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The adoption of western management accounting practices in China and the influences of foreign partnered joint ventures

THE ADOPTION OF WESTERN MANAGEMENT ACCOUNTING PRACTICES IN CHINA AND THE INFLUENCES OF FOREIGN PARTNERED JOINT VENTURES

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ABSTRACT

The adoption of western management accounting practices in China and the influences of foreign partnered joint ventures

As an attempt to investigate the adoption, future emphasis and benefits derived from traditional and contemporary western-orientated management accounting practices in Chinese organisations, in particular, in state-owned enterprises and foreign joint ventures located in China, this empirical study was modeled on a similar study undertaken in Australia (Chenhall and Langfield-Smith 1998). It obtained structured information and carried out a comparison between a western capitalist developed country and an eastern socialist developing country (China), which is moving towards a market economy. The effectiveness of the adoption of management accounting practices is influenced by complex contextual factors. Based on cultural, economic, institutional, organisational and innovation theory frameworks established in the research literature, the study therefore explored a wider range of environmental factors which determined the extent to which state-owned enterprises and foreign joint ventures have employed management accounting practices, Thus, the role which joint ventures have played in the diffusion of management accounting practices in China has consequently been evaluated.

A cross-sectional survey involving a postal questionnaire method of data collection was adopted. A total of 179 usable responses were received representing a response rate of 19%. The study also conducted some interviews.

The results of this research indicated that management accounting practices in Chinese organisations have made considerable progress in recent years compared to previous Chinese studies (He 1997; Lin and Wu 1998; Qiao 1997). However, there is a lower usage of management accounting practices by comparison with western countries. A number of environmental factors such as external authorities, social services, advanced production and management techniques, long-standing traditional practices, the attitude of the leadership, the quality of the accounting personnel have influenced the adoption of management accounting practices in state-owned enterprises and joint ventures. This study also confirmed that joint ventures have played an important role in the diffusion of management accounting practices in China because they have in general higher adoption rates and place greater emphasis on recently developed, strategically focused, market oriented and investment appraisal techniques than state-owned enterprises. In addition, the research has reinforced some support for the findings from previous studies (Chenhall and Langfield-Smith 1998; Firth 1996; O'Connor *et al.* forthcoming). The study also provided some evidence supporting institutional isomorphism theory; for example, joint ventures have adjusted the management accounting systems and practices to suit the Chinese management context.

The distinguishing feature of this study is that it incorporates an empirical investigation and an exploratory study in order to provide new knowledge relating to the adoption of western practices of management accounting in China and the influence of foreign joint ventures. However, as with other studies, it has a number of limitations that need to be overcome in the future. Also future research directions are highlighted.

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CHAPTER 1

INTRODUCTION

CHAPTER 1

INTRODUCTION

The purpose of this chapter is to provide a general introduction to this thesis. The first section describes the research background. In this section, the reasons and justification for undertaking this study are explained. The next section (section 1.2) contains a brief description relating to relevant previous research and the relationship between the current study and previous research. This is followed by section 1.3 that lists the major research objectives. Sections 1.4 and 1.5 describe alternative management accounting approaches and approach adopted in this study respectively. The final section (section 1.6) provides an outline of the thesis.

1.1 Research background

It is widely known that from the establishment of the Peoples Republic of China (PRC) in 1949 to the end of 1970's, China had adopted a socio-economic system which was largely modeled on the pre-Soviet model and based on the public ownership of the means of production and a centrally planned economy. Under this system state-owned enterprises had a dominant position within the industrial sector and were tightly controlled by the Chinese central government. At that time, some simple management accounting practices, such as 'work teams', 'internal profit system' were used in many large and medium-sized state-owned enterprises to assist the government implementing state economic plans and policies and controlling the means of production.

From 1978 onwards, the Chinese economy has gradually moved from a single, simple and closed centrally planned economy to a diversified, complicated and open economy, and further towards a market economy. This has fundamentally changed the economic and regulatory environments in which Chinese organisations operate (Child 1994) and has resulted in the requirements to adopt western practices of management for increasing efficiency and effectiveness, reducing management error (Lawrence & Lorsch 1967; Shields & Shields 1998) and even containing corruption (Perrow 1986).

Chinese economic reforms can be roughly divided into three aspects: (1) modernisation and restructuring of state-owned enterprises; (2) privatisation and the opening of markets, and (3) reduction of government's interference in enterprise management.

The aims of modernisation and restructuring of state-owned enterprises are to change the state-owned enterprises from being a quasi-government agency to a profit-oriented corporation and to build a new ownership structure and corporate governance. Several reform initiatives falling into this category include the past contract term system or recent corporations such as transforming small-scale state-owned enterprises into shareholding cooperatives (Smyth 1998) and converting large and medium-scale state-owned enterprises into either listed shareholding or limited-liability companies (Hassard *et al.* 1999). These reforms were intended to bring into Chinese state-owned enterprises western style company structures and modern management mechanism companies (Hassard *et al.* 1999) that would create pressures on state-owned enterprises to adopt western management systems that enhance organisational transparency, efficiency and productivity (Cheng 2001).

The second aspect involves a much broader range of industries and sectors of the economy that were opened to the private sector (non- state-owned enterprises). Involvement in foreign joint venture was encouraged (Liu & Eddie 1995), and poorly managed listed state-owned enterprises could be acquired by private companies (Cheng 2001). The change toward a free market economy represented a major economic shock to many state-owned enterprises and added significantly to the competition faced by them. For example, the monopoly position granted to state-owned enterprises under the central planned economy quickly disappeared when foreign investors brought their technological and organisational expertise and offered more innovative products and superior customer responsiveness (Guthrie 1999). The increased market competition generated considerable pressures on state-owned enterprises to improve their cost, product quality and economic performance, which in turn created demands for more formal management controls and more advanced management accounting techniques (Li 1997).

The Chinese government's influence on state-owned enterprises still exists via the power of communist party officials to intervene in enterprise decision-making, including the appointment of state-owned enterprise managers, cadres, boards of directors (Hassard *et al.* 1999) and the delegation of state representatives as board members or asset-management supervisors (O'Connor *et al.*, forthcoming). This influence, however is not uniform across different industries and regions which are subject to specific treatment by governmental policies (Lin *et al.* 1998). The reduction of the government's interference in enterprise management can increase state-owned enterprise manager's intention to sharpen managerial discretion, improve organisational efficiency and adopt advanced management systems and practices (Branie 1996; Peng & Heath 1996; Groves *et al.* 1994).

In the process of responding to the changing task and institutional environments, institutional theory suggests that state-owned enterprises will adapt their management practices including management accounting practices to gain legitimacy and to ensure their survival (DiMaggio & Powell 1983 and 1991; O'Connor *et al.*, forthcoming). Adaptation may be voluntarily in response to pressures to conform with accepted standards of practice or an involuntary response arising from coercion by powerful institutional forces (DiMaggio & Powell 1983 and 1991; O'Connor *et al.*, forthcoming; Scott 1987). For example, raising capital through stock markets for listed state-owned enterprises requires adopting a set of better capital investment appraisal techniques. The use of contracting term, coupled with increased autonomy, created a need for mechanisms to control and monitor managerial performance (Brickley *et al.* 2000). Thus methods of performance evaluation and rewards have become important. Therefore it is plausible to expect that there is a greater need for state-owned enterprises to adopt western practices of management accounting. It is thus appropriate to examine the current adoption of western practices of management accounting in state-owned enterprises given that they have been exposed to these practices for over the past 20 years.

By engaging in a joint venture, a state-owned enterprise has more opportunities to model itself on the foreign partner and then increase the adoption of capitalist style management skills and management accounting practices. For instance, the foreign partners normally assist state-owned enterprise partners through job learning and formal in-house training, support of outside training in local schools, and trips overseas (Child & Makoczy 1993; Firth 1996; Yan & Gray 1994). Therefore it is possible that joint ventures contribute an enhanced amount of technology and management transfer from overseas investors to domestic state-owned enterprises. Therefore it is also appropriate to examine and evaluate their actions in the diffusion of western practices of management accounting in China.

1.2 Relationship between this study and previous research

Several studies have researched the adoption of traditional and contemporary management accounting practices in capitalist societies (see chapter 3). However, there is little evidence on the use of management accounting practices in socialist or emerging capitalist societies. Additionally, previous research of management accounting in China had drawn heavily upon interpretative and anecdotal evidence rather than positivistic and empirical studies. There has been an increased interest and emphasis given to empirical studies of management accounting practices in recent years and research has begun to focus on the investigation on the current situation of management accounting practices in Chinese enterprises (see section 1.5). Nevertheless, the literature review did not identify any previous studies that have examined the adoption, future emphasis and benefits derived from traditional and contemporary western-orientated management accounting practices in Chinese organisations. However, Chenhall and Langfield-Smith (1998) used a survey to identify the extent to which Australian manufacturing firms have adopted certain traditional and recently developed management accounting practices, the benefits received from those practices and the intentions to emphasise certain management accounting practices in the future. Therefore this study will partially model the Australian study in order to obtain similar structured information and that can also be used to provide a comparison between the two countries.

There are very few studies on the use of accounting information in foreign joint ventures located in China. An exploratory study (Firth 1996) investigated the influence of foreign joint ventures in the diffusion of new management accounting practices within China. This study confirmed that Chinese enterprises participating in foreign-partnered joint ventures made more changes to their management accounting systems when compared to similar Chinese enterprises that had no collaborative venture operation with foreign firms. Firth thus identified joint ventures as a major 'diffusion driver'. Firth also confirmed that the nationality of the foreign joint venture partner (USA and Europe versus others), the degree of competition experienced by the Chinese partner and enterprise size were positively and significantly related to the extent of diffusion.

However, some limitations exist in Firth's study. Firstly, it did not explore and explain the reasons behind the differences in the adoption of management accounting practices between the two types of organisations. 'No judgement is made on whether the adoption of various capitalist style accounting practices by Sino companies is appropriate' (Firth 1996). Secondly, Firth's study only considered accounting control, specially the use of standard costs and budget responsibility centres (O'Connor *et al.*, forthcoming). In other words, his survey did not cover all aspects of management accounting practices experienced by state-owned enterprises and joint ventures. Finally Firth's data is based on the period from 1990 to 1993, a relatively early period in China's economic reform.

There is therefore a need to undertake research on the use of traditional and contemporary management accounting techniques and compare their uses between the Chinese state-owned enterprises and the Chinese companies involved in joint ventures. There is also a need to examine the perceived benefits and future use of management accounting techniques so that a further evaluation of the function of foreign joint ventures in diffusing management accounting techniques can be carried out. Finally, Firth's work also identified a need to analyse and explain the environmental factors behind the differences in the adoption of management accounting practices between the two types of companies.

The recent study undertaken by O'Connor *et al.* (forthcoming) explored the influences on the adoption of western management accounting/controls practices by Chinese state-owned enterprises. Based on in-depth interviews and a questionnaire survey, they identified nine factors that influence the adoption of western management accounting/controls in state-owned enterprises, i.e., limited-term employment contracts, market competition, joint venture experience, stock exchange listing, government influence, enterprise size, Chinese management norms, enterprise age and availability of training. The most important contribution of their research is that they carried out an in-depth contextual analysis from the macro environmental level (market competition), the institutional level (limited-term employment contracts, joint venture experience, stock exchange listing and government influence) and the organisational level (size, Chinese management norms, age and training).

However their findings are only based on the perceptions of those managers who have been chosen to reveal them in responding to a survey or interviews rather than management accounting experts. Another limitation in this study is that their survey questions were limited to the above nine hypothesised factors rather than other wider environmental factors. This study seeks to avoid the above limitations.

1.3 Research objectives

The research aims to achieve the following objectives:

1. to examine the adoption, future emphasis and benefits derived from traditional and recently developed management accounting practices in joint venture and the state-owned enterprise samples;

2. to compare the differences between the joint venture and state-owned enterprise samples in the adoption, future emphasis and benefits derived from these management accounting practices;

3. to determine and analyse the environmental factors (either internal or external) that influence the adoption of management accounting practices in the joint venture and state-owned enterprise samples;

4. to evaluate the influence of foreign joint ventures in diffusing western orientated practices of management accounting.

1.4 Alternative management accounting research approaches

In order to understand how the research approach employed in the study links to previous management accounting research methods it is appropriate to provide at this point a broad description relating to the alternative management accounting research approaches. The following classification representing broad general categories of management accounting research approaches has been identified (Scapens 1991; Ryan *et al.* 2002):

- Traditional (economic-based) management accounting research;
- Behavioural accounting research;
- Research drawing off organisational theory;
- Research drawing off social theory;
- Practice-oriented research.

This classification is not absolute because it is common knowledge that some research often has the potential to be classified within more than one of the categories. Each of the above categories is briefly described below.

Traditional (economic-based) management accounting research

Prior to the 1970s, management accounting research was mostly normative in nature and based primarily on neoclassical economics (Scapens 1984). The normative neoclassical economic framework was based on the assumptions of certainty and costless information, whereby the decision-maker had received all of the required information without any cost (Scapens and Arnold 1986).

Researchers started to incorporate information economics into the models from 1970s. Scapens (1991) described this as the 'costly truth' approach whereby truth was assumed to vary from one situation to another, according to the cost and benefits of the information. This led to the belief that truth can be obtained and that a preferred accounting system does exist depending on the situation (Ryan *et al.*, 2002).

The emergence of the 'costly truth' approach encouraged some researchers to pay attention to explaining observed management accounting practices. There appeared to be little formal research of management accounting practices but there was a general view that a wide gap existed between the theory and practice of management accounting in the early of 1980's (Scapens 1984). According to Anthony (1989) 'Almost all the information is anecdotal.' Some researchers therefore called for developing positive theories that were based on empirical data with a focus on explaining observed practices. However, both normative and positive theories still rely mainly on a neoclassical economic framework.

Because of their dissatisfaction with these approaches that relied entirely on neoclassical economics, some researchers began to draw off behavioural science, psychology (behavioural research) and organisational theory to explain management accounting practices from the late 1960's.

Behavioural accounting research

Behavioural accounting research is mainly concerned with the effects of accounting control systems, such as budgetary control techniques, and how they influence individual behaviour and organisational performance. Its major feature is that the people in organisations are thought to be an important element in influencing the operations of a budget system in organisations. This interest in the effect of behaviour in organisations would lead to the focus on organisational theory, and in particular contingency theory, for ideas in conducting management accounting research (Ryan *et al.* 2002).

Research drawing off organisational theory

Organisational theory has been used to explain the organisational aspects of management accounting since 1970s. Management accounting researchers sought to explain management accounting practices using different elements of organisational theory (e.g. contingency theory, systems theory, and organisational and behavioural decision theory). Within these sub-theories, contingency theory states that there is no one 'best' design for a management accounting information system, ' and it all depends' upon the situational factors (Drury 2000). The situational factors represent the contingent factors or contingent variables.

Contingency theory has been widely used in previous research to explain observed differences in characteristics of management control systems of organisations. The contingency factors include the nature of the external environment, the competitive strategies employed, production technology, and business unit, firm and industry variables. Most of the contingency theory studies are based on cross-sectional studies using data derived from questionnaire surveys.

