here focus on the chief executives heading two of the 424 local corporate securities traders in Hong Kong.

A.2 The Printing Industry

Small family enterprises, with strong imitative capabilities and competitive cost structures, have been the norm in the industrial sector of the Hong Kong economy (Sit & Wong, 1989; Wong, 1988). Even in 1997, less than 1,000 manufacturing establishments in Hong Kong had more than 50 employees. Meanwhile, extensive sub-contracting networks promote production flexibility in response to changing marklet demands and serve as incubators for product extension and diversification (Redding, 1990; Sit & Wong, 1989). Furthermore, the relocation of labour-intensive production to mainland China and a move towards higher technology and higher value-added activities have been major recent trends among Hong Kong manufacturers. These general characteristics also fit the printing industry in Hong Kong.

Hong Kong produces different types of printed matter, including books, brochures, pamphlets and leaflets, and paper and paperboard labels that are used for packaging. Other product categories include advertising materials, commercial catalogues, calendars, postcards and greeting cards. Hong Kong is also a well-known centre for printing newspapers, journals and periodicals.

There were about 4,900 printing establishments at the end of 1996, but only 157 of these establishments employed more than 50 people, and only about 20 firms had more than 250 workers (Hong Kong Census and Statistics, 1997). Total industry employment was about 46,000 people (or just under 15 percent of all manufacturing workers in Hong Kong), making it the second largest employer in the manufacturing sector by early 1997, behind clothing, but well ahead of electronics (Howlett, 1997).

Gross output by the printing industry was valued at HK$ 24.4 billion (or nearly 2 billion British pounds) in 1996, with value-added totalling nearly HK$10 billion (or nearly 800 million British pounds). Although the role of manufacturing in the Hong Kong has declined significantly since the 1970s, the printing

industry has experienced healthy growth, at a compound annual rate of about 17 percent from 1986 to 1996.

In contrast to many industries in Hong Kong, which exported the majority of their products, almost 80 percent of printing industry outputs were sold to local customers. The United States, China, the United Kingdom, and Japan had been the major foreign markets in recent years. Direct overseas buying by principals is rare, and direct marketing through the company's own channels was relatively insignificant. Most exports were attributable to orders received directly from overseas countries. About 25% of the export orders came from major publishers with Hong Kong operations, such as Oxford University Press, Longman and Macmillan. Exports were handled primarily by a few large printing firms that have established business relationships with overseas customers.

The printing industry could be broadly divided into three segments: 1) job printing, 2) periodicals printing, and 3) pre- and post-press services. The number of estbalishments and employees in each segment are shown in **Table A.1**.

Table A.1
Establishments and Employment in the Printing Industry
(1997 Hong Kong Government estimates)

	Number of establishments	Total employees	Employees per establishment
Job printing	3,650	28,000	7.7
Periodicals printing	50	9,000	180
Pre- and post-press operations	1,200	9,000	7.5
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Total	**4,900**	**46,000**	**9.4**

Job printing is the largest segment of the printing industry,

accounting for almost 80 per cent of the total number of establishments. This sector is dominated by a few large players and a large numbers of small manufacturers. The small job printers are primarily engaged in the printing of posters, name cards, invitation cards, pamphlets, catalogues, and office paper stationery for local consumption.

The larger printers are more export-oriented, printing everything from books, pamphlets, diaries, periodicals, greeting cards and securities products (such as cheques, credit cards and share certificates), to packaging/printing materials for other manufacturing industries. In contrast, the smaller firms tend to rely on orders from individuals and small businesses in Hong Kong and southern China. As such, they are highly dependent on the general health of the local economy.

Periodicals printing accounts for less than two percent of the total number of printing establishments but over 20% of the total employment. Hong Kong enjoys a relatively high degree of press freedom that has led many international publishing houses (especially those involved in publishing news magazines and journals) to set up their regional centres here. Several major international magazines (e.g. *Readers' Digest*, *The Economist*, and *Newsweek*) and regional magazines (e.g. *Far East Economic Review*, *Asia Week*, and *Asian Business*) are printed in Hong Kong.

Establishments in publishing services are engaged in typesetting, colour separation, plate-making, lamination and book binding. Like job printing factories, these factories are generally quite small, mainly providing support services to local printers. Some, like the reproduction houses, also deal directly with overseas publishers and printers. Given Hong Kong's excellent telecommunication facilities, publishers are able to access information quickly from various parts of the world. This advantage is of vital importance to time-sensitive publications.

Increased demand for securities products has also fuelled the

boom of the printing industry. Industry sources estimated that annual growth of the sector averaged 30 per cent in the last few years. Hong Kong has become the East Asian centre of security printing due to its ability to meet high quality requirements.

The printing industry in Hong Kong is renowned for its quality, quick delivery, competitive pricing, and ability to cope with short-run printing jobs. Local printing firms have combined extensive sub-contracting networks with assorted technologies to achieve flexible production capbilities and superior service to niche markets. The industry has made a steady stream of capital investments to upgrade its technology. Its advanced machinery and equipment have led to expanded production capacity and improved quality standards. Many printing firms use advanced models of lasersetters, electronic colour scanners, electronic page-composing systems, automatic finishing systems and automatic printing machines. Large printers such as Toppan, Dai Nippon, Kyodo and Empire reportedly use the best equipment available.