Research drawing off social theory

According to Ryan *et al.* (2002) the research drawing off social theory includes interpretive and critical research. Interpretive research aims to understand the social world and the social nature of accounting practices and to interpret accounting practice within the context of wider social systems. Critical research aims to go beyond just interpreting accounting practices within a social context by creating the conditions in which social change is made possible. Ryan *et al.* (2002) also concluded that the impact of social theory on management accounting research was ' a major development in management accounting research' and 'provided alternative insights into the functions of accounting'.

Practice-oriented research

Most of the research approaches described above have a particular theoretical framework to explain management accounting practice. However, since the late 1980s a considerable amount of research has been undertaken that focuses on describing management accounting practice without attempting to develop or test existing theory. Ryan *et al.* (2002) classifies this research as practice-oriented research.

Direct motivation for undertaking practice-oriented research originated from Johnson and Kaplan's (1987) criticisms of management accounting practice. Their criticisms were derived either from anecdotal evidence or observations from a very small number of companies. Their criticisms encouraged some researchers to undertake questionnaire surveys and interviews in order to assess the extent to which the criticisms were justifiable. Practice-oriented research therefore has become an approach to obtain a general picture of management accounting practices, in particular to ascertain the extent of usage of certain techniques, the purposes for which they were being used and to identify the problems and issues associated with introducing new management accounting techniques.

Practice-oriented research normally consists of descriptive cross-sectional studies to determine the nature and form of management accounting practices, the extent of use of new techniques and case studies to refine and report observed innovative practices of management accounting.

1.5 The research approach adopted in this study

Various approaches have been adopted for understanding the adoption of management accounting practices in Chinese organisations. Most of the publications involving management accounting research in China's accounting magazines can be categorised within the traditional economic based management accounting research category. These articles have drawn heavily upon interpretative and anecdotal evidence rather than practice-oriented or empirical research. However, recently more interest and greater emphasis have been given to practice-oriented research. Several studies have involved investigating the adoption of management accounting practices in Chinese organisations. Most attention has been given to Chinese state-owned enterprise and identifying the problems and difficulties surrounding these organisations in relation to the diffusion and application of some new management accounting techniques (Lin and Wu 1998; Meng *et al.* 1997; Shi 2001; Feng and Huang 2002; O'Connor, forthcoming).

To achieve the research objectives identified in section 1.3, a descriptive practice-oriented research approach will be mainly adopted. It uses a questionnaire to collect relevant information to examine and compare the adoption of western practices of management accounting in state-owned enterprises and foreign joint ventures. In addition, to determine and evaluate the environmental factors that influence the adoption of management accounting practices in state-owned enterprises and joint ventures, organisational/institutional theory will also be drawn off to identify potential contingency factors.

1.6 Outline of the structure of this thesis

This thesis contains eight chapters. Chapter 1 provides the research background to evaluate the justification for undertaking this study and the relationships between the current study and previous relevant research and to also judge the contributions made by this current study. A summary of the research objectives is also outlined.

Chapters 2-5 contain the literature review to support the study. Chapter 2 examines the differences in national cultural backgrounds between Chinese and western organisations because most of the foreign partners in Sino-foreign joint ventures are from western developed countries. The aim of the chapter is to provide literature support for exploring the influence of national culture on organisational practices in later chapters. Chapter 3 summarises and outlines contemporary management accounting practices, describes the major criticisms of traditional systems and the arguments for the need for change. The aim of this chapter is to provide a reference point to enable comparisons of management accounting practices to be carried out between the two different kinds of Chinese organisations (joint ventures and state-owned organisations) discussed in later chapters. Chapter 4 provides a presentation about the processes of the diffusion of western management accounting practices in Chinese organisations, particularly in state-owned enterprises and the problems arising from the adoption of these practices. The aim of this chapter is to describe the background and the difficulties of the diffusion of western practices of management accounting in Chinese state-owned enterprises so that a comparison relating to the adoption of management accounting practices between state-owned enterprises and joint ventures can be carried out in later chapters. Chapter 5 attempts to establish a theoretical foundation to examine the influence of foreign joint ventures in disseminating western practices of management accounting by using institutional theory, specially institutional isomorphism. The purpose of this chapter is to evaluate and identify the roles and characteristics in adopting western techniques of management accounting in joint ventures located in China.

The remaining chapters are concerned with aspects relating to the research findings. Chapter 6 describes the research methodology, the design and content of the questionnaire, the sample selection, the methods used to collect the data and details relating to the respondents. In addition, the tests for non-response bias, the validity and reliability of the questionnaire responses and the justifications of the statistical techniques that are used to analyse the data are explained. The most important aim of this chapter is to provide an insight into the research methodology adopted in the study. The main purposes of chapter 7 are to provide a general description of the questionnaire responses and to present the findings relating to research objectives. Finally chapter 8 distinguishes the research features and contributions, discusses its limitations and addresses areas for further research.

CHAPTER 2

THE INFLUENCE OF NATIONAL CULTURE ON MANAGEMENT PRACTICES ACROSS COUNTRIES

CHAPTER 2

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As stated in chapter 1, one of the research objectives of this study is to compare the differences between traditional Chinese state-owned enterprises and newly founded foreign joint ventures relating to the adoption of western practices of management accounting. It is widely accepted both by academics and practitioners that the differences of management practices in organisations are mainly caused by the cultural differences of the people in these organisations. In today's competitive global environment, a successful organisation must learn how to harmonise the different cultures between its staff and how to use the cultural diversity as an advantage rather than a disadvantage.

The aim of this chapter is to examine the differences of cultural background of the people in Chinese and western organisations because most of foreign partners in Sino-foreign joint ventures come from western developed countries. The chapter is organised as follows: section 2.1 explores the influence of national culture on organisational practices. It focuses on the differences in organisational practices between eastern and western organisations based on Hofstede's cultural dimensions. Sections 2.2 and 2.3 explain the relationships between culture and accounting and management accounting respectively. Section 2.4 discusses the potential problems arising from Chinese attempts to import foreign cultures and management practices. Section 2.5 provides the summary of this chapter.

2.1 Influence of national culture on organisational practices

2.1.1 Importance of cross-cultural management studies

With the accelerating integration of the global economy modern international enterprises, such as multinational companies (MNCs) and international joint ventures, operate in a multitude of cultural and societal settings. This has created a demand for managers in these enterprises to recognise, understand and cope with national cultural diversity in organisations. In an international business environment, employers come together from diverse national cultures and there is a potential for conflict emanating from differences in individual values.

The international managers' job involves a high level of cross-cultural interaction. They need to be aware of what happens when people from different cultures work together and how to act when working within foreign cultures. For example, they must be aware of how people modify their within-culture styles when working with people from other cultures, how to work in harmony with people from foreign cultures and the most effective ways of approaching foreign colleagues. They must learn to use cultural diversity as an advantage, rather than as a disadvantage, to the organisation. In other words, a successful international organisation needs to develop ways to create and manage evolving systems of cultural synergy. Otherwise these cultural differences in organisations may result in management controls, which are effective in the domestic country but which are ineffective or even dysfunctional in the foreign country (Chow *et al.* 1994). Therefore, international companies need to modify their domestic management control systems to suit the national cultural dictates of a foreign country, where the national culture of the foreign country differs from that of the domestic country (O'Connor 1995).

The crossing of different cultures in organisations resulted in the emergence of cross-cultural management studies during the early 1980s. In this area, the influence of national culture on organisational practices has been emphasised through the explicit recognition that many of the problems encountered in international organisations can be traced to employers' national cultural factors. It is widely accepted that culture is the invisible force behind the tangibles and observables in any organisation, and has a significant effect on these organisations. Different cultures in an organisation, national culture as well as organisational culture may lead to a number of unproductive behaviours that reduce the social effectiveness of the organisation.

In the analysis and interpretation of employee action within complex organisations, the relationship between national and organisational culture can be a powerful analytical tool because it can address the following basic questions:

- Does organisational behaviour vary across national cultures?

- How much of the observed difference can be attributed to national cultural determinants?

- How can organisations best manage within other cultures rather than their-own?

- How can organisations best manage cultural diversity, including using diversity as an organisational resource?

Many researchers have developed a number of cultural approaches that have used the concept of culture to gain fuller understanding of the subtle dynamics and forces at work in organisations. Examples include:

- Using cultural dimensions and values developed by Hofstede (1980 and 1984), various researchers have examined the cross-cultural or cross-national generalisability of participation's effect on the relation between budget emphasis in superior evaluation style and subordinates' job related attitudes (Harrison 1992).

- Examining the relationship between national culture and activity-based costing systems (Brewer 1998).

- Analysing preferences for specific management controls at the interface between the organisation and the external labour market (Chow *et al.*1994).

- Testing the effects of national culture and management control system on manufacturing performance (Chow *et al.* 1991).

2.1.2 Cultural dimensions

The concept of culture has been defined in many different ways. Tylor (1877) defined culture as 'that complex whole which includes knowledge, belief, art, law, morals, customs and any capabilities and habits acquired by a man as a member of society'.

Hofstede (1980) had described the most widely quoted culture concept as ' the collective programming of the mind which distinguish the members of one group or society from those of another'.

From a common sense point of view culture is something that is shared by all or almost all members of some social group, something that the older members of the group try to pass on to the younger members, and something that shapes behaviour or structures one's perception of the world (Carrol 1982). In other words, culture is about the way people understand their world and make sense of it.

Hoeckin (1995) summaries the characteristics of culture as follows:

- A shared system of meanings---culture dictates what groups of people pay attention to.

- Relative---there is no cultural absolute.

- Learned---culture is derived from your social environment, not from your genetic make-up.

- About groups---culture is a collective phenomenon that is about shared values and meanings.

Culture influences people's values, beliefs, attitudes and behaviour, which in turn collectively define their culture. People acquire their culture by common learning and experience in a group.

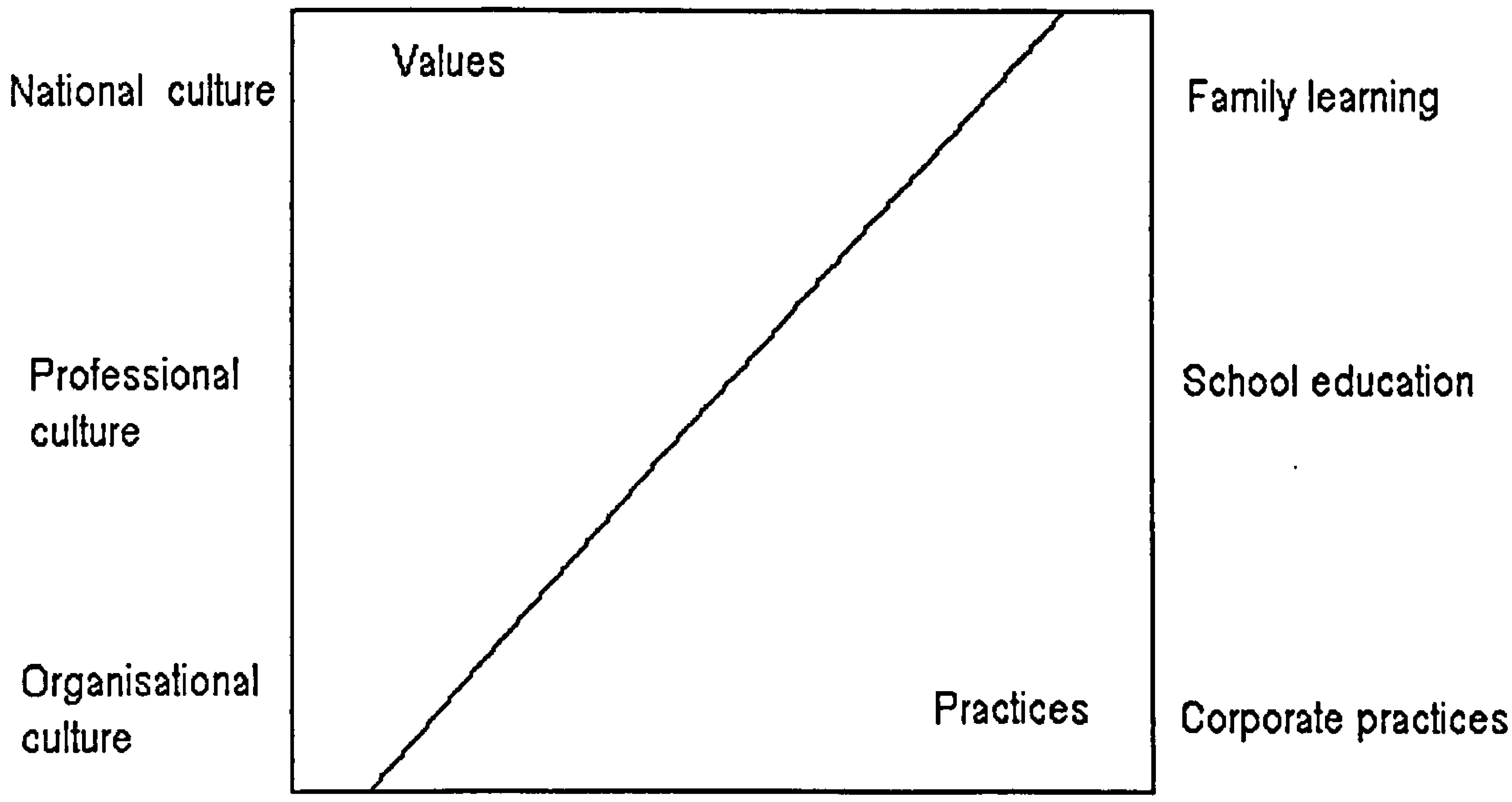
Culture is divided into two levels: culture at the national level (national culture) and culture at the organisational level (corporate culture). National cultures are fundamental, invisible values held by the majority members of the nation, acquired in early childhood. In contrast, organisational cultures are visible practices of the organisation, acquired by socialisation of the new members who join as young adults.

National cultures change very slowly but organisational cultures may be consciously changed (Hofstede 1993).

There are two different opinions relating to the influence of national culture. Some commentators consider that national culture is often overpowered by organisational culture. For example, Adler (1986) assumed that employees working for the same organisation even if they are from different countries are more similar than different. By contrast, other researchers affirm that national culture is predominant compared with organisational culture (Hofstede 1980; Laurent 1983). They argue that the influence of external culture (national culture) on companies has often been underestimated. Soeters and Schreuder (1988) point out that the interaction between national and organisational cultures has not yet received very much attention. However, there are obviously research developments relating to a more complex relationship between national and organisational cultures in recent years. For example, Lachman *et al.* (1994) point out that both national and organisational cultures have different levels of centrality, i.e. there are central and peripheral national and organisational cultures respectively. Therefore, certain core organisational cultures may be more central than certain peripheral national cultures. Harrison and McKinnon (1999) argue that an attempt to change core national culture would require a great organisational effort.

The relationship between national culture and organisational culture described by Hofstede is shown in figure 2.1.

Figure 2.1 Interaction between national and organisational culture



(Source: Adapted from Hofstede 1991)

As the diagram shows, national cultures differ mostly at the values level, while organisational cultures differ mostly at the practices level (Hofstede 1991). Hence, much of this work on the influence of national culture on organisational culture is based on the specific examination of the two cultural characteristics---values and practices, the former describes what 'should be' while the latter describes what 'is' (Pratt and Beaulieu 1992).