Labour shortages and rising production costs have hampered industrial development since the 1980s and forced many firms to move their operations out of Hong Kong. Most of these relocations have been to Guangdong Province in mainland China, where land and especially labour costs are much lower. Both large and small printing firms have participated in this migration. Their tendency to keep administrative and marketing activities in Hong Kong has created the challenge of managing remote operations. Some small- and medium-sized firms in the industry have been grouping together in order to offer a complete range of publishing and printing services, and thereby improve their competitiveness.

Internal R&D within the industry remains extremely limited, with even modified production processes being imitated from overseas rather than innovated. Rivalry is intense and stems mainly from the large number of industry participants. The primary bases for competition are cost and responsiveness. There is a growing need

for low-cost labour, because the comparatively simple and standardized nature of the production technology means that competition can come from anywhere in the region, or anywhere in the world.

Detailed data on both potential customers and production technologies are available from the Trade Development Council (TDC) and the Department of Industry. Private sources, such as Trade Media Ltd., also publish an assortment of specialized buying guides. Some buying agencies also act as information hubs. The openness of Hong Kong to information about externally available production machinery, and the ease with which it can be imported, makes it difficult to sustain an advantage through either cost or the functionality of production technology.

The vast majority of printing firms registered in Hong Kong are locally owned, and about 90 per cent are owner-managed. Foreign investment in the industry amounted to almost HK$ 2.5 billion (or over 200 million British pounds) in 1995. Japan was the primary source of that foreign investment (accounting for around 59 per cent of the total), followed by the United States, Singapore, and the United Kingdom.

A.3 Newspapers and Universities

In addition to the two surveyed industries (securities and printing), newspaper publishers and universities were considered to be fertile settings for studying information seeking by CEOs. Information and IT play vital roles in these two industries (Picard, 1997; Samaddara, 1994). Cynics might suggest that much of the information flowing in and around universities is irrelevant to everyday life while that provided by newspapers is highly dispensable. However, a general contrast may also be drawn between the general characteristics of information in the two business environments: sophisticated and objective for universities versus sensationalistic and opinionated in newspapers.

Universities strive for rigorous data collection and analysis, and thereby tend to advance and disseminate accumulated knowledge. Meanwhile, newspapers gather data about very recent events and provide it to consumers in the form of easy-to-read descriptive accounts. However, it can not be denied that both universities and newspapers depend critically on information. They would not exist with it.

In line with their information-intensive activities, both newspaper firms and universities depend critically upon 1) the basic freedom of enquiry, whether journalistic and academic, and 2) the freedom to disseminate the results of those enquiries, irrespective of their consistency with the values and ideologies of political authorities. As a result, the top managers of both newspaper publishers and universities in Hong Kong may have reasons for concern about an impending transfer of sovereignty to an authoritarian regime that rules over a comparatively closed society in mainland China.

A.3.1 The Chinese Language Newspaper Industry

Timely information is a necessity in the newspaper industry. Daily newspaper companies need to design, manufacture and distribute a new product every 24 hours. There are few other

industries where this sort of pressure recurs on a daily basis.

At the time of the study, there were 19 daily newspapers in Hong Kong. Sixteen of these were published in the Chinese language and the remaining three in English. The Chinese language newspapers were: Apple Daily (AD), Express News (EN), Hong Kong Commercial Daily (HKCD), Hong Kong Daily News (HKDN), Hong Kong Economic Journal (HKEJ), Hong Kong Economic Times (HKET), Hong Kong People's Daily (HKPD), Mad Dog Daily (MDD), Ming Pao (MP), Oriental Daily News (ODN), Sing Pao Daily News (SPDN), Sing Tao Daily (STD), Ta Kung Pao (TKP), The World Daily News (TWDN), Tin Tin Daily News (TTDN), and Wen Wei Po (WWP). The English language newspapers were: the Eastern Express (EE), the Hong Kong Standard (HKS), and the South China Morning Post (SCMP).

The newspaper industry in Hong Kong had a loose oligopoly structure, with substantial product differentiation and relatively low barriers to entry, but the market is dominated by a few firms. The Chinese language newspapers in Hong Kong may be divided into two groups, based on their target market. The ODN, AD, SPD, HKDN, and TTDN were among those serving the mass market. On the other hand, MP, HKEJ, and HKET were aimed at specific market segments. MP was directly aimed at the educated middle class while the latter two specialized in local financial news and analysis.

Technological change and competition with other media have become global issues for the newspaper industry (see Picard, 1997). However, this study came at a time when the impending transfer of sovereignty represented an unprecedented challenge for Hong Kong newspaper firms. Amidst the political and economic uncertainty that were expected to accompany this environmental discontinuity, their distinctive concerns could be expected to include the prospects for both the editorial freedom of the press and the stream of advertising income after the handover.

The total size of the Hong Kong newspaper market had been slowly

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declining since the late 1980s. The interviews with two newspaper chief executives suggested that three factors - real price increases, reduced product differentiation, and the emergence of substitute products - were behind this trend. Each is briefly outlined in the paragraphs that follow.

The costs for newspapers may be divided into production and distribution. The distribution costs in the industry had been quite constant in real times for the past decade. By 1996, they totalled about HK$ 2 per copy, with about HK$ 0.50 going to the distribution agent and HK$ 1.50 to the newsstand vendor. Despite this stability in distribution costs, sharply rising costs of material inputs and human resources created tough times for most Hong Kong newspaper firms.

Production costs had outpaced inflation throughout the early 1990s. There was upward pressure on wage rates for editors, reporters and semi-skilled production workers. Meanwhile, the price of newsprint was rising rapidly. Even worse, it was in scarce supply as a result of strong market growth through the region. Newspaper publishers in Hong Kong had to pay nearly US $1,000 per tonne by late 1995. This was some US $150-200 more than the price in Europe and North America, and nearly three-fold increase on the price in the Hong Kong market the start of 1992.

At the same time, people in Hong Kong were becoming more selective in buying their daily newspapers. One of the CEOs estimated that between 15 and 20 percent of the adult population in Hong Kong read more than one paper in the mid 1980s, but that figure had declined to less than 5 percent. This was attributed largely to a faster pace of life and the increasing availability of timely and low-cost substitutes. News through the Internet and other electronic channels that is free or offered at a nominal subscription cost has undoubtedly hurt the newspaper industry. However, the CEO also mentioned that journalists from different newspapers were increasingly sharing information amongst themselves or relying on news wire services. This had

reduced content differentiation in the newspaper industry.

One of the industry's few opportunities for growth and potential differentiation came from the increasing demand for fast, accurate and comprehensive financial information and analysis. With the rising level of prosperity in Hong Kong, and the prospects to make quick money in the stock and property markets, such information was attractive to more and more people.

A.3.2 Higher Education

The Hong Kong Government identified the improvement of 'soft infrastructure' as a major policy aim for the last decade of colonial role. Consistent with this aim, the higher education system was rapidly transformed from an elitist model to a mass model in order to produce the professionals and technologists that are required by a rapidly-developing socio-economy. From 1988 to 1995, the first year, first degree places in Hong Kong rose from about 7 per cent of the 18-year old population in Hong Kong to over 18 per cent of that population.

A wide variety of public and private institutions now provide higher education in Hong Kong. Secondary school graduates may obtain initial qualifications from a number of universities and colleges funded indirectly by the government through the University Grants Committee (UGC) and the Vocational Training Council (VTC). These institutions are heavily subsidised by the taxpayer. Most offer a wide range of disciplines, but two (the Hong Kong Academy for Performing Arts and the Hong Kong Institute of Education) specialise in limited areas. Three privately-operated local colleges also provide full-time degree programmes.

Part-time programmes, typically taken by those already in employment, are offered by the Open Learning Institute, the Hong Kong Management Association, and many overseas institutions. While full-time postgraduate programmes are restricted to the UGC institutions, part-time provision is more widespread. A large and growing demand for continuing and professional education

(CPE) is satisfied by UGC and VTC institutions, private colleges as well as partly by trade associations and employers in-house.

In 1996-1997, there were about 140,000 full time equivalent (FTE) students of higher education in Hong Kong, of which the largest components were 70,000 in the UGC institutions and 30,000 taking CPE courses. Higher education in Hong Kong has absorbed about six percent of recurrent public expenditure in recent years, and employed nearly 18,000 workers at the end of 1996, including over 5,000 teaching and research staff. About one-third of the academic staff were "home grown" in that they received their higher education in Hong Kong. Little change in these student and staff numbers is foreseen over the next few years.

In addition to the expansion of opportunity within the UGC and VTC institutions, there had also been a substantial increase in private sector provision. Business and computing courses provided by overseas institutions, usually in collaboration with local partners, had been particularly popular. In essense, the universities in Hong Kong have gradually moved towards government-supervised, market-based competition.

The recent expansion of higher education in Hong Kong has raised concerns about the quality of both processes and outputs. In response, the UGC had initiated periodic research assessment exercises as well as teaching and learning quality process reviews. News structures and systems at the university level and audits that are conducted in collaboration with outside parties were introduced to helped assure quality.

The average A-level score of entrants to first degree courses declined slightly from 1988 to 1996. The UGC institutions also remained weak in terms of their limited numbers of overseas students, their lack of student residences, and a declining level of English language competence among their incoming students (and even some worries about Chinese proficiency, e.g. Putonghua).

A-13

In contrast, emerging factors such as increasingly attractive compensation packages and a growing research culture enabled appointments that upgraded the university faculties in Hong Kong to a level "that is comparable to those in the world's leading intellectual centres such as Boston, London and Paris" (Eastern Express, 1996). The remarkable growth in research activity has also been helped by increased funding from both government and industry, which amounted to HK$ 700 million (or over 55 million British pounds) in 1996, and the creation of a high-powered Research Grants Council. Whether the vibrant research culture is maintained and world-class scholars remain in Hong Kong after the handover may depend largely on the nature of university relations with the new government and other funding sources.

To sum up, the teaching side of the university system may be said to have survived the rapid expansion process while the research component has undeniably thrived. In advance of the handover, there were adequate levels of high-quality faculty and facilities to meet the demand for higher education in Hong Kong. A diverse and flexible higher education system was addressing the needs for both initial qualifications and life-long personal and professional development.

Each university in Hong Kong has a governance structure that includes an overall governing body (variously called the Court, the Council, or the Board of Governors) and a body to regulate academic affairs (called the Senate or the Academic Board). The governing body, headed by a government-appointed Chancellor or Chairman, periodically selects the chief executive for the university, who has the title of Vice-Chancellor or President.