Hofstede (1991) notes that values represent the deepest level of a culture. Also values represent the core of organisational culture. Wiener (1988) develops a framework for the analysis of organisational culture based on an organisational value system. He suggests that it seems reasonable to apply the shared values construct as a framework for the analysis of organisational culture because operational definitions and measurement of values are feasible. Lachman *et al.*'s (1994) further critical distinction among values indicates that not all values are equally important or have the same impact on regulating behaviour. Central values will have a stronger impact on organisational practices and will be more resistant to change compared to peripheral values.

These views indicate that the study on the interaction between national and organisational culture should be focused on the differences of national values and the differences of corporate practices. This is because an understanding of organisational culture must include an understanding of shared values by the members as well as an understanding of the practices that manifest those values (Pratt an Beaulieu 1992).

Hofstede carried out the most famous research in the attempt to compare national cultures in terms of broad value differences. His research was based on a very large sample of employees (over 11,600) from 50 countries and three multi-country regions within a single multinational organisation (IBM). Hofstede originally identified four cultural dimensions through a comparison of the work-related values of similar people (employees and managers) in sixty-four national subsidiaries of the IBM Corporation. Hofstede's research was based on the assumption that people working for the same multinational, but in different countries, represented suitable matched samples from the populations of their countries that were similar in all respects except nationality (Hofstede 1993). The four cultural dimensions identified were power distance, uncertainty avoidance, individualism/collectivism and masculinity/femininity (Hofstde 1980). Hofstede and his colleagues later added a fifth cultural dimension - Confucian dynamism (The Chinese cultural Connection 1987).

2.1.2.1 Power distance

Power distance is the extent to which the members of a society accept that power in institutions and organisations is distributed unequally. The fundamental issue addressed by this dimension is how a society handles inequalities among people when they occur. People in large power distance societies accept a hierarchical order in which everybody has a place, which needs no further justification. People in small power distance societies strive for power equalisation and demand justification for power inequalities (Hofstede 1984).

The influences of power distance in organisational practices are summarised in table 2.1.

Table 2.1 Organisational practices affected by power distance

Small power distance organisation	**Large power distance organisation**
Flatter organisation pyramids	Steep organisation pyramids
Inequalities among employees should be minimised	Inequalities among employees are both expected and desired
Managers seen as making decisions after consulting with subordinates	Managers seen as making decisions autocratically and paternalistically
Subordinates expect to be consulted	Subordinates are used to being told what to do
Decentralisation is popular	Centralisation is popular
Higher-educated employees hold much less authoritarian values than lower-educated ones	Higher- and lower-educated employees hold similar values about authority
Hierarchy in organisations means an inequality of roles, established for convenience	Hierarchy in organisations reflects the existential inequality between higher-ups and lower-downs
The ideal boss is a resourceful democrat	The ideal boss is a benevolent autocrat or a good father

Source: Adapted from Hofstede (1991), Hoecklin (1995)

2.1.2.2 Individualism/ Collectivism

Individualism stands for a preference for a loosely knit social framework in society wherein individuals are supposed to take care of themselves and their immediate families only. Collectivism stands for a preference for a tightly knit social framework in which individuals can expect their relatives, clan, or others within the group to look after them in exchange for unquestioning loyalty. This dimension addresses the degree of interdependence a society maintains among individuals. In other words, it describes the degree to which individuals are integrated into groups (Hofstede 1984).

The influences of individualism/collectivism in organisational practices are summarised in table 2.2.

Table 2.2 Organisational practices affected by individualism/collectivism

Individualist organisation	Collectivist organisation
Management is management of individuals	Management is management of groups
Employees are expected to defend their own interests	Employees expect organisation to defend their interests
Employer-employee relationship is a contract supposed to be based on mutual advantage	Employer-employee relationship is perceived in moral terms, like a family link
Hiring and promotion decisions are supposed to be based on skills and rules	Hiring and promotion decisions take employee's in-group into account
Emphasis on individual initiative and achievement; leadership ideal	Emphasis on belonging to organisation; membership ideal
Policies and practices apply to all	Policies and practices vary according to relationships
Managers try to be up-to-date and endorse modern management ideas	Less concern with fashion in management ideas
Involvement of individuals with organisations primarily calculative	Involvement of individuals with organisations primarily moral
Organisations are not expected to look after employees from the cradle to the grave	Employees expect organisations to look after them like family
Organisation has moderate influence on members' well-being	Organisation has great influence on members' well-being
Promotion from inside and outside, and based on market value	Promotion from inside and based on seniority

Source: Adapted from Hofstede (1991), Hoecklin (1995)

2.1.2.3 Uncertainty avoidance

Uncertainty avoidance is the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity. The fundamental issue addressed by this dimension is how a society reacts to the fact that time only runs one way and that the future is unknown: whether it tries to control the future or to let it happen. Strong uncertainty avoidance societies maintain rigid codes of belief and behaviour and are intolerant towards deviant persons and ideas. Weak uncertainty avoidance societies maintain a more relaxed atmosphere in which practice counts more than principles and deviance is more easily tolerated (Hofstede 1984).

The influences of uncertainty avoidance in organisational practices are summarised in table 2.3.

Table 2.3 Organisational practices affected by uncertainty avoidance

Weak uncertainty avoidance organisation	Strong uncertainty avoidance organisation
Less emotional resistance to change	More emotional resistance to change
Managers should be selected on other criteria than seniority	Managers should be selected on the basis of seniority
A manager need not be an expert in the field he or she manages	A manager must be an expert in the field he or she manages
Greater readiness to live by the day	More worry about the future
Less hesitation to change employers	Tendency to stay with same employers
Loyalty to employer is not seen as a virtue	Loyalty to employer is seen as a virtue
Delegation to subordinates can be complete	Initiative of subordinates should be kept under control
More risk-taking	Less risk-taking
Hope of success	Fear of failure
Top managers are more concerned with strategic problems	Top managers are more concerned with daily operations
Conflict in organisations is natural	Conflict in organisations is undesirable
Employee optimism about the motives behind company activities	Employee pessimism about the motives behind company activities

Source: Adapted from Hofstede (1991), Hoecklin (1995)

2.1.2.4 Masculinity/Femininity

Masculinity stands for a preference in society for achievement, heroism, assertiveness, and material success. Femininity stands for a preference for relationships, modesty, caring for the weak, and the quality of life. Masculinity/femininity as a dimension of societal culture addresses the way in which a society allocates social roles to the sexes. Hofstede thinks that masculine societies define gender roles more rigidly than feminine societies. In a masculine society even the women prefer assertiveness whereas in a feminine society, even the men prefer modesty (Hofstede 1984).

The influences of masculinity/femininity in organisational practices are summarised in table 2.4.

Table 2.4 Organisational practices affected by masculinity/femininity

Masculine organisation	Feminine organisation
Some occupations are typically male, others female	Less occupational segregation by gender
Fewer women in more qualified and better-paid jobs	More women in more qualified and better-paid jobs
Belief in inequality of the sexes	Greater belief in equality of sexes
Resolution of conflicts by fighting them out	Resolution of conflicts by compromise and negotiation
Managers expected to be decisive and assertive	Managers use intuition and strive for consensus
Management tries to avoid having to deal with labour unions	Management makes joint consultation with employee representatives
Live in order to work	Work in order to live
Young men expect to make a career; those who do not see themselves as failures	Some young men and women want careers, others do not
Stress on equity, competition among colleagues, and performance	Stress on equality, solidarity, and quality of work life
Higher job stress	Lower job stress
More industrial conflict	Less industrial conflict
Appeal of job restructuring permitting Individual achievement	Appeal of job restructuring permitting group integration
The ideal manager is a masculine, aggressive hero with taking fast important decision.	The ideal manager is a modest, benevolent person like a good father

Source: Adapted from Hofstede (1984, 1991), Hoecklin (1995)

Hofstede devised a scoring system to measure the four dimensions of national culture. The scores on these dimensions of national culture for some eastern and western countries are shown in table 2.5. High scores represent larger power distance, high individualism, strong uncertainty avoidance and high masculinity whereas low scores represent small power distance, low individualism, weak uncertainty avoidance and low masculinity.

Table 2.5 Scores on four dimensions of national culture for some eastern and western countries

Countries	Power Distance	Individualism /Collectivism	Uncertainty Avoidance	Masculinity/ Femininity
China	80*	20*	60*	50*
Hong Kong	68	25	29	25
Taiwan	58	17	69	45
Japan	54	46	92	95
South Korea	60	18	85	39
Singapore	74	20	8	48
Thailand	64	20	64	34
Malaysia	104	26	36	50
Indonesia	78	14	48	46
Philippines	94	32	44	64
Australia	36	90	51	61
Canada	39	80	48	52
France	68	71	86	43
Germany	35	67	65	66
Great Britain	35	89	35	66
Italy	50	76	75	70
Netherlands	38	80	53	14
New Zealand	22	79	49	58
USA	40	91	46	62

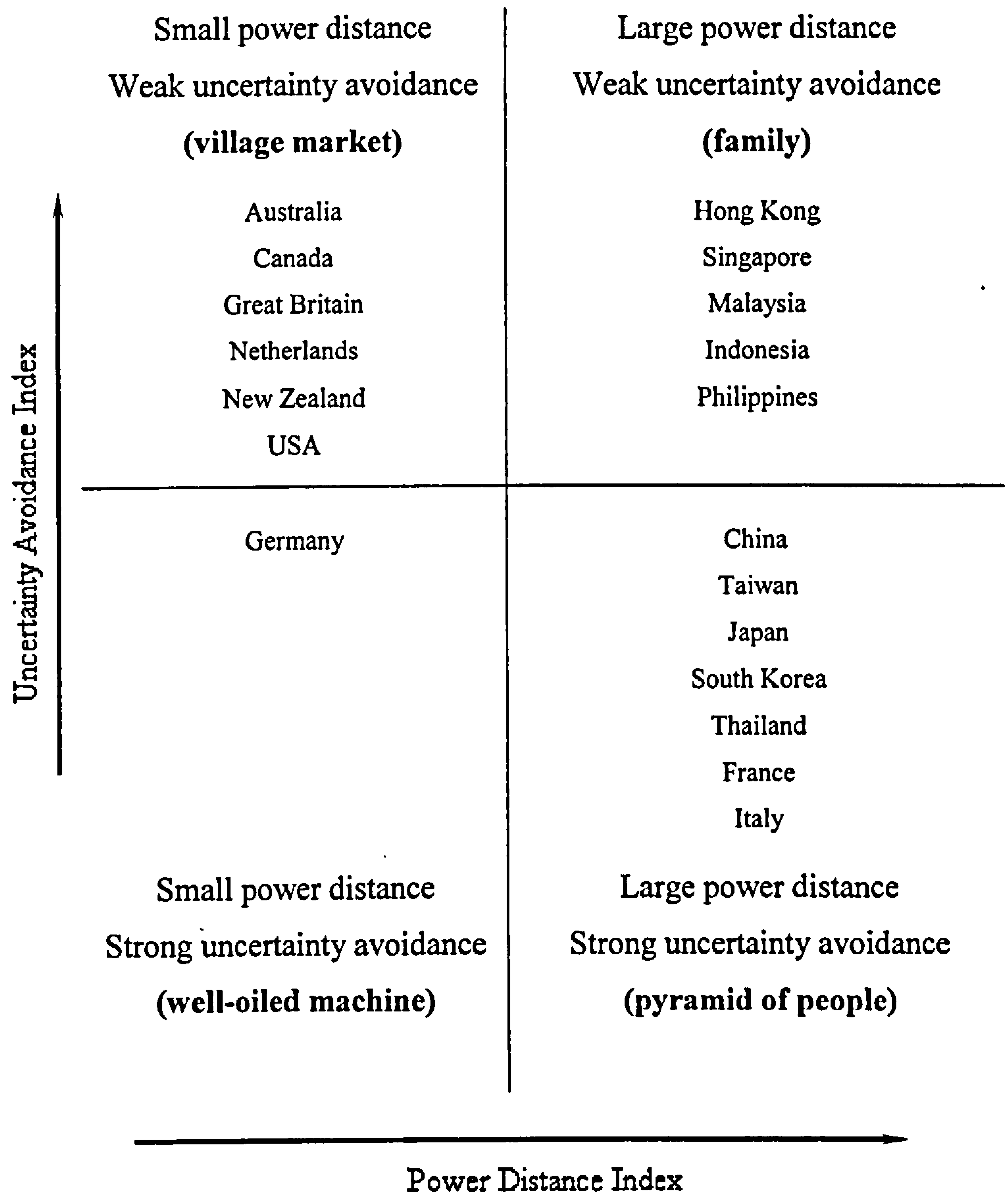
*Estimated
Source: Hofstede (1984), Hofstede (1993)

It can be seen from the above, at the organisation level, differences among cultures in these four dimensions have many consequences for management practices, e.g. both power distance and individualism/collectivism affect the type of leadership whereas masculinity/femininity and uncertainty avoidance affect employees' motivations. However, within these four dimensions, power distance and uncertainty avoidance are the two decisive dimensions of culture affecting organisational practices. This is because organisations are devices to distribute power. They also serve to avoid uncertainty and to make things predictable. Different combinations of these two dimensions can reveal differences in the implicit model people from different cultures may have about organisational structure and functioning.

Based on an unpublished study that measured the links between the implicit models of organisations and objectively assessable characteristics of organisational structure, Professor O.J. Stevens of INSEAD in France has observed that large power distance plus strong uncertainty avoidance leads to people viewing an organisation as a 'pyramid of people.' This consists of a chief executive at the top and everyone else being located in a hierarchy at lower levels interacting according to the rules. Stevens cited countries like France and Latin and Mediterranean countries as falling within this dimension. Also according to Stevens small power distance plus strong uncertainty avoidance leads to viewing organisations as 'well-oiled machines' whose operations are predetermined by the rules, without the need of hierarchical interventions in daily operations. Representative countries consist of Germany and other Central-European countries. Small power distance plus weak uncertainty avoidance leads to viewing organisations as a 'village market' in which actors negotiate and where outcomes are neither predetermined by a hierarchy nor by procedures. Great Britain and other Anglo and Nordic countries are presented as illustrations of this dimension. Large power distance plus weak uncertainty avoidance leads to viewing organisations as a "family", in which authority is clearly centralised in the "parents", but outcomes are not predetermined by procedures. Representative countries within this category are India and other Asian and African countries (Hofstede 1984).

The combination of power distance and uncertainty avoidance for some eastern and western countries based on table 2.5 is shown in figure 2.2.

Figure 2.2 Combination of power distance and uncertainty avoidance



Source: Adapted from Hofstede 1985

The four types of implicit models of organisations (pyramid, machine, market and family) suggest that there is no one best way of organising. The structures of organisations need to suit for the surrounding culture. They will only be effective when the people inside and around the organisation properly understand them. If an organisation is transferred to a different cultural environment (for example foreign subsidiaries' management practices, procedures and styles may have to be changed in order to maintain effectiveness.