As identified in the interviews conducted with two of these chief executives, the universities faced a wide range of strategic issues. In many ways, these issues were more complex than many of the ones mentioned by private sector chief executives because of the interplay between market and political forces.

A-14

Please circle the number that best indicates your response e.g.   1   ②   3   4   5

| Section A: Perception of the Environment |

A1   How **important** to your organization are trends and events in each environmental sector?

The external environment may be divided into 6 sectors defined below.

	Environmental sector	Not important	Fairly unimportant	Of some importance	Fairly important	Very important
(1)	**Customer sector:** companies or individual that use your service/ purchase your products	1	2	3	4	5
(2)	**Competition sector:** companies that make substitute service/ products, which compete with your own, and their competitive tactics.	1	2	3	4	5
(3)	**Technological sector:** development of new information technologies, production techniques, innovation and R&D trends to your company.	1	2	3	4	5
(4)	**Legal & political sector:** legislation and regulations, government policies, and political developments.	1	2	3	4	5
(5)	**Economic sector:** economic factors such as inflation, interest rates, unemployment, and economic growth.	1	2	3	4	5
(6)	**Sociocultural sector:** demographic trends, social attitudes and values in the general population.	1	2	3	4	5

A2   What is the **rate of change** taking place in each environmental sector?

Rate of change is the extent to which agencies, issues, trends, problems, or opportunities change over time in your company's external environment.

A *low rate of change* means things stay about the same from year to year.
A *high rate of change* means things change quickly and unpredictably from year to year.

	Environmental sector	Low	Fairly low	Medium	Fairly high	High
(1)	Customer sector	1	2	3	4	5
(2)	Competition sector	1	2	3	4	5
(3)	Technological sector	1	2	3	4	5
(4)	Legal & political sector	1	2	3	4	5
(5)	Economic sector	1	2	3	4	5
(6)	Sociocultural sector	1	2	3	4	5

A3   What is the **level of complexity** of each environmental sector?

A complex sector has a large number of diverse factors that need to be taken into account in decision making. There are many organizational and individual players with complex relationships, so that cause and effect links cannot always be established.

	Environmental sector	Low	Fairly low	Medium	Fairly high	High
(1)	Customer sector	1	2	3	4	5
(2)	Competition sector	1	2	3	4	5
(3)	Technological sector	1	2	3	4	5
(4)	Legal & political sector	1	2	3	4	5
(5)	Economic sector	1	2	3	4	5
(6)	Sociocultural sector	1	2	3	4	5

Section B: Perception of Information Sources

B1 How **frequently** do you use each of the following information sources to **scan** the environment?

	Information source	Never	Less than once a year	Few times a year	At least once a month	At least once a week	At least once a day
1.	Customers	1	2	3	4	5	6
2.	Competitors	1	2	3	4	5	6
3.	Business/ professional associates	1	2	3	4	5	6
4.	Friends, family	1	2	3	4	5	6
5.	Public media[2]	1	2	3	4	5	6
6.	Government publications	1	2	3	4	5	6
7.	Industry, trade associations	1	2	3	4	5	6
8.	Superiors	1	2	3	4	5	6
9.	Subordinates	1	2	3	4	5	6
10.	Internal documents[3]	1	2	3	4	5	6
11.	Electronic information services[4]	1	2	3	4	5	6

Other sources that you use:

		Never	Less than once a year	Few times a year	At least once a month	At least once a week	At least once a day
12.	_____	1	2	3	4	5	6
13.	_____	1	2	3	4	5	6

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[1] Suppliers, distributors, bankers, lawyers, accountants, consultants, etc.
[2] Newspapers, periodicals, radio, TV, etc.
[3] Memoranda, circulars, reports, studies, etc.
[4] On-line databases, electronic news bulletin boards, etc.

B2   How **relevant** is the information from each source about the environment?

Relevant information is information that is needed and useful with respect to the goals and activities of your company.

	Information source	Very irrelevant	Fairly irrelevant	Of some relevance	Fairly relevant	Very relevant
1.	Customers	1	2	3	4	5
2.	Competitors	1	2	3	4	5
3.	Business/ professional associates[5]	1	2	3	4	5
4.	Friends, family	1	2	3	4	5
5.	Public media[6]	1	2	3	4	5
6.	Government publications	1	2	3	4	5
7.	Industry, trade associations	1	2	3	4	5
8.	Superiors	1	2	3	4	5
9.	Subordinates	1	2	3	4	5
10.	Internal documents[7]	1	2	3	4	5
11.	Electronic information services[8]	1	2	3	4	5

Other sources that you use:

		Very irrelevant	Fairly irrelevant	Of some relevance	Fairly relevant	Very relevant
12.	_____	1	2	3	4	5
13.	_____	1	2	3	4	5

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[5]   Suppliers, distributors, bankers, lawyers, accountants, consultants, etc.
[6]   Newspapers, periodicals, radio, TV, etc.
[7]   Memoranda, circulars, reports, studies, etc.
[8]   On-line databases, electronic news bulletin boards, etc.

B3 How **reliable** is the information from each source about the environment?

Information is reliable when it is authoritative and dependable. It is information that you personally trust.

	Information source	Very unreliable	Fairly unreliable	Reliable to some extent	Fairly reliable	Very reliable
1.	Customers	1	2	3	4	5
2.	Competitors	1	2	3	4	5
3.	Business/ professional associates[9]	1	2	3	4	5
4.	Friends, family	1	2	3	4	5
5.	Public media[10]	1	2	3	4	5
6.	Government publications	1	2	3	4	5
7.	Industry, trade associations	1	2	3	4	5
8.	Superiors	1	2	3	4	5
9.	Subordinates	1	2	3	4	5
10.	Internal documents[11]	1	2	3	4	5
11.	Electronic information services[12]	1	2	3	4	5

Other sources that you use:

		Very unreliable	Fairly unreliable	Reliable to some extent	Fairly reliable	Very reliable
12.	_____	1	2	3	4	5
13.	_____	1	2	3	4	5

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[9] Suppliers, distributors, bankers, lawyers, accountants, etc.
[10] Newspapers, periodicals, radio, TV, etc.
[11] Memoranda, circulars, reports, studies, etc.
[12] On-line databases, electronic news bulletin boards, etc.

B4 How much of your **time and effort** is needed to approach, contact, or locate each information source?

	Information source	Very great deal	Great deal	some	Little	Very Little
1.	Customers	1	2	3	4	5
2.	Competitors	1	2	3	4	5
3.	Business/ professional associates [13]	1	2	3	4	5
4.	Friends, family	1	2	3	4	5
5.	Public media [14]	1	2	3	4	5
6.	Government publications	1	2	3	4	5
7.	Industry, trade associations	1	2	3	4	5
8.	Superiors	1	2	3	4	5
9.	Subordinates	1	2	3	4	5
10.	Internal documents [15]	1	2	3	4	5
11.	Electronic information services [16]	1	2	3	4	5

Other sources that you use:

		Very great deal	Great deal	some	Little	Very Little
12.	_____	1	2	3	4	5
13.	_____	1	2	3	4	5

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[13] Suppliers, distributors, bankers, lawyers, accountants, consultants, etc.
[14] Newspapers, periodicals, radio, TV, etc.
[15] Memoranda, circulars, reports, studies, etc.
[16] On-line databases, electronic news bulletin boards, etc.

B5 After contacting or locating the source, **how easy** is it to get the desired information from that source?

	Information source	Very hard	Fairly hard	Neither easy nor hard	Fairly easy	Very easy
1.	Customers	1	2	3	4	5
2.	Competitors	1	2	3	4	5
3.	Business/ professional associates[17]	1	2	3	4	5
4.	Friends, family	1	2	3	4	5
5.	Public media[18]	1	2	3	4	5
6.	Government publications	1	2	3	4	5
7.	Industry, trade associations	1	2	3	4	5
8.	Superiors	1	2	3	4	5
9.	Ssubordinates	1	2	3	4	5
10.	Internal documents[19]	1	2	3	4	5
11.	Electronic information services[20]	1	2	3	4	5

Other sources that you use:

12.	_____	1	2	3	4	5
13.	_____	1	2	3	4	5

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[17] Suppliers, distributors, bankers, lawyers, accountants, consultants, etc.
[18] Newspapers, periodicals, radio, TV, etc.
[19] Memoranda, circulars, reports, studies, etc.
[20] On-line databases, electronic news bulletin boards, etc.

| Section C: Amount of Scanning |

C1 How **frequently** does information about each environmental sector **come to your attention**?

Environmental sector	Less than once a year	Few times a year	At least once a month	At least once a week	At least once a day
(1) Customer sector	1	2	3	4	5
(2) Competition sector	1	2	3	4	5
(3) Technological sector	1	2	3	4	5
(4) Legal & political sector	1	2	3	4	5
(5) Economic sector	1	2	3	4	5
(6) Sociocultural sector	1	2	3	4	5

C2 To what extent do you **keep yourself informed about developments** in each environmental sector?

	I generally do not try to keep myself informed about this sector	I try to be informed about the existence of major events and trends in this sector	I try to be informed about the details of major events and trends in this sector	I try to be informed about most events and trends in this sector	I try to know everything about this sector
(1) Customer sector	1	2	3	4	5
(2) Competition sector	1	2	3	4	5
(3) Technological sector	1	2	3	4	5
(4) Legal & political sector	1	2	3	4	5
(5) Economic sector	1	2	3	4	5
(6) Sociocultural sector	1	2	3	4	5

C3 How many hours do you work in a typical day, including working at home?____hrs

In a typical working day, how many hours do you spend scanning?   ____hrs

Section D : Use of Information

D1 How **frequently** do you use **information** about the environment in your decision making activities?

How frequently do you use information about the external environment, when you...

		Never	Seldom	Sometimes	Often	Always
1.	decide on **improvement project** such as going into new businesses, organizational restructuring, acquisitions, public relations programs, computerization projects, etc.?	1	2	3	4	5
2.	decide about **resource allocation**, including budget allocation, employment of resources, setting of targets, distribution of work, and so forth?	1	2	3	4	5
3.	decide how to handle unexpected but important **events**, such as loss of a major customer or supplier, conflicts with another organization, cutting off of key resources, etc.?	1	2	3	4	5
4.	decide during **negotiations** with external organizations or individuals, about your company's position on, for example, the commitment of resources, or agreement on contracts?	1	2	3	4	5

D2   How **frequently** do you use information about the environment from each **source** in your decision making?