2.1.2.5. Confucian dynamism

The fifth dimension labelled Confucian Dynamism was added on the basis of a questionnaire study called the Chinese Value Survey (CVS) or the Chinese Culture Connection. The study was undertaken by a group of researchers in Hong Kong. It was translated from 40 Chinese items (see table 2.6) into different languages and answered by fifty male and fifty female students from twenty-three countries and regions in all five continents.

The Chinese Value Survey was motivated by observations of the World Bank data relating to the average annual growth rate of per capita gross national product between 1965-1985. It was observed that the East Asian Five Dragons—Japan, South Korea, Taiwan, Hong Kong, and Singapore were heading the list. The average annual sustained-growth percentages over a 20-year period was 7.6% for Singapore, 7.2% for Taiwan, 6.6% for South Korea, 6.1% for Hong Kong and 4.7% for Japan. In contrast, rates within same period were only 2.4% for Canada, 1.7% for the United States and 1.6% for Britain (Hofstede and Bond 1988).

The Chinese Values used in CVS are listed in table 2.6.

Table 2.6 The Chinese values used in the Chinese value survey

1.	Filial piety (obedience to parents, respect for parents, honouring of ancestors, Financial support of parents).
2.	Working hard.
3.	Tolerance of others.
4.	Harmony with others.
5.	Humbleness.
6.	Loyalty to superiors.
7.	Observation of rites and social rituals.
8.	Reciprocation of greetings, favours, and gifts.
9.	Kindness (Forgiveness, compassion).
10.	Knowledge (Education).
11.	Solidarity with others.
12.	Moderation, following the middle way.
13.	Self-cultivation.
14.	Ordering relationships by status and observing the order.
15.	Sense of righteousness.
16.	Benevolent authority.
17.	Non-competitiveness.
18.	Personal steadiness and stability.
19.	Resistance to corruption.
20.	Patriotism.
21.	Sincerity.
22.	Keeping oneself disinterested and pure.
23.	Thrift.
24.	Persistence (Perseverance).
25.	Patience.
26.	Repayment of either the good or the evil that another person has caused you.
27.	A sense of cultural superiority.
28.	Adaptability.
29.	Prudence (Carefulness).

Table 2.6 The Chinese values used in the Chinese value survey (continued)

30.	Trustworthiness.
31.	Having a sense of shame.
32.	Courtesy.
33.	Contentedness with one's position in life.
34.	Being conservative.
35.	Protecting your "face".
36.	A close, intimate friend.
37.	Chastity in women.
38.	Having few desires.
39.	Respect for tradition.
40.	Wealth.

Source: The Chinese Culture Connection (1987)

Based on the 40 items above, the CVS developed four dimensions. They are CVS_1 (Integration), CVS_2 (Confucian dynamism), CVS_3 (Human-heartedness) and CVS_4 (Moral discipline). In the correlated analysis of these dimensions with Hofstede's IBM dimensions, CVS_1 was found very similar to power distance, CVS_4 to individualism/collectivism, CVS_3 to masculinity/femininity, but no CVS dimension was found resembling uncertainty avoidance (The Chinese Culture Connection 1987). The CVS dimensions associated with supporting values are shown in table 2.7.

Table 2.7 CVS dimensions and their supporting values

CVS_1 (Integration)	CVS_2 (Confucian dynamism)
1. Tolerance of other. 2. Harmony with others. 3. Solidarity with others. 4. Non-competitiveness. 5. Trustworthiness. 6. Contentedness. 7. Being conservative. 8. A close, intimate friend. 9. Filial piety. 10. Patriotism. 11. Chastity in women	1. Ordering relationships 2. Thrift. 3. Persistence. 4. Having a sense of shame 5. Reciprocation. 6. Personnel steadiness. 7. Protecting your 'face'. 8. Respect for tradition.
CVS_3 (Human-heartedness)	**CVS_4 (Moral discipline)**
1. Kindness. 2. Patience. 3. Courtesy. 4. Sense of righteousness. 5. Patriotism.	1. Moderation keeping oneself disinterested and pure. 2. Having few desires. 3. Adaptability. 4. Prudence.

Source: The Chinese Culture Connection 1987

Further analysis was undertaken by CVS researchers. They found that none of the four IBM dimensions were related to national economic growth across all countries. They also found that CVS_2, (Confucian dynamism) did not correlate with any of the Hofstede's dimensions. This is not surprising from a glance at its composition of eight items shown in table 2.7. In the CVS survey, the countries scores on Confucian Dynamism are strongly associated with those countries' economic growth. Thus CVS found a cultural link to an economic phenomenon by discovering a new dimension (i.e. Confucian Dynamism). This dimension was strongly associated with economic growth over the period between 1965 and 1985 across all countries and regions covered by the CVS (Hofstede and Bond 1988). It locates cultures on a continuum from relatively long-term oriented to relatively short-term oriented. Hofstede preferred to use the more neutral label "Long-term/Short-term Orientation" as an alternative because it appears that the two sides can divide the supporting values. On the long-term side one finds values oriented towards the future, like thrift (saving) and persistence. In contrast, on the short-term side one finds values rather oriented towards the past and present, such as respect for tradition and fulfilling social obligations (Hofstede 1993).

Scores on Confucian Dynamism dimension for the countries and regions in CVS plus China are listed in table 2.8.

Table 2.8 Scores on Confucian Dynamism for CVS' countries and regions

Countries	Scores	Rank
China	118*	1
Hong Kong	96	2
Taiwan	87	3
Japan	80	4
South Korea	75	5
Brazil	65	6
India	61	7
Thailand	56	8
Singapore	48	9
Netherlands	44	10
Sweden	33	11
Australia	31	12-13
Germany (F.R.)	31	12-13
New Zealand	30	14
United States	29	15
Great Britain	25	16-17
East Africa	25	16-17
Canada	23	18
Philippines	19	19
West Africa	16	20
Pakistan	0	21

*Estimated
Source: Hofstede and Bond (1988), and Hofstede (1993)

From table 2.8 , it can be seen that four of the Five Dragons—Hong Kong, Taiwan, Japan and South Korea hold the top positions on the Confucian Dynamism scale in the CVS.

Data on both IBM and CVS for China is missing, but Hofstede provided estimated scores for all five dimensions (see tables 2.5 and 2.8). From these scores, China locates high on power distance, low on individualism (high on collectivism), mid-range on masculinity and uncertainty avoidance, and highest on Confucian dynamism.

Since 1978 when China started to carry out the reform and openness policy, China has maintained a constant economic growth. Table 2.9 shows Chinese Gross Domestic Products (GDP) growth rate in recent years.

Table 2.9 GDP growth rate of China from 1993

Year	GDP growth rate
1993	13.5%
1994	12.6%
1995	10.5%
1996	9.6%
1997	8.8%
1998	7.8%
1999	7.1%
2000	8.0%

Source: China Statistics Yearbook

Culture in the form of certain dominant values is a necessary condition for economic growth. The cultures of East Asian countries including China were labelled 'new-Confucian' by the futurologist Herman Kahn. This means that East Asian countries have shared cultures rooted in the teachings of Confucian, which can go back into history. These cultural inheritances produce particular values, which can lead to nations developing specific competencies and competitive advantage for successful business activity under increasingly complex and dynamic world-markets in the past and present.

It is also noticed that in recent years, especially from the Asian financial economic crisis in 1997, the economic growth of most East Asian countries including the Five Dragons have shown a tendency towards decline. Even the growth-oriented Japanese economy has remained at a low point for some years. However, this does not necessarily deny the relationship between Confucian dynamism and national economic growth but it does indicate that culture alone is not sufficient for such growth to occur. Other necessary conditions such as market and political factors are also important factors that allow economic development. For example, the global economy slow down was made worse by the terrorist event at the World Trade Centre on September 11, 2001.

There are some alternative cultural taxonomies based on value dimensions (Chow *et al.* 1999; Harrison and McKinnon 1999; Lau *et al.* 1997) and even some important criticisms of Hofstede's framework (McSweeney 2002), Hofstede's (1991) taxonomy, however, has been widely used in cross-cultural management research and has been empirically supported (Harrison and McKinnon 1999; Chow *et al.* 1996, 1999; McSweeney 2002). Therefore the analysis of the relationship between cultures and practices in this study will be mainly based on Hofstede's taxonomy.

2.1.3 Characteristics of Chinese organisational practices and cultural dimensions

China is rapidly emerging as one of the world's larger and fastest growing economies. Yet, relatively few studies have directly examined how Chinese cultural values affect the consequence of alternate organisational practices (Merchant *et al.* 1995).

China itself has experienced rapid economic development and the implementation of many effective management practices. Successful Chinese entrepreneurs have followed management approaches that are not common in western countries. Thus many westerners do not understand aspects of the Chinese management culture, such as stressing human relationship, personal connections and trust. Such approaches date back thousands of years.

Except for some common features listed on tables 2.1 - 2.4 relating to large power distance, high collectivism, strong uncertainty avoidance and femininity, the following paragraph outlines some typical characteristics of organisational practices in Chinese enterprises. They cover all cultural dimensions, although some characteristics can be classified into different dimensions.

2.1.3.1 Power distance dimension

In Hofstede's terminology, China is a society that can be classified within the large power distance category, in which people accept a hierarchical order in which everyone has an assigned place. It is often accompanied by a concern with titles, complicated rituals of acknowledging precedence and long-term maintenance of ties of obligation. Members of the society should know their own position in the whole societal link, and behave in a manner consistent with the expected code of conduct. The subtleties of which are often visible to its members. The society's rules for authority become embedded in its business entities.

A traditional Chinese enterprise, e.g. a state-owned enterprise, has a high regard for hierarchy, in essence vertical order, in which individuals in superior positions are accorded a wide range of prerogatives and authority over those below them. The stability of the enterprise is based on unequal relationships between members, which are based on mutual and complementary obligations. In general, the subordinate owes the superior respect and obedience, while the superior owes the subordinate protection and consideration.

Another significant characteristic in this kind of enterprise is the tradition of bureaucracy with a highly structured centralised administrative system. People in these enterprises have a strong cultural value system that influences attitudes towards accepting authority and reconciling one's behaviour to conform.

2.1.3.2 Individualism/Collectivism dimension

The position of China on the dimension of individualism/collectivism is very different from that of the most western countries. China is a typical collective country whereas western industrialised countries tend to be individualistic societies. Chinese people have a strong sense of psychological dependency on a particular social group. An individual is locked into a cohesive family structure, which cultivates collective consciousness and responsibility. The structural effects develop a social orientation towards authority and a group orientation.

In the collectivism environment, the structure of a typical Chinese organisation is like a big family. A good superior is expected to behave like a benevolent father towards subordinates: paternalism is the norm. People in the organisation share a common denominator of idealising benevolent, paternalistic leaderships and legitimising dependency. They learn to suppress self-interest in favour of group solidarity while expecting welfare benefits in exchange to the loyalty and conformity offered. They view their actions as an important contribution to their group/organisation's well being, and they gain satisfaction and feelings of accomplishment from group/organisation outcomes. A strong sense of obligation and responsibility to one's group and organisation is cherished as a valuable organisational culture. The subtleties of vertical obligation may be invisible but they have had a great impact on the internal efficiency of many Chinese traditional enterprises.

In Chinese state-owned enterprises, there is a greater preference for team-based over individual-based performance measures and rewards, and top management make decisions favouring team-based performance.

2.1.3.3 Uncertainty avoidance dimension

Although according to Hofstede's terminology, China is classified on the mid-range uncertainty avoidance, Chinese society by nature has had a strong inclination to avoid uncertainty. In contrast to the western approach, which encourages curiosity and experimentation in acquiring knowledge, Chinese teaching relies heavily on reference to tradition and discourages the pursuit of original thought. This social framework does not allow people's conduct to deviate from the prescribed code. Furthermore, the fact that Chinese people are more likely to see distinctions and separateness supports the case for a strong uncertainty avoidance societal value (Chow *et al.* 1995).

In Chinese organisation, there is a strong emphasis on the avoidance of interpersonal conflict by subjugating one's own interests to those of the collective. In order to avoid conflict, complicated webs of relationships based on unseen understandings about mutual obligation (called Guanxi) are set up both inside the organisation and between organisations, many of which are informal and invisible, but capable of powerful effects that even influence on rational and objective decision-making.

Many westerners simply cannot understand Chinese 'guanxi.' They do not experience the sense of being embedded in network-conflicts that sharply conflict with the western ideal of 'doing your own thing' or 'being your own man' but Chinese people are used to 'guanxi' and readily accept it.

2.1.3.4 Masculinity/Femininity dimension

Chinese culture classifies human behaviour into three categories: the aggressive, the restrained and the passive. According to Confucius, an ideal person is one who exhibits self-restraint and emotional control. The Chinese pattern of behaviour is labelled as 'moderation, balance and harmony'. Achieving harmony in society and with nature has especially been a fundamental theme of Chinese culture. These features reveal a preference for femininity in Chinese society where there is a preference for modesty, quality of life rather than achievement in terms of material success (Chow *et al.* 1995).

Harmony in Chinese organisations is stressed in organisational culture. A deep-seated belief is that a harmonious enterprise flourishes and prospers. Most Chinese managers have a spirit of compromise and conciliation. In order to harmonise the enterprise's relationship with outside, they learn how to achieve a balance between corporate and social benefits. Even in the internal management, they leave a considerable leeway for subordinate's task accomplishment.

2.1.3.5 Confucian dynamism dimension

As a long-term oriented (i.e. strong Confucian dynamism) society, Chinese culture values thrift and perseverance that are more dynamic and more towards the future rather than towards the past and the present. Chinese people are tenacious in pursuing goals and also thrifty in order to conserve resources for future needs.

In Chinese organisations, managers always think of money as a security surrogate. They believe in Confucian familism and encourage subordinates to work hard and be thrift. The Chinese management culture also stresses morality. Chinese managers have been shown to honour at tight set of business rules. They all expect to keep long-term and good relationships with their business partner companies, thus long-term performance other than short-term performance is more highly rated.

The above are some traditional management features of Chinese organisations based on Hofstede' and other researcher's studies. Hofstede's data, however, is now over 20 years old and was obtained from only one firm (IBM). Furthermore, Hofstede's views are to some extent based on western thinking. For example, some researchers question national culture determinism in organisational practices. They suggest that other factors, such as organisational culture, work context, competitive pressures or other non-cultural contingencies might significantly influence organisational practices (O'Connor 1995; Merchant *et al.* 1995; Awasthi *et al.* 1998; Chow *et al.* 1999; Lee *et al.* 2000).

2.1.3.6 Future changes

Hofstede (1991 and 1999) defines organisational culture as the manifestation of practices and behaviours that derive from the shared values in the organisations and considers that organisational cultures are not rooted in values but rather in practices. However, in Burns and Scapens's (2000) framework, organisational culture is a part of the international realm. Although change is considered to be difficult, it is not impossible. The above statements include clear messages that organisational cultures and practices supplement each other. Since practices are more superficial than values, organisational cultures are more manageable. A partial cultural convergence in organisational practices seems to be occurring due to an increased cross-cultural intercourse, such as trade cooperation, use of the internet and global management software and joint ventures (Hofstede 1999; Birnberg and Snodgrass 1998; Merchant *et al.* 1995; Granlund and Lukka 1998a). That is why some organisations take deliberate actions to produce an organisation-specific culture to achieve the acceptance of certain practices and behaviours (Harrison *et al.* 2000).