	Information source	Never	Seldom	Sometimes	Often	Always
1.	Customers	1	2	3	4	5
2.	Competitors	1	2	3	4	5
3.	Business/ professional associates[21]	1	2	3	4	5
4.	Friends, family	1	2	3	4	5
5.	Public media[22]	1	2	3	4	5
6.	Government publications	1	2	3	4	5
7.	Industry, trade associations	1	2	3	4	5
8.	Superiors	1	2	3	4	5
9.	Subordinates	1	2	3	4	5
10.	Internal documents[23]	1	2	3	4	5
11.	Electronic information services[24]	1	2	3	4	5

Other sources that you use:

		Never	Seldom	Sometimes	Often	Always
12.	_____	1	2	3	4	5
13.	_____	1	2	3	4	5

---

[21]   Suppliers, distributors, bankers, lawyers, accountants, consultants, etc.
[22]   Newspapers, periodicals, radio, TV, etc.
[23]   Memoranda, circulars, reports, studies, etc.
[24]   On-line databases, electronic news bulletin boards, etc.

Section E: Background information

Please tell us about yourself and your company: (We will preserve the confidentiality of all data)

E1   What is your age? (Please tick one box)

Below 25 ☐   25 - 34 ☐   35 - 44 ☐   45 - 54 ☐   55 - 64 ☐   Above 64 ☐

E2   How many years have you been owner/ manager of this company?   _____years

In total, how many years have you been with this company?   _____years

E3   What is your highest level of schooling you have attained? (Please tick one box)

None ☐   Primary ☐   Secondary ☐   Master degree or above ☐

College ☐   University degree ☐   Other ☐   please specify:_____

E4   In which functional area are you working? (Please tick one box)

Finance ☐   Marketing ☐   Production ☐   Personnel ☐   Other ☐   please specify: _____

E5   What is the business nature of your company?   _____

E6   How many employees are there in your company?   _____employees

E7   Is there a unit in your company which specializes in scanning?   Yes ☐   No ☐

COMMENTS AND FEEDBACK

Is there anything else you would like to tell us about how you scan for and use information about the external environment? If so, please use this space for that purpose.

~THANK YOU VERY MUCH FOR ANSWERING THE QUESTIONNAIRE! ~

請圈上適當的答案　　　　　　　　　例：　1　②　3　4　5

甲部：　外在環境觀

A1　你認為以下每一個環境因素的趨勢及事件對貴公司的重要性達到那程度?

外在環境因素可分為以下六個部份:

環境因素	不 重要	不甚 重要	略為 重要	頗為 重要	極之 重要
(1) 顧客因素： 使用貴公司的服務或產品 的公司或個人·	1	2	3	4	5
(2) 競爭因素： 其它公司用策略變化可取 代貴公司的服務或產品·	1	2	3	4	5
(3) 技術因素： 相關的資訊科技發展、生 產技術或研究·	1	2	3	4	5
(4) 法律及政治因素： 法律及規則、政府及政治 的發展·	1	2	3	4	5
(5) 經濟因素： 通貨膨脹、息率變動、失 業情況及經濟增長·	1	2	3	4	5
(6) 社會因素： 人口、年齡、收入水平、 教育水平、社會行為及價 值觀·	1	2	3	4	5

A2 你覺得以下每個環境因素的<u>轉變速度</u>如何？

轉變速度是指在貴公司以外的一些爭論問題、趨勢、或機會，隨著時間而改變的程度。

低轉變速度意指事物經常保持不變。
高轉變速度意指事物經常有急速及難以預料轉變。

環境因素	十分低	頗低	中等	頗高	十分高
(1) 顧客因素	1	2	3	4	5
(2) 競爭因素	1	2	3	4	5
(3) 技術因素	1	2	3	4	5
(4) 法律及政治因素	1	2	3	4	5
(5) 經濟因素	1	2	3	4	5
(6) 社會因素	1	2	3	4	5

A3 你覺得以下每個環境因素的<u>複雜</u>程度如何？

一個複雜的環境是有大量不同的要素，須要在決策時予以考慮。而當中的參與者往往都牽涉很多複雜的關係，所以因果關係難以確立。

環境因素	十分低	頗低	中等	頗高	十分高
(1) 顧客因素	1	2	3	4	5
(2) 競爭因素	1	2	3	4	5
(3) 技術因素	1	2	3	4	5
(4) 法律及政治因素	1	2	3	4	5
(5) 經濟因素	1	2	3	4	5
(6) 社會因素	1	2	3	4	5

乙部：　資訊觀

B1　你對於以下每種用作環境審視的資訊來源的<u>使用</u>程度如何？

	資訊來源	從不使用	每年少於一次	一年使用數次	每月至少一次	每星期至少一次	每日至少一次
1.	顧客	1	2	3	4	5	6
2.	競爭對手	1	2	3	4	5	6
3.	商業/ 專業人士[1]	1	2	3	4	5	6
4.	朋友.家人	1	2	3	4	5	6
5.	傳播媒介[2]	1	2	3	4	5	6
6.	政府刊物	1	2	3	4	5	6
7.	工商團體	1	2	3	4	5	6
8.	上司	1	2	3	4	5	6
9.	下屬	1	2	3	4	5	6
10.	內部文件[3]	1	2	3	4	5	6
11.	電子資訊服務[4]	1	2	3	4	5	6

其它使用的資訊來源：

12.	＿＿＿＿＿	1	2	3	4	5	6
13.	＿＿＿＿＿	1	2	3	4	5	6

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[1]　包括供應商 、分銷商、銀行、律師、會計師.顧問等。
[2]　包括報紙、期刊、電台、電視等。
[3]　包括備忘錄、通告、調查及研究報告等。
[4]　包括上線資料庫、電子新聞版等。

B2   以下每種來源所提供有關環境的資訊的<u>相關</u>程度如何?