Today the organisational practices of Chinese enterprises are undergoing great changes. Chinese enterprises are learning advanced management techniques and operating in many different ways, such as establishing joint ventures, employing experts and training staff.

It is well known that tremendous social changes will lead to dramatic changes in cultural concepts. There is a general view that economy and culture must be integrated. The more integrated the economy and culture become, the sounder the social development will be. In the process of change, things rejected in the past may become popular now. For example, although the Chinese people have strong cultural values towards accepting authority and reconciling one's behaviour to conform, modernisation is moving Chinese management teams in joint ventures towards a higher level of internal control and away from authoritarian attitudes, suggesting great internal control and independence over personal decisions. Western management ideas and organisational practices are now being widely circulated in China. As China moves towards a free market economy, it is likely enterprises may seek to examine western style management techniques and organisational practices and adopt those that seem appropriate. Therefore, the issue of the intermingling of cultures must be taken into account in the study of culture and organisational practices.

Some researchers have predicted that Chinese culture would be one of the dominant cultures on the world stage in the 21st century (e.g. Merchant 1995) and that the Chinese economy will be of considerable importance. Another widely accepted fact is that Chinese culture and management practices are quite different from those of western countries. Management culture in the new century should and can draw on ideas from China as well as from the West (Su *et al.* 1998). As in the last third of the 20th century the economic success of Japan resulted in many western companies copying aspects of Japanese practices, such as lifetime employment, group decision-making and employment participation. There is a need in the future, for the East and the West to learn from each other. This is reflected in the following statement:

> The East and the West must unite to give each other what is lacking ---Abdu's-Baha, 1911

2.2 Culture and accounting

There is a considerable amount of literature that seeks to classify and explain the diversity of accounting practices across different countries. From this literature, Doupnik and Salter (1995) identified three elements, which appear to determine a nation's accounting development. They are:

- The external environment, which affects both a society's culture and its institutional structure and provides external stimuli that initiate change.

- Cultural values, which affect the institutional structure, and which govern the interactions between components of the institutional structure in evaluating suitable responses to external stimuli.

- The institutional structure within which responses are made.

They also thought that an understanding of how external environment, cultural factors and institutional structure affect cross-national accounting diversity can be useful in efforts to reduce that diversity and enhance the comparability of accounting information world-wide.

Concerning the impact of culture on accounting and based on the study of culture and cultural dimensions, Gray (1988) extended the application of these ideas to accounting by developing a model of the accounting sub-culture. According to Hofstede, 'culture' is reserved for societies as a whole, or nations, whereas 'sub-culture' is used for the level of an organisation, profession or family. While the degree of cultural integration varies between societies, most sub-cultures within a society share common characteristics with other sub-cultures (Hofstede 1980). Gray (1988) proposed that if societal value orientations are related to the development of accounting systems at the sub-culture level, there should be a close match between culture areas and patterns of accounting systems internationally.

In order to explore further the relationship between culture and accounting systems in an international context, Gray also identified mechanisms by which values at the societal level are linked to values at the accounting sub-cultural level. He hypothesised that the latter is likely to influence directly the development of accounting systems in practice.

Gray (1988) supplied four 'accounting values' for consideration. There are

- Professionalism versus statutory Control - a preference for the exercise of individual professional judgement and the maintenance of professional self-regulation as opposed to compliance with prescriptive legal requirements and statutory control.

- Uniformity versus flexibility - a preference for the enforcement of uniform accounting practices between companies and for the consistent use of such practices over time as opposed to flexibility in accordance with the perceived circumstances of individual companies.

- Conservatism versus optimism - a preference for a cautious approach to measurement so as to cope with the uncertainty of future events as opposed to a more optimistic, laissez-faire, risk-taking approach.

- Secrecy versus transparency - a preference for confidentiality and the restriction of disclosure of information about the business only to those who are closely involved with its management and financing as opposed to a more transparent, open and publicly accountable approach.

The relationships between Hofstede's cultural dimensions and the above accounting values are that:

- Professionalism can be linked most closely with the individualism and uncertainty avoidance dimensions, e.g., the higher a country ranks in terms of individualism and the lower it ranks in terms of uncertainty avoidance and power distance then the more likely it is to rank highly in terms of professionalism;

- Uniformity can be linked most closely with the uncertainty avoidance and individualism dimensions, e.g., the higher a country ranks in terms of uncertainty avoidance and power distance and the lower it ranks in terms of individualism then the more likely it is to rank highly in terms of uniformity.

- Conservatism can be linked most closely with the uncertainty avoidance dimension, e.g., the higher a country ranks in terms of uncertainty avoidance and the lower it ranks in terms of individualism and masculinity then the more likely it is to rank highly in terms of conservatism.

- Secrecy can be linked most closely with the uncertainty avoidance and power distance and individualism dimensions, e.g., the higher a country ranks in terms of uncertainty avoidance and power distance and the lower it ranks in terms of individualism and masculinity then the more likely it is to rank highly in terms of secrecy.

From the above relationships, it is evident that the most important societal values at the level of the accounting sub-culture are uncertainty avoidance and individualism. While power distance and masculinity are also significant to some extent, masculinity appears to be of somewhat lesser importance in the system of accounting values (Gray 1988).

Although Gray's accounting values specifically apply to financial accounting systems, his sub-cultural theory of accounting is also useful for analysing the relationship between cultural dimensions and management accounting because financial accounting and management accounting fall within the same level of sub-culture.

2.3 Culture and management accounting

National and organisational cultures have traditionally been seen as the most important drivers of divergence in relation to management accounting practices (Birnberg and Snodgrass 1988; Chow *et al.* 1999). National cultures differ most at the value level and organisational cultures (corporate cultures) differ most at the practices level (see section 2.1.2). However, Granlund and Lukka (1998) further divide the influence of national cultures on management accounting practices into macro and micro levels. They argue that the impact of national cultures at the macro level of management accounting practices is reducing as an increasing globalisation of economy. For example, under the pressure of global competition, firms would like to adopt corresponding successful managerial ideas (e.g. TQM, JIT, Benchmarking, customer-orientation) and management accounting approaches (e.g. ABC, Non-financial measurement) irrespective of their possibly differing organisational and national cultures. They indicate that this process will lead to a convergence of management accounting practices at the macro level (e.g. concepts, ideas, techniques and system designs, etc).

In contrast, national cultures and organisational cultures set norms for organisational behaviour drive and divergence in management accounting practices at the micro level only (e.g. behavioural patterns and styles of certain management accounting practices). The authors also claim that the influence of organisational cultures on management accounting practices appears to be stronger than that of national cultures.

A large number of empirical studies have examined the relationships between national and organisational culture and various aspects of management accounting, such as management control system, budget participation, strategic decision-making, activity-based costing. Some of these studies are summarised below. They indicate that there are considerable differences in management accounting practices across-cultural environments at the micro-level. The results suggest that management accounting techniques that are effective in one country may be ineffective, or even dysfunctional in another. However the differences arise from the interaction between national and organisational cultures on management accounting practices mainly at micro level, i.e. involving people's attitude towards using these management accounting practices in different corporate cultures.

The study by Birnberg & Snodgrass (1988) focuses on three functions of management control systems (monitoring, evaluating and rewarding) by comparing the perceptions of these functions held by U.S. and Japanese managers and workers. The research produced three findings:

- The Japanese managers and workers had more similar values relating to monitoring and evaluating than did U.S. managers and workers. However, the U.S. respondents were more homogeneous than the Japanese ones when considering the reward process.
- The Japanese companies had more implicit or informal control systems while the U.S. companies had more explicit or formal control systems.
- The Japanese view their control systems as being more explicit in disseminating information, while the U.S. respondents saw their control systems as being more explicit in defining roles.

Chow *et al.* (1999) investigated the effects of national culture on the design of, and employees' preference for, management controls by collecting data from 159 Taiwanese managers working in six Japanese, Taiwanese and USA owned size-matched firms within the computers/electronics sector in Taiwan. Their results indicated that national cultures affected the design of and employees' preferences for management control systems.

Daley *et al.* (1985) undertook a survey to examine the attitudes towards various aspects of budgeting and control systems and to obtain insight into the existence of differences. The research was based on a large sample (the 500 largest industrial firms in Japan and U.S.) of Japanese and U.S. controllers and line managers. The results of the study increased the level of understanding about Japanese and U.S. managers' attitudes towards the components of a management control system. They found that the U.S. respondents agreed more with the use of controllability filters, purchase autonomy, slack budgets, expressing budget goals in monetary terms, top-down budgets and using budgets to evaluate performance. However, the Japanese respondents agreed more with using budgets to communicate goals and less with budget-contingent compensation.

Chow *et al.* (1991) examined the relationships between components of control systems and national culture by testing how individualism interacts with two types of control system interdependence (workflow and pay) to affect performance, using respondents from Singapore and the USA. The results are consistent with culture individualism and management controls having independent, but not interactive, effects on performance.

According to Hofstede (1980) most countries have either high power distance & low individualism or low power distance & high individualism. Using data obtained from managers in Australia (low power distance and high individualism) and Singapore (high power distance and low individualism), Harrison (1992) studied the moderating effects of participative budgeting on the relationship between performance evaluation style and job-related tension and job satisfaction. He found that national culture did not have a moderating effect of participative budgeting. Harrison (1993) also examined the influences of culture and personality on the relationship between the reliance on accounting performance measurement in the evaluative style of superiors and work-related attitudes of subordinates. He found that high reliance on accounting performance measures and budgets by superiors for evaluation purposes was associated with lower tension and with higher job satisfaction in a high power distance and low individualism society. In contrast, low reliance on such measures and budgets was associated with lower tension and higher job satisfaction in a low power distance and high individualism society. No support was found for the personality variable.

Chow *et al.* (1999) adopted an experimental approach involving the U.S. subjects representing a high individualism culture and Chinese nationals from Taiwan representing a low individualism culture. They examined the effects of individualist and collectivist cultures on individuals' decisions in a team-based setting. Their findings indicated that only the U.S. subjects chose more team-based performance measures when they perceived higher-level task interdependence. Holding constant the level of perceived task interdependence, the U.S. subjects selected more team-based performance measures compared to their Chinese counterparts. However, holding constant both the performance measure and perceived task interdependence, the U.S. subjects made greater self-sacrifices in favour of the team. Furthermore, the U.S. subjects were more concerned than Chinese subjects about their own and their teammates' individualistic tendencies. Therefore they selected performance measures that restricted them and their co-workers and made resource expenditure decisions that promoted team-oriented behaviour.

Bond *et al.* (1982) examined the impact of task and maintenance contributions on reward distribution to answer how the dimension of collectivism/individualism influences the way organisational members allocate rewards and punishments to people for various types of input to a group project. They chose undergraduates from Hong Kong as subjects to represent a high collectivism culture and from the U.S. to represent a high individualism culture. They found that the collectivism culture produced a more equal distribution of rewards at the interpersonal level whereas the Chinese people showed greater moderation in distributing any kind of resource to avoid conflict and embarrassment and to promote group harmony and solidarity over time.

A field study by Merchant *et al.* (1995) explored the differences between U.S. and Taiwanese companies in measuring, evaluating and rewarding profit centre managers. Surprisingly, their findings were generally inconsistent with previously identified dimensions of national culture and companies' measurement, evaluation and reward practices. The study revealed other factors that were more important than national culture in explaining differences and similarities between the practices of the companies in the two countries. The factors included senior managers' education and experience, the development stage of the business, the type of business and pattern of company growth , the nation's labour force mobility and the use of consultants.

O'Connor (1995) examined whether differences in organisational culture between local and foreign manufacturing firms affected the usefulness of budgetary participation in a high power distance nation (Singapore). The results indicated that power distance moderates the usefulness of participation in budget setting and performance evaluation at the organisational culture level in terms of decreased the role ambiguity and enhanced superior/subordinate relationship.

The study by Lau and Tan (1998) examined whether the three-way interaction between budget emphasis, budgetary participation and task difficulty affected managerial performance. In common with Harrison (1992), Lau and Tan used the managers of financial services sector from Australia (low power distance and high individualism) and from Singapore (high power distance and low individualism) as samples. Their results indicated that budget emphasis has a significant and positive main effect on performance for financial services sector managers, whilst budgetary participation interacts significantly with task difficulty to affect performance. No cultural effects on the relationship between evaluative styles and performance were found. Another 'surprise' for Lau and Tan was that the application of the instrument of Hofstede (1998) to measure power distance and individualism/collectivism showed no difference between the Australian and Singapore samples on either dimension (Harrison and McKinnon 1998).

An empirical comparison of budget and performance evaluation systems in large Japanese and American manufacturing firms was carried out by Bailes and Assada (1991). They found that the budget preparation process of American firms is more complex than for Japanese firms. Participation in budget preparation is significantly more common for divisional and operating managers in American firms. The budget planning process in American firms is initially oriented to a top down approach compared to a bottom up approach for Japanese firms. In the ranking of budget goals for divisional managers, Japanese firms ranked sales volume as the most important goal , followed by profits after allocation of corporate overhead. In contrast, return on investment (ROI) was the top ranked budget goal followed by controllable profit in American firms. For budget variances, Japanese firms were significantly more likely to focus on the identification of problems and improving future budgets whereas American firms focused more on the evaluation of divisional performance. Also American managers focused more on short-term performance than Japanese managers.

A case study by Carr and Tomkins (1998) examined cultural and contextual differences in strategic investment decisions and management control styles in the vehicle components manufacturing industry across the four countries - U.K., Germany, USA and Japan. A longer-term strategic orientation was found in German and Japanese companies. In contrast, Anglo-American short-terminism as reflected by a preponderance and over-reliance of strong financial control style companies was observed particularly in the U.K. High 'comfort factors' financial hurdle rates were also observed. Strategic decision making processes, particularly in the U.K., were also more politicised and less attentive to detail.

Ralson *et al.* (1993) examined values held by practising managers and future business leaders in the U.S. and Hong Kong. The research examined cross-national value differences and how values held by managers influenced their decision-making behaviour. They found that since values differed significantly between current and future managers in both cultures, different decision-making processes are likely to result in dissimilar business strategies. Hong Kong managers were most comfortable with unambiguous decisions. Strategies were therefore likely to reflect their preference for certainty and for avoiding high-risk, innovative situations. By contrast, U.S. managers may bring to strategic alliances a level of frustration born of their eagerness to make rapid decisions and to accept risks and uncertainty.

Roxas and Stoneback (1997) examined the influence of dimensions of culture on the ethical decision process in a broad scope of eastern and western countries (nine) including China and the United States. They found that the accounting systems and the accounting profession in China were developing very quickly. They suggested that the further development of the Chinese accounting system would likely be influenced by their trading partners. The study suggested that when accounting professionals undertake business in countries with similar accounting systems, they might expect similar ethical decision-making responses to accounting ethical dilemmas.

Brewer (1998) examined the relationship between national culture and activity-based costing systems based on a multi-national corporate (Harris Semiconductor), which had implemented an ABC system at plants located in Malaysia and the United States.

Brewer used two out of the six predictions formulated from Hofstede's (1980) taxonomy of work-related cultural values, which were:

1. A company that relies upon high-level managers to champion ABC initiatives in a strong 'top-down' fashion will generate more defensive behaviour in low-power-distance cultures, thereby reducing ABC success relative to high-power-distance cultures. Brewer identified the U.S. as having a low power-distance culture and Malaysia as having a high-power-distance culture. Therefore based on the prediction, Malaysian plants should have a higher level of ABC success as compared to the U.S. plants.

2. The cross-functional team-based approach to work inherent in ABC systems will result in more defensive behaviour in individualist cultures, thereby reducing ABC success relative to collectivist cultures where cross-functional teams co-operatively work in groups. Here, Brewer identifies Malaysia as having a collectivist culture and the U.S. as having an individualist culture. Therefore based on prediction (2) he advocates that Malaysian plants will have a higher level of ABC success as compared to the U.S. plants. Focussing on these predictions, Brewer drew up the following research hypothesis that "the level of ABC success will be greater in HS's Malaysian plant relative to its U.S. plants" and his research findings were consistent with his hypothesis.

The study therefore suggests that national culture does have an impact on the success of ABC and therefore it is necessary to cater for the cultural differences when evaluating the likely success of ABC implementation. Nevertheless, Brewer cautioned that the generalisability of his findings might be questionable because his study was based only on one company i.e. the Harris Semiconductor Company.

Research by Snodgrass and Grant (1986) explored the cultural influence impact on strategic planning and control process between Japanese and U.S. managers in major multi-national firms. They identified the United States and Japan as being culturally diverse and hypothesised that Japanese organisations would exhibit implicit management control systems and U.S. organisations would exhibit explicit management control systems. The results suggest that there are cultural differences in the manner in which the communications occur between Japanese and U.S. managers and provide implications for Japanese and U.S. managers in their understanding of each other.

The above studies have concentrated mainly on comparing some east Asian countries and regions (e.g. China, Japan, Singapore, Hong Kong and Taiwan) with various western countries (e.g. United States and Australia). They have documented systematic cross-national differences in the uses of management accounting information relating to management control system, planning, budgeting, decision-making processes, and performance evaluations and rewards.

These eastern countries and regions are influenced by traditional Chinese culture, mainly the ideas of Confucius (about 550-479 BC). It is recognised that China is the cultural motherland of Japan. Despite intensive western influences, Hong Kong, Taiwan and Singapore remain, in many ways, fundamentally Chinese. Traditional Chinese values still underpin much of the social fabric in these societies. The similar historical roots, cultural lineage combined with a modern environment have resulted in a mixture of traditional Chinese culture and modern culture. Comparing management accounting practices of these countries with those of the West suggests that there are considerable differences in the use of management accounting information arising from cultural differences. Although very few empirical studies have examined the difference between China and western countries, the cultural differences suggest that the gap might be greater than the observed differences reported by other comparative studies.

2.4 Problems arising when attempting to import foreign culture and management practices

In a wider sense, some researchers have examined the impact of internationalisation. They found that internationalisation did not necessarily result in cultures becoming more similar. As western business practices are introduced into host countries, and as some of the superficial aspects of consumer behaviour converge, the more people tend to vigorously cling to their own culture. Cultural differences are not going away with increasing management contact and interdependence across cultures, but becoming more entrenched (Hoeckin 1995).

Hofstede (1983) also found that not all other countries have been as fortunate as Japan in the successful adaptation of American management theories. Even in European countries (let alone in third world countries like China), foreign management methods and ideas were indiscriminately imported as a part of 'technology transfer'. The evident failure of much of the international development assistance in the past is at least partly due to this lack of cultural sensitivity in the transfer of management ideas.

Taking international joint ventures, whose culture is hybrid between the international organisational culture and local national culture, as an example, many of the problems encountered in the international joint ventures can be traced to specific cultural factors. The following example cited from East Asian Executive Reports (Mu 1995) is a verbal conversation with perceptions between a Chinese engineer and an American quality control manager, both of whom had previously worked together in a department of a Sino-American joint venture in southern China.

> As background, the Chinese tend to perceive supervisory roles as more authoritarian than do Americans, who prefer participatory decision-making. The example recounts verbal conversation in quotation marks, with the perceptions being made by the Chinese and the American in parentheses.
>
> American: "How long will it take you to finish this report?"
> (Perceptions-American: I ask him to participate. Chinese: This is strange. He is the boss. Why doesn't he tell me?)
>
> Chinese: "I do not know. How long should it take?"
> (Perceptions-American: He refuses to take responsibility. Chinese: I asked him for an order.)
>
> American: "You are in the best position to analyse the time requirements."

(Perceptions-American: I'm pressing him to take responsibility for his own actions. Chinese: This does not make sense! I'd better give him an answer.)

Chinese: "Ten days."
(Perceptions-American: He lacks the ability to estimate time; this time estimate is totally inadequate.)

American: "Take fifteen. Is it agreed you will do it in fifteen days?"
(Perceptions-American: I've offered a contract. Chinese: These are my orders; 15 days.)

The report, in fact, required 20 days of regular work. So the Chinese engineer worked day and night, but at the end of the 15th day, he needed one more day. The scenario continues.

American: "Where is the report?"
(Perceptions-American: I am making sure he fulfils his contract. Chinese: He is asking for the report.)

Chinese: "It will be ready tomorrow."
(Perceptions-Chinese: I am working very hard and am cooperating with my superior.)

American: "But we had agreed it would be ready today."
(Perceptions-American: I must teach him to fulfil a contract. He should learn to be more professional. Chinese: This not fair! Not only did he give me wrong orders, but also he does not even appreciate that I am doing a 20-day job in 16 days.)

Outcome: The Chinese engineer went to the general manager and asked for a transfer to a different department.
(Perceptions-The American: is surprised. Chinese: I can't work for such a man; he looks down on me.)

This example illustrates the important role perception plays in how people understand the world, and also just how wrong these perceptions can be. At almost every point in the conversation, the statement of one person is meant in a way that does not match the perception of the other person, to the detriment of the relationship.

In Mu's (1995) study, she examined a case about how an American company pursued a contract with a Chinese paper mill for the purchase of a papermaking machine. She illustrates that the failure of establishing relationships between a foreign company and host company was not because of external factors (e.g. money, technology, market, products etc.). Instead, it was caused by a lack of understanding of cultural differences, involving such factors as personal values, expectations and the perceptions held by people from different cultures. People going into another culture carry their own cultural distortions along. They may experience difficulties in the foreign country because of their own upbringing or culture, or because they lack an understanding of the foreign culture.

2.5 Summary

The differences of management practices including management accounting practices in different organisations may be a result of national and organisational cultural differences between people in these organisations. A number of studies have examined the cultural differences between various east Asian countries and various western countries. They have documented systematic cross-national differences in management accounting practices and suggested that management accounting techniques which are effective in one country may be ineffective, or even dysfunctional in another. This appears to be due to people of different national origins having different attitudes towards, or reactions to, the same management accounting practices (Birnberg & Snodgrass 1988; Chow *et al.* 1994; Daley *et al.* 1985). In short, culture influences people's values, beliefs, attitudes and behaviour.

Culture is divided into two levels, national and organisational culture (corporate culture). The former differs mostly in relation to the values of the people while the latter differs mostly at the practice level. Hence, the study on the interaction between national and organisational culture should focus on the differences in corporate practices.

A representative study on the cultural differences among nations was provided by Hofstede's research. Hofstede (1980) originally identified four cultural dimensions: power distance, uncertainty avoidance, individualism/collectivism and masculinity/femininity. He later added a fifth cultural dimension - Confucian dynamism. The differences relating to organisational practices arising from the strong or weak extent of individual cultural dimensions were described. According to Hofstede's terminology, China is a society with the characteristics of large power distance, collectivism, strong uncertainty avoidance, mid-range femininity and very high Confucian dynamism. In contrast, Anglo-American countries can be mainly characterised as low power distance, individualistic, weak uncertainty avoidance, mid-range masculinity and a very small Confucian dynamism societies (see tables 2.5 and 2.8). Such a large difference among cultural dimensions between China and Anglo-American countries may result in a considerable gap of management practices between Chinese and western organisations.

It is necessary to recognise the interaction between economic development and cultural change. When China moves towards a free market economy, it is likely that Chinese organisations may seek to examine western management techniques and organisational practices and adopt those that seem appropriate for their environments. Therefore, the issue of the integration of eastern and western culture must be taken into account in the study of organisational practices. The relevant literature also indicates that there is a convergence in management accounting practices across countries at the macro level but not at the micro-level (Granlund and Lukka 1998).

CHAPTER 3

CONTEMPORARY MANAGEMENT ACCOUNTING PRACTICES

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The main introduction of western management accounting practices in China occurred about 20 years ago. To meet the objectives of this study it is necessary to ascertain how these practices operate currently in western organisations so that practices in Chinese and western organisations can be compared. The aim of this chapter is therefore to provide a reference point to enable comparisons of management accounting practices to be carried out between the two different kinds of Chinese organisations (joint ventures and state-owned organisations) discussed in later chapters. This chapter summarises and outlines contemporary management accounting practices, describes the major criticisms of traditional systems and the arguments for the need for change. It begins with criticisms of traditional systems and the recognition for a need to change (section 3.1). A description of the recent developments in management accounting is described in section 3.2. The empirical studies relating to current practices of management accounting in western countries are described in section 3.3 and issues relating to management accounting education and research are presented in section 3.4. Section 3.5 provides the summary of this chapter.

3.1 Criticisms of traditional systems and the recognition for a need to change

In comparison with financial accounting, management accounting is relatively new. Management accounting emerged during the nineteenth century in industrial companies in western countries as a consequence of the Industrial Revolution. In Britain, one of the first books on cost accounting was published in 1887 (*Factory Accounts*, written jointly by Emile Garcke and John Fells). In America, *Risk, Uncertainty and Profit* (Frank Knight 1921), *Studies in the Economics of Overhead Costs* (J.M.Clark 1923) and *The Economics of Accountancy* (John Canning 1929) were some of the first books on management accounting.

According to Johnson and Kaplan (1987) most of the developments in today's management accounting systems occurred in the early decades of the twentieth century to support the growth of multi-activity, diversified corporations. By 1925, virtually all management accounting practices used in the mid-1980's had been developed. Examples include product costing, budgets for planning, flexible budgets for control and variance analysis. These practices served the informational and control needs of the managers of increasingly complex and diverse organisations (Johnson and Kaplan 1987).

The early management accounting procedures were simple but served the needs of owners and managers. They played a key role in providing managers with information about the efficiency and profitability of internal processes. In the decades following the 1920s the diversity of products and the complexity of manufacturing processes continued to increase. These changes created the need for accurate product costs and effective process controls and imposed new demands on organisational management accounting systems. Management accounting systems were criticised because of a failure to keep pace with these changes. In particular, it was claimed that the failure to change management accounting systems resulted in the reporting of inaccurate product costs, delayed and overly aggregated process control information and short-term performance measures that did not reflect the increases or decreases in the organisation's economic position. Traditional management accounting systems had therefore become less relevant to the firm's operations and strategy.

In their famous book *Relevance Lost—the rise and fall of management accounting*, Johnson and Kaplan (1987) stated that the failings of management accounting systems had three important consequences:

- Management accounting reports were of little help to operating managers as they attempt to reduce costs and improve productivity;

- The management accounting systems also failed to provide accurate product costs;

- The monthly profit reporting systems motivated managers' to focus excessively on the short-term.

Johnson and Kaplan attribute some of the weaknesses and failures of management accounting systems to academics. In the nineteenth and early twentieth century writings on management accounting innovations were by industrialists and practitioners. Approximately from 1920 to 1980, most of the writing relating to potential new ideas in management accounting had been contributed by academics. These academic researchers were interested in developing highly sophisticated models for management accounting in simplified, stylised production settings. For example, in order to illustrate their points, the researchers always emphasised simple decision-making models in highly simplified situations based on one or only a few products, usually involving a one-stage production process. The academics developed their ideas by logic and deduction rather than attempting to study the problems actually faced by managers of firms producing hundreds or thousands of products in complex production processes. Thus, it was difficult for practising executives to apply these ideas in their much more complex organisations.

The firm's management accounting system serves as a vital role in providing information for planning and control, motivation and evaluation and as a two-way communication link between senior and subordinate managers. It is an important component in assisting firms in formulating strategy and achieving competitive success.

The contemporary competitive environment for manufacturers in the U.S. and western Europe completely changed from the early 1980s. Product lines expanded, production technology changed, product life cycles shortened, global competitive conditions emerged and great advances in information technology occurred. The need for accurate product costs and effective process control imposed new demands on a firm's management accounting system relating to the provision of timely, relevant and accurate information to facilitate decision-making, control costs and improve production processes.

Contemporary management accounting systems were criticised for failing to direct managerial attention to the critical success factors and failing to provide the relevant set of measures that appropriately reflect the technology, products, processes and the competitive environment in which the firm operates. The competitive environment from 1980s has had profound implications for cost management systems and performance measures. Accurate knowledge of product costs, excellent cost control and coherent performance measures have become far more important than they have ever been in the past (Johnson and Kaplan 1987).

Low cost is an important competitive strategy for many firms. However, the cost accounting and management systems operating in the late 1980's were criticised for failing to determine product costs accurately, for not enhancing cost control and for encouraging the creation of long-term economic wealth. Traditionally cost accounting systems have attempted to satisfy three aims:

- To allocate costs to products so that financial accounting statements can be prepared monthly, quarterly, and annually;
- To provide product cost estimates to operation managers;
- To provide process control information to cost centre managers.

Johnson and Kaplan claim that financial accounting has dominated the provision of information so that only the first of the above three goals has been satisfactorily accomplished. This has resulted in cost accounting failing to facilitate process control within cost centres and the provision of distorted individual product costs. In addition, many performance measures employed by companies at that time were short-term financial performance measures that assess short-term profitability. However, the role of short-term financial performance measures has diminished because of the rapid changes in technology, shortened product life cycles and innovations in the organisation of production operations. Companies whose competitive advantage comes from innovative processes and high-performance products require measurement relating to time to the market for new products, percentage of sales from new products and customer satisfaction. Thus, short-term financial measures have become less important and there is a need to supplement them with a variety of non-financial indicators that provide better targets and predictors for the company's long-term profitability goals. Measuring and reporting indicators based on the company's strategy incorporating key measures of manufacturing, marketing and research and development success are gradually being seen as more important than short-term financial indicators.

A report published by the Chartered Institute of Management Accountants (CIMA) authored by Bromwich and Bhimani (1989) summarised the major criticisms that were being made relating to management accounting systems. They were:

- The alleged subservience of management accounting to external financial accounting requirement.

- The lack of strategic considerations in management accounting and project appraisal.

- The reliance of management accounting on redundant assumptions concerning manufacturing processes.

- The maintenance of traditional assumptions in performance evaluation and the continued short-term orientation of this process.