相關資訊是指貴公司在定立目標及各類活動時須要及有用的資訊。

資訊來源	完全 無關	頗為 無關	有些 關係	頗為 有關	完全 有關
1. 顧客	1	2	3	4	5
2. 競爭對手	1	2	3	4	5
3. 專業／專業人士[5]	1	2	3	4	5
4. 朋友,家人	1	2	3	4	5
5. 傳播媒介[6]	1	2	3	4	5
6. 政府刊物	1	2	3	4	5
7. 工商團體	1	2	3	4	5
8. 上司	1	2	3	4	5
9. 下屬	1	2	3	4	5
10. 內部文件[7]	1	2	3	4	5
11. 電子資訊服務[8]	1	2	3	4	5

其它使用的資訊來源:

12. _____	1	2	3	4	5
13. _____	1	2	3	4	5

---

[5]   包括供應商 、分銷商、銀行、律師、會計師,顧問等。
[6]   包括報紙、期刊、電台、電視等。
[7]   包括備忘錄、通告、調查及研究報告等。
[8]   包括上線資料庫、電子新聞版等。

B3 以下每種來源所提供有關環境的資訊的<u>可靠</u>程度如何?

可靠的資訊是有高度的可信性及值得你個人信賴。

	資訊來源	完全 不可靠	頗為 不可靠	某些程 度上可靠	頗為 可靠	完全 可靠
1.	顧客	1	2	3	4	5
2.	競爭對手	1	2	3	4	5
3.	商業/ 專業人士[9]	1	2	3	4	5
4.	朋友．家人	1	2	3	4	5
5.	傳播媒介[10]	1	2	3	4	5
6.	政府刊物	1	2	3	4	5
7.	工商團體	1	2	3	4	5
8.	上司	1	2	3	4	5
9.	下屬	1	2	3	4	5
10.	內部文件[11]	1	2	3	4	5
11.	電子資訊服務[12]	1	2	3	4	5

其它使用的資訊來源:

12.	_____	1	2	3	4	5
13.	_____	1	2	3	4	5

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9 包括供應商 ．分銷商．銀行、律師、會計師.顧問等．
10 包括報紙．期刊、電台、電視等．
11 包括備忘錄．通告、調查及研究報告等．
12 包括上線資料庫．電子新聞版等．

B4 你須要付出多少<u>時間</u>及<u>努力</u>去尋求、接觸或找出每種資訊來源？

資訊來源	十分大量	大量	一些	小量	十分小量
1. 顧客	1	2	3	4	5
2. 競爭對手	1	2	3	4	5
3. 商業/ 專業人士[13]	1	2	3	4	5
4. 朋友．家人	1	2	3	4	5
5. 傳播媒介[14]	1	2	3	4	5
6. 政府刊物	1	2	3	4	5
7. 工商團體	1	2	3	4	5
8. 上司	1	2	3	4	5
9. 下屬	1	2	3	4	5
10. 內部文件[15]	1	2	3	4	5
11. 電子資訊服務[16]	1	2	3	4	5

其它使用的資訊來源：

12. _____	1	2	3	4	5
13. _____	1	2	3	4	5

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13 包括供應商 ·分銷商·銀行·律師·會計師及顧問等·
14 包括報紙·期刊·電台·電視等·
15 包括備忘錄、通告、調查及研究報告等·
16 包括上線資料庫·電子新聞版等·

B4　你須要付出多小<u>時間及努力</u>去尋求、接觸或找出每種資訊來源?

	資訊來源	十分 大量	大量	一些	小量	十分 小量
1.	顧客	1	2	3	4	5
2.	競爭對手	1	2	3	4	5
3.	商業/ 專業人士[13]	1	2	3	4	5
4.	朋友．家人	1	2	3	4	5
5.	傳播媒介[14]	1	2	3	4	5
6.	政府刊物	1	2	3	4	5
7.	工商團體	1	2	3	4	5
8.	上司	1	2	3	4	5
9.	下屬	1	2	3	4	5
10.	內部文件[15]	1	2	3	4	5
11.	電子資訊服務[16]	1	2	3	4	5

其它使用的資訊來源:

12.	＿＿＿＿＿	1	2	3	4	5
13.	＿＿＿＿＿	1	2	3	4	5

13　包括供應商 、分銷商．銀行．律師．會計師及顧問等．
14　包括報紙．期刊．電台．電視等．
15　包括備忘錄．通告．調查及研究報告等．
16　包括上綫資料庫．電子新聞版等．

B5　當接觸到或找出這個來源後，你會<u>幾容易</u>或<u>困難</u>才從這個來源得到你想要的資訊?

資訊來源	極為困難	頗為困難	不困難也不容易	頗為容易	極為容易
1.　顧客	1	2	3	4	5
2.　競爭對手	1	2	3	4	5
3.　商業/ 專業人士[17]	1	2	3	4	5
4.　朋友,家人	1	2	3	4	5
5.　傳播媒介[18]	1	2	3	4	5
6.　政府刊物	1	2	3	4	5
7.　工商團體	1	2	3	4	5
8.　上司	1	2	3	4	5
9.　下屬	1	2	3	4	5
10.　內部文件[19]	1	2	3	4	5
11.　電子資訊服務[20]	1	2	3	4	5

其它使用的資訊來源:

12.　_____	1	2	3	4	5
13.　_____	1	2	3	4	5

17　包括供應商 ·分銷商·銀行·律師·會計師及顧問等·
18　包括報紙·期刊·電台·電視等·
19　包括備忘錄·通告·調查及研究報告等·
20　包括上線資料庫·電子新聞版等·

丙部： 審視數量

C1 你對於以下環境因素引起你頻密注意的程度如何？

環境因素	每年少於一次	一年數次	每月至少一次	每星期至一次	每日至少一次
(1) 顧客因素	1	2	3	4	5
(2) 競爭因素	1	2	3	4	5
(3) 技術因素	1	2	3	4	5
(4) 法律及政治因素	1	2	3	4	5
(5) 經濟因素	1	2	3	4	5
(6) 社會因素	1	2	3	4	5

C2 你留意以下環境因素的發展去到什麼程度？

	我通常不會留意它的發展	我會留意事件及趨勢的存在	我會留意主要事件及趨勢的詳情	我會留意大部份的事件及趨勢	我什麼都會留意
(1) 顧客因素	1	2	3	4	5
(2) 競爭因素	1	2	3	4	5
(3) 技術因素	1	2	3	4	5
(4) 法律及政治因素	1	2	3	4	5
(5) 經濟因素	1	2	3	4	5
(6) 社會因素	1	2	3	4	5

C3 你通常每日工作幾多小時（包括在公司及家中）？　　＿＿＿＿＿小時

你通常每日花費多少時間於環境審視？　　＿＿＿＿＿小時

丁部： 資訊用途

D1 在作出下列決策時，你使用有關環境的資訊的<u>頻密</u>程度如何？

	從沒 使用	很少 使用	有時 使用	通常 使用	經常 使用
1. 改善計畫的決定，例如建立新 企業、機構重組、收購行動、 公共關係事務、電腦化計畫等．	1	2	3	4	5
2. 有關資源分配的決定，包括預 算分配、資源利用、目標定立 、工作分配等．	1	2	3	4	5
3. 決定怎樣處理一些意料之外但 重要的事件，例如失去一個大 客戶或供應商、與其它公司有 衝突、削減重要資源．	1	2	3	4	5
4. 和其它機構或公司在磋商中決定 貴公司的位置，例如資源承諾或 協議合約等．	1	2	3	4	5

D2　在作出決策時，你使用以下來源提供有關環境的資訊的<u>頻密</u>程度如何？

資訊來源	從沒使用	很少使用	有時使用	通常使用	經常使用
1. 顧客	1	2	3	4	5
2. 競爭對手	1	2	3	4	5
3. 商業/ 專業人士[21]	1	2	3	4	5
4. 朋友，家人	1	2	3	4	5
5. 傳播媒介[22]	1	2	3	4	5
6. 政府刊物	1	2	3	4	5
7. 工商團體	1	2	3	4	5
8. 上司	1	2	3	4	5
9. 下屬	1	2	3	4	5
10. 內部文件[23]	1	2	3	4	5
11. 電子資訊服務[24]	1	2	3	4	5

其它使用的資訊來源：

12. ＿＿＿＿＿	1	2	3	4	5
13. ＿＿＿＿＿	1	2	3	4	5

21　包括供應商 ，分銷商，銀行，律師，會計師及顧問等．
22　包括報紙，期刊，電台，電視等．
23　包括備忘錄，通告，刊物及研究報告等．
24　包括上線資料庫，電子新聞版等．

戊部：背景資料

以下是一些關於你個人及貴公司的資料（所有資料均絕對保密）：

E1　你今年幾多歲？

25歲以下 □　　　25至34歲 □　　　　35至44歲 □　　　45至54歲 □
55至64歲 □　　　64歲以上 □

E2　你作為東主／擔任行政人員有多久？　　　　　　　　＿＿＿＿＿＿年

你在這公司服務了多少年？　　　　　　　　　　　＿＿＿＿＿＿年

E3　你的最高學歷是

未曾受過教育 □　　　小學程度 □　　　中學　　　　　□
大專程度　　 □　　　學士學位 □　　　碩士學位或以上 □
其它　　　　 □ 請註明：＿＿＿＿＿

E4　你服務於那一個部門？

財政 □　　市場 □　　生產 □ 人事 □　　其它 □ 請註明：＿＿＿＿＿．

E5　貴公司的生意性質是　　　　　　　　　　＿＿＿＿＿＿＿＿＿＿

E6　貴公司有多少名員工？　　　　　　　　　　＿＿＿＿＿＿名

E7　貴公司有沒有一個專責現場審視單位？　　　　　有 □　　無 □

意見及回應

※ 多謝回答問卷 ※