Consequently, the challenge for the new competitive environment of the 1990's was to develop novel and more flexible approaches to the design of effective management accounting systems. In other words, unless management accounting systems were amended to enhance the functional efficiency of organisations in the fast changing and turbulent new manufacturing environment, the value of management accounting was likely to diminish.

A revolution was triggered by innovative practices developed by western manufacturers in 1980s based on approaches used in Japan. The revolution did not just include the application of advanced automated equipment and flexible technologies. It also included the implementation of new practices and approaches relating to the co-ordination, integration, control and management of organisational activities. Total quality management, just-in-time inventory systems and computer-integrated-manufacturing systems emerged. New developments in management accounting also occurred such as activity-based costing and strategic management accounting. These new practices will now be briefly discussed.

Total quality management (TQM) is a comprehensive quality control philosophy under which the only acceptable quality level is zero defects. Under the system, many activities have to be done correctly in order to keep reducing defect rates continually. While the zero defects goal may not be actually obtainable, TQM provides a target so that the organisation will never be satisfied with its quality program and emphasises quality and manufacturability at the design stage. Additional results of implementing TQM include extensive training of all personnel, continually maintaining and operating machines, and working with suppliers to ensure raw material quality. Companies which have adopted TQM have reported significant improvements in quality (Bromwich and Bhimani 1994).

The aim of Just-in-time (JIT) systems is to obtain low cost, high quality, on-time production to order by minimising stock levels between successive processes and therefore idle equipment, facilities and workers. It comprises two separate sets of activities: JIT purchasing, which attempts to match the receipt of material closely with usage to reduce raw material inventory to near-zero levels and JIT production, which pull products through the factory as they are needed.

Relevant claimed benefits of JIT systems include reduced set-up times, raw material stock reduction, control over delivery timing, close working relations with suppliers and a more flexible workforce. In other words, JIT is a means of more flexible, rapid and cost effective production (Bromwich and Bhimani, 1994).

Use of digital computer production technology—computer numerical controls (CNC), computer-aided design and manufacturing (CAD/CAM), and flexible manufacturing systems (FMS) has had a profound impact on manufacturing processes by providing greatly improved quality, reliability and manufacturing flexibility. It has had implications for management accounting. For example, cost tracing and performance evaluation can become more complex and the widely used approach of allocating overheads on the basis of direct labour hours becomes obsolete because of the diminished direct labour (Bromwich and Bhimani 1994).

CAD/CAM are high-level computer design and supervisory systems. Cost control in CAD/CAM is also problematic because of the difficulty of setting labour standards for special activities such as drafting and design. With the experience of CAD/CAM, product costing is simplified when engineering and design costs can be attributed to the production of a specific order. Performance measure can be linked to improving non-financial measures such as set-up times, material usage, defect rates and quality (Bromwich and Bhimani 1994).

The main advantages of a flexible manufacturing system (FMS), which refers to a computer controlled production system to produce a family of parts, include the ability to produce differing varieties and volume levels, quick customer response and reduced labour costs. However cost control, product costing and performance measurement problems arise principally from the reduction in direct labour utilisation and the high capital cost components of a FMS (Bromwich and Bhimani 1994).

The above changes have reduced the direct and indirect labour content of products and services. Direct labour has become a decreasing fraction of total product costs and much of it is now more properly thought of as a fixed rather than a variable cost. On the other hand, overhead costs have been a much higher fraction of total costs and consequently need to be understood and controlled much more carefully than in the past (Johnson and Kaplan 1987). In order to respond to the more competitive environment many companies have begun to expand the range of products and services.

3.2 Recent developments in management accounting

The previous section has drawn attention to the criticisms of management accounting and has identified some of the factors that have created the need for change. The most prominent critic has been Robert Kaplan. The criticisms presented in his writings have attracted a considerable amount of publicity. However, in an article published in 1994 (Kaplan 1994, p.101) stated:

> The past 10 years have seen a revolution in management accounting theory and practice. The seed of the revolution can be seen in

> publications in the early to mid-1980's .....that identified the failings of existing cost and performance measurement systems. Since that time we have seen remarkable revolutions in management accounting; even more remarkable has been the speed with which the new concepts have become widely known, accepted and implemented in practice and integrated into a large number of educational programmes.

The aim of this section is to describe some of the recent developments in management accounting. The following developments will be discussed:

1. The diffusion of activity-based costing and activity-based management;
2. The integration of financial and non-financial measures;
3. Strategic management accounting;
4. Target costing;
5. The future role of management accountants.

3.2.1 The diffusion of activity-based costing and activity-based management

Product costs are required to distinguish between profitable and unprofitable activities for the requirement of decision-making. However, traditional product costing systems do not capture accurately enough the consumption of resources by products when companies produce a wide range of products. The costs derived from traditional systems may be too distorted to be used directly for decision-making or as attention-directors. Hence, there is a danger that managers may drop profitable products or continue the production of unprofitable products (Drury 1998).

Activity-based costing emerged in the late 1980's to meet the demand for more accurate product costs. The original function of activity-based costing was designed to more accurately trace the cost of indirect resources to products. Compared with traditional systems, an activity-based costing (ABC) system involves the use of a large number of cost pools consisting of activities rather than departments in the first stage of the two-stage allocation process. In addition, ABC uses many cost drivers (both volume-based and non-volume based) in the second stage of the overhead allocation process. In contrast, traditional cost systems normally use only a limited number of volume-based cost drivers (e.g. direct labour hours and/or machine hours).

Thus ABC involves a more detailed, complex and sophisticated approach to cost assignment in order to produce more accurate product costs. High information processing costs in the past resulted in company's being reluctant to introduce more sophisticated products costing systems because they could not be justified on cost/benefits criteria. In the late 1980's information processing costs had declined dramatically and they were no longer a barrier to introducing more sophisticated cost systems. This resulted in the emergence of activity-based costing (ABC) in the late 1980s.

ABC systems can also be used for cost management besides product costing. Traditional cost control systems can provide relevant information for managing costs only when there are well defined input-output relationships between indirect costs and support activities, and the consumption of resources usually varies proportionally with the volume of the final output of products or services. Activity-based cost management (ABCM) views the business as a set of linked activities that ultimately add value to the customer. It focuses on managing the business on the basis of the activities that make up the organisation. ABCM is based on the premise that activities consume costs. By analysing costs by activities ABCM can provide management with information on why costs are incurred and the output from the activity. Therefore by managing activities, costs will be managed in the long term. The goal of ABM is to enable customer needs to be satisfied while making fewer demands on organisational resources (Drury 1998).

3.2.2 Integration of financial and non-financial measures

Traditionally accounting-based measurement systems that have relied extensively on financial measures have been the predominant systematic performance measurement systems operated at higher levels within most organisations. In recent years traditional accounting-based performance measures have been widely criticised on the grounds that they are too narrow and fail to incorporate the key variables which are necessary to compete in today's global competitive environment.

The perceived inadequacies of traditional accounting-based performance measures resulted in increasing emphasis being given to complementary financial measures with 'new' non-financial measures. Prior to the 1990's non-financial performance measures were extensively used in organisations but at the operational level. In the late 1980's and early 1990's increasing attention was given to the systemisation of non-financial performance measures and integrating them into the periodic formalised reporting process at the top management level.

In response to the perceived weaknesses of traditional financial performance measures and the need to incorporate key non-financial performance measures and integrate financial and non-financial measures, the balanced scorecard was devised by Kaplan and Norton (1992) and refined in later publications (Kaplan and Norton 1993, 1996a, 1996b and 2000).

The balanced scorecard is an effective combination of financial and non-financial performance measures to provide a reliable feedback for management control purposes and performance evaluation. In their writings Kaplan and Norton (1992, 1993, 1996a and 1996b) stress that the balanced scorecard is an integrated set of financial and non-financial measures that aims to provide answers to the following questions:

1. How do customers see us?

2. What must we excel at?

3. Can we continue to improve and create value?

4. How we look to shareholders?

The balanced scorecard consists of four perspectives. They are:

- The financial perspective, which depends on traditional (e.g. return on investment) and new financial measures (e.g. economic value added). The financial perspective aims to provide feedback as to whether improved performance on the three non-financial perspectives within the scorecard is translated into improved financial performance.

- The customer perspective requires managers to identify the customer and market segments in which the business unit will compete. Managers should then develop performance measures that track the business unit's ability to create satisfied and loyal customers in the targeted segments. Examples of measures include market share, customer retention, new customer acquisition, customer satisfaction and customer profitability.

- The internal business process relates to the critical internal processes for which the organisation must excel in implementing its strategy. The identified processes should be those that are required to achieve the organisation's customer and financial perspectives. Kaplan and Norton identify three internal business processes – innovation, operation and post-service sales processes for which there is a need to develop appropriate non-financial performance measures.

- The learning and growth perspective. This perspective is concerned with identifying the infrastructure that the organisation must build to create long-term growth and continuous improvements. Kaplan and Norton stress the importance of organisations investing in their infrastructure (people, systems and organisational procedures) to provide the capabilities that enable the accomplishment of the other three perspectives' objectives.

The aim of the scorecard is to provide a comprehensive framework for translating a company's strategic objectives into a coherent set of performance measures. Organisations should articulate the major goals for each of the four perspectives and then translate these goals into specific performance measures.

Drury (1998) concludes that the scorecard has two major objectives:

- It brings together in a single management report, many of the seemingly disparate elements of a company's competitive agenda (becoming customer-orientated, shortening response time, improving quality, emphasising team work and reducing new product launch times).

- It guards against sub-optimisation because the scorecard lets senior managers see whether an improvement in one area may have been at the expense of another by forcing them to consider all the important operation measures together.

Drury suggests that the future development of the balanced scorecard should focus on developing a structure of integrated performance measures that enables the key global measures reported in the balanced scorecard to be cascaded throughout the organisation including to the lower management levels. The aim should be to devise a structure so that the individual managers for the various functions can see how the performance measures they are evaluated on contribute to the higher scorecard measures.

3.2.3 Strategic management accounting (SMA)

Accounting has a clear role in helping companies to formulate business strategies. Strategic management accounting is the most important strategic approach that has been widely publicised recently. Strategic management accounting helps companies to focus managerial efforts more on their markets, where customers have to be won and retained and competitors repulsed, and on the costs of these market activities.

Lord (1996) has summarised the main themes of strategic management accounting as follows:

- Collecting competitor information.

- Exploiting cost reduction opportunities.

- Matching accounting emphasis with strategic position.

The first theme emphasises the external focus of strategic management accounting. To protect an organisation's strategic position and determine strategies, strategic management accounting can help it evaluate its competitive position by collecting data on costs and prices, sales volumes, market share and resources availability for its major competitors. This information provides advance warning of the need for a change in competitive strategy.

The second theme involves a change of emphasis from merely meeting standards to a focus on continuous improvement. The emphasis is mainly on finding ways of reducing costs by exploiting linkages in the value chain and the adoption of target costing and activity-based cost management. Target costing will be discussed in more detail in the next section.

The third theme advocates that firms should place different emphasis on elements of traditional management accounting depending on their strategic position chosen. For instance, when new products are constantly being implemented, as with a prospector strategy, companies should place less emphasis on detailed standard costing for performance assessment and using product costs for pricing decisions. Instead, greater emphasis should be given to external, future-oriented information relating to competitors and product markets. On the other hand, if companies compete by adopting a low cost strategy high importance should be attached to cost control techniques such as standard costing, flexible budgeting and using product costs for pricing decisions.

The implementation of strategic management accounting provides a major challenge to accountants. It requires accountants to embrace new skills extending beyond their usual areas and co-operate much more with general management, corporate strategists, marketing and product development (Bromwich and Bhimani 1994). However, because few accountants have been educated in strategy formulation, Bromwich and Bhimani suggest that there is a need to place more emphasis in training accountants in strategic knowledge and skills.

3.2.4 Target costing

Target costing normally relates to the pricing and cost management of new products. Drury (2000) describes target costing as a customer-oriented technique that has been widely used by Japanese companies and which has recently been adopted by companies in Europe and the USA. The first stage requires market research to determine the customers' perceived value of the product based on its functions and its attributes (i.e. its functionality). A target price which customers are prepared to pay for the product is determined and a target profit is also determined which is then deducted from the target price to derive a target cost. The target cost is compared with the predicted actual cost. If the predicted actual cost is above the target cost intensive efforts are made to close the gap so that the predicted cost equals the target cost.

A major feature of target costing is that a team approach is adopted to achieve the target cost. The team members include designers, engineers, purchasing, manufacturing, marketing and management accounting personnel. Their aim is to achieve the target cost specified for the product at a prescribed level of functionality and quality. This involves eliminating product functions that add cost but which do not increase the value to customers.

The major advantage of adopting target costing is that it is deployed during a product's design and planning stage so that it can have a maximum impact in determining the level committed costs. It is an iterative process with the design team, which ideally should result in the design team continuing with its product and process design attempts until it finds designs that give an expected cost that is equal or less than the target cost. The process should result in the design a product with an expected cost that does not exceed target cost and that also meets the target level of functionality. Where the target costing approach is adopted, target costs form the basis for product decisions, thus production management are expected to meet the target costs. The attraction of target costing is that it represents a feed-forward control whereby an attempt is made to control costs at the design stage before they become committed costs.

3.2.5 The future role of management accountants

The adoption of new and innovative management accounting techniques has provided a need for management accountants to alter their roles. In the past managers have considered them to be watchdogs rather than as suppliers of information and as parties to decision-making (CIMA 1989). Advances in, and decreases in information technology costs are enabling management accountants to take on actions of value-adding business partners, consultants and change agents instead of their traditional score-keeper role (Drury 1998).

The automation of management accounting systems reduces the need for management accountants to be involved in the preparation and use of management information. Instead, they are required to help design and implement the management information systems. After the systems have been designed and implemented, much of the daily management accounting information can be transferred to accounting technicians. Over time the need for management accountants actively supporting the cost management process might fall to quite low levels because management accounting skills may become decentralised (Cooper 1996; Shank 1995).

The considerable changes bring a strong need for management accountants to experiment, to seek out new ways of using their existing expertise and to enlarge their competence by seeing management accounting as a much broader function (CIMA 1989). The new role of the management accountants will be to adopt a more active role in the management process. There will be a need for them to be more actively involved in the processes of management and become an integral member of the management team by acting as an advisor and supporter rather than a corporate controller (Cooper 1996; Burns *et al.* 1996).

Kaplan (1995) has concluded that management accountants should:

- Become part of the organisations value-added team.
- Participate in the formulation and implementation of strategy.
- Translate strategic intent and capabilities into operational and management measures.
- Move away from being scorekeepers of the past and to become designers of the organisation's critical management information systems.

3.3 Empirical studies relating to current practices of management accounting in western countries

In this section, the results of some of the surveys that have been undertaken are presented. The aim is to provide an overview of management accounting practices in western countries, mainly taking the UK as being representative of western practices. This will provide a basis for comparison with Chinese practices that are reported in later chapters. Many surveys have been undertaken in western countries and a summary of all of these studies would cover hundreds of pages. The aim is to provide a brief summary of the findings from only the major studies.

3.3.1 The impact of advanced manufacturing technologies (AMT)

Investment in AMTs, such as computer-integrated manufacturing (CIM) technologies and flexible manufacturing systems (FMS), can help companies to develop manufacturing capabilities that create or sustain competitive advantage. Abdel-Kader and Dugdale (1998) reported an investigation into the investments in AMT's of a sample of 466 UK large manufacturing companies. In the 102 responding companies, 77% had invested in AMT's. Table 3.1 shows their results in several different AMT applications from the highest to the lowest percentages and table 3.2 summarises the number and percentage in classified groups based on the level of AMT in these companies.

Table 3.1 Types of AMT projects invested in

	No.	%
Computer Aided Design (CAD)	65	86
Computer Numerical Control (CNC)	48	63
Computer Aided Manufacturing (CAM)	42	55
Flexible Manufacturing Systems (FMS)	32	42

(Source: Abdel-Kader and Dugdale 1998)

Table 3.2 Level of AMT in the company

	No.	%
Non-AMT companies	23	23.2
Less integrated AMT companies	33	33.3
Full integrated AMT companies	43	43.4

(Source: Abdel-Kader and Dugdale 1998)

One of the most comprehensive analyses of management accounting practices was undertaken by Drury *et al.* (1993), who presented the findings of their questionnaire survey, with responses from 303 individuals across 260 UK medium and large-sized manufacturing companies (Bhimani 1996). In their survey, Drury *et al.* (1993), examined the impact of advanced manufacturing technologies from different aspects. They reported that 80% of JIT firms and 58% of FMS users indicated that there had been no significant change in the product costing systems. Only 3% of JIT firms and 18% of FMS firms stated that significant changes had been made. In contrast, 53% of JIT firms and 49% of FMS users indicated that there had been no significant change in the performance measurement and cost control system whereas 23% and 32% respectively reported that significant changes had been made.

3.3.2 Surveys relating to product costing and overhead allocation

The conventional wisdom of management accounting rejects the use of costs derived from stock valuations for decision-making because they include unavoidable fixed costs that are not relevant for decision-making. In the Drury *et al.* (1993) survey, the findings indicated that product costs derived from stock valuations were widely used with 79% of the responding firms stating that they "often/always" use total manufacturing costs or total costs for decision-making. Total cost was computed by merely adding non-manufacturing costs (using simplistic allocation methods) to the costs that are required for meeting inventory valuation requirements. In the USA similar findings were reported by Emore and Ness (1991) with 76% of the responding firms using identical product cost information for decision-making and financial statement inventory valuation (Drury and Tayles 1997).

According to Johnson and Kaplan (1987), the use of stock valuation product costs derived from simplistic overhead allocations can no longer be justified for decision-making. The survey by Drury *et al.* (1993) ascertained the extent to which simplistic techniques were being used for decision-making. It is likely that the simplest product costing system uses a single plant-wide rate to allocate overheads to products. Their findings reported that a plant-wide rate was used by 25% of those respondents that stated that they "often/always" used full costs for decision-making. In a later study Drury and Tayles (1997) reported that simplistic methods were used to assign service/support department costs to products. Only a small percentage of organisations adopted more sophisticated methods by establishing separate support department rates.

3.3.3 Surveys relating to activity-based costing (ABC) systems

Many studies have been undertaken relating to the extent that of the adoption of ABC systems. Details extracted from surveys by Drury *et al.* (1993), Innes and Mitchell (1991) and Innes *et al.*, (2000) are presented in tables 3.3 - 3.5.

Table 3.3 Extent of ABC usage (Drury *et al.* 1993)

Use of ABC	Percentage
Using ABC	4
Intending to use ABC	9
Consideration given to introducing ABC	37
Decided not to introduce ABC	5
No discussion has taken place regarding ABC	45

An earlier survey on ABC carried out by Innes and Mitchell (1991) based on a responding population of 187 organisations in the manufacturing and financial services sector provided the results shown in table 3.4.

Table 3.4 Extent of ABC usage (Innes and Mitchell 1991)

Use of ABC	Percentage
Considered and implementing ABC	6
ABC currently under consideration	33
Considered ABC and rejected it	9
ABC not considered	52

Innes *et al.* (2000) compared the results of surveys they had undertaken in 1994 and 1999 on ABC usage in the UK's largest companies. The adoption rates are shown in table 3.5.

Table 3.5 ABC adoption status (Innes *et al.* 2000)

	1999 Survey		1994 Survey	
	No.	%	No.	%
Currently using ABC	31	17.5	74	21.0
Currently considering ABC adoption	36	20.3	104	29.6
Rejected ABC after assessment	27	15.3	47	13.3
No consideration of ABC to date	83	46.9	127	36.1
Total	177	100.0	352	100.0

Innes *et al.* (2000) found that the adoption of ABC had remained significantly higher among UK's largest companies. However, the proportions of ABC users and of those currently assessing it have fallen.

Drury (2000) provides the following summary of ABC surveys. He states:

> Significant variations in the usage of ABC both within the same country and across different countries have been reported. These differences may arise from the difficulty in precisely defining the difference between traditional costing systems and ABC systems and the specific time period when the surveys were actually undertaken.

Survey evidence suggests that over the last decade there has been an increasing interest in ABC. In the UK, surveys in the early 1990's reported adoption rates around 10% (Innes and Mitchell 1991; Nicholls 1992; Drury *et al.*1993). Similar adoption rates of 10% were found in Ireland (Clarke 1992) and 14% in Canada (Armitage and Nicholson 1993). In the USA Green and Amenkhienan (1992) claimed that 45% of firms used ABC to some extent. More recent surveys suggest higher ABC adoption rates. In the UK reported usage was 20% (Innes and Mitchell 1995), 22% (Banerjee and Kane 1996), 21% (Evans and Ashworth 1996) and 23% (Drury and Tayles 2000). In the USA, Shim and Stagliano (1997) reported a usage rate of 27%.

Reported usage rates for mainland Europe are 19% in Belgium (Bruggerman *et al*, 1996) and 6% in Finland in 1992, 11% in 1993 and 24% in 1995 (Virtanen *et al.* 1996). Low usage rates have been reported in Denmark (Israelsen *et al.* 1996), Sweden (Ask *et al.* 1996) and Germany (Scherrer 1996). Activity-based techniques do not appear to have been adopted in Greece (Ballas and Venieris 1996), Italy (Barbato *et al.* 1996) or Spain (Saez-Torrecilla *et al.* 1996).

Other studies have examined the applications of ABC. Innes and Mitchell (1995) found that cost reduction was the most widely used application. Other widely used applications included product/service pricing, cost modelling and performance measurement/improvement. ABC was used for stock valuation by 29% of ABC adopters thus suggesting that the majority of ABC users have separate systems for stock valuation and management accounting applications.

According to Bjonenak (1997) there has been little research on who adopts ABC and for what reasons. His survey indicated that 40% of the responding Norwegian companies had adopted ABC as an idea (i.e. they had implemented ABC or planned to do so). Different variables relating to cost structure, competition, existing cost systems, size and product diversity were tested as explanatory factors for the adoption of ABC but only cost structure and size were found to be statistically significant. The UK study by Drury and Tayles indicated that company size and business sector had a significant impact on ABC adoption rates. The adoption rates were 45% for the largest organizations and 51% for financial and service organizations. Although the ABC adopters used significantly more cost pools and cost drivers than the non-adopters most adopters used fewer cost pools and drivers compared with what is recommended in the literature. Approximately, 50% of the ABC adopters used less than 50 cost centres and less than 10 separate types of cost driver rates.

Friedman and Lyne's (1995) case study research of 12 UK companies cited top management support as a significant factor influencing the success or failure of ABC systems. Implementation problems identified by the various studies included the amount of work in setting up the system and data collection, difficulties in identifying activities and selecting cost drivers, lack of resources and inadequate computer software. The benefits reported by the studies included more accurate cost information for product pricing, more accurate profitability analysis, improved cost control and a better understanding of cost causation.

3.3.4 Surveys relating to the integration of financial and management accounting

Johnson and Kaplan (1987) argue that management accounting has, at least in some companies and countries, been subservient to financial accounting requirements. This excessive focus on financial accounting has led to deficiencies in internal reporting. Financial accounting is required for meeting external users' requirement while management accounting relates to providing internal reports to help managers make better decisions. Various surveys, however, show that most companies use same rules and procedures to produce external and internal reporting. For example, 76% of the responding firms in the USA (Emore and Ness 1991) and 79% of the UK firms (Drury *et al.* 1993) used the same product cost information for decision-making purposes that they used for financial statement inventory valuation. In the Drury *et al.* survey

(1993), most of the firms (97%) prepared monthly internal profit statements and 84% valued stocks on an absorption costing basis in accordance with UK financial accounting requirements even though the alternative variable costing basis may be preferable for internal reporting. Also historic financial accounting asset valuations are widely used to compute division internal profitability measures with 90% using historical cost asset valuations and only 6% using current value or replacement cost as recommended for management accounting purposes.

A number of studies have tried to explain the reasons why most firms do not prefer investing into two separate systems (one for financial accounting stock valuation requirements and the other for internal management accounting purposes). One reasonable explanation is that on a cost-versus-benefits basis, companies are only willing to invest in a single accounting system to meet financial accounting stock valuation requirements. Traditional stock valuation product costing systems can accurately measure direct costs consumed by products but they inaccurately assign indirect costs. Previous studies suggest that direct costs average approximately 75% of total manufacturing costs. Therefore traditional systems may not lead to the reporting of significantly distorted product costs (Brierley *et al.* 2001).

A more plausible reason for adopting financial accounting rules to generate management accounting information is that companies prefer their internal profit reporting systems to be consistent with outsiders' measures of overall company performance (Drury and Tayles 1995). Senior managers are primarily interested in financial accounting information because it is perceived as having a major influence on how financial markets evaluate companies and their management. Moreover, the fact that managerial rewards are often linked to external financial accounting measures provides a further encouragement for senior managers to pressurise management accountants to ensure that internal accounting systems do not conflict with external financial accounting requirements (Hopper *et al.* 1992; Drury and Tayles 1999).

3.3.5 The incorporation of non-financial performance measures

The literature (e.g. Drury 1998) has drawn attention to the need to place a greater emphasis on collecting and reporting non-financial quantitative and qualitative information on those key factors that are necessary to compete successfully in today's competitive environment. Examples of non-financial measures recommended in the literature include quality, reliability, customer satisfaction, new product lead times, customer response time, delivery and supplier performance (Drury 1998).

Table 3.6 Extent to which non-financial performance measures are used

	Never/rarely		Sometimes		Often/always	
	Smaller firms %	Larger firms %	Smaller firms %	Larger firms %	Smaller firms %	Larger firms %
Customer satisfaction/ Product quality	22	2	11	7	67	91
Customer delivery Efficiency	16	2	22	7	62	91
Supplier quality/delivery	16	4	32	15	52	81
Throughput times	33	6	24	20	43	74
Set-up times	59	32	19	22	22	46

The Drury *et al.* (1993) survey produced the results on the question of non-financial performance measures shown in table 3.6.

Another survey of 150 companies (KPMG 1990) selected from *The times* 1,000 index, but excluding the top 100, gave results comparable to the Drury *et al.* (1993) investigation. The study indicates that nearly a quarter of companies in manufacturing, distribution and service sectors do not use non-financial monitoring. Of particular interest is that more than half of the companies rely solely on financial measures in appraising the utilisation of new technology (Bhimani 1996).

Since its introduction in the early 1990's, the balanced scorecard has attracted a great deal of interest and has become one of the latest management fashions to sweep the business world (Malmi 2001). This is evidenced by the large number of publications in management journals and seminars and workshops that have been devoted to it. There is also evidence to suggest that the balanced scorecard is widely used. A survey conducted in the USA has estimated that 60 percent of the Fortune 1000 firms have experimented with balanced scorecards (Silk 1998)

3.3.6 Capital investment appraisal techniques

Capital investment appraisal, changes in the manufacturing cost mix and performance evaluation are identified as representing areas of management accounting which have received a great deal of attention in recent years as companies adopt advanced manufacturing technologies (CIMA, *Management Accounting*, Oct. 1989).

As far as investment appraisal methods are concerned, discounting methods (IRR and NPV) have become widely accepted during the past 20 years. However, surveys have reported that non-discounting methods such as the payback method are widely used in practice. The result of the Drury *et al.* (1993) study with regard to the use of different investment appraisal methods in the 260 manufacturing companies are shown in table 3.7.

Table 3.7 Use of different investment appraisal methods (often/always replies)

	All firms		Small firms		Larger firms	
	N=278	%	N=43	%	N=46	%
Payback (unadjusted)		63		56		55
Discounted payback		30		30		48
Accounting return on capital employed		41		35		85
Internal rate of return		57		30		85
Net present value		43		23		80

The result of another survey carried out by Lefley and Wharton (1993) within the top 500 UK manufacturing companies are shown in table 3.8.

Table 3.8 The use of different appraisal methods

Appraisal method	(%, rounded)
Payback	69
Discounted payback	54
Accounting rate of return	20
Internal rate of return	55
Net present value	52

Their findings show that payback continues to be the most widely used method than other methods, and IRR and NPV techniques are used to a lesser extent.

3.3.7 Surveys relating to the application of the controllability principle

Accounting conventional wisdom suggests that managers should be evaluated strictly on the basis of costs and revenues directly traceable to them. Thus all allocations of indirect costs ought not to be assigned to managers for performance evaluation and cost control, i.e. managers should only be held accountable for those costs which they can significantly influence (Drury and Tayles 1995). However, it is apparent that many organisations do not adhere to the controllability principle. For example, the Drury *et al.* (1993) survey reported that 23% of the responding companies did not distinguish between controllable and non-controllable items for responsibility accounting performance reporting. Also 51% of the divisionalised companies evaluated the performance of divisional managers on the basis of profitability measures that included an allocation of corporate headquarters' cost (Drury 1998).

3.3.8 Target costing usage

Few studies have examined the extent to which target costing is used. In the Drury *et al.* (1993) survey, only 26% of the respondents stated that target costing was 'often/always' used whereas 47% stated that this approach was 'never' or 'rarely' used.

3.3.9 Perceived past and future benefits of various management accounting practices

Chenhall and Langfield-Smith (1998) undertook a survey to identify the extent to which Australian manufacturing firms have adopted certain traditional and recently developed management accounting practices. The survey examined the use of 42 management accounting practices. The benefits received from those practices and the extent of future use was also examined. The results of the survey are shown in tables 3.9 and 3.10.

Table 3.9 Relative use of management accounting practices in Australian companies

	Rank	
High adoption		
Budgeting for planning financial position	1	100%
Capital budgeting tools	2	99%
Budgeting for planning cash flows	2	99%
Budgeting to plan day-to-day operations	2	99%
Budgeting for controlling costs	2	99%
Performance evaluation: return on investment	3	96%
Performance evaluation: budget variance analysis	4	95%
Budgeting to co-ordinate activities across business units	5	94%
Benchmarking of operational processes	6	93%
Performance evaluation: non-financial measures	7	92%
Benchmarking of strategic priorities	8	91%
Benchmarking of management processes	8	91%
Formal strategic planning	8	91%
Long-rang forecasting	9	90%
Performance evaluation: divisional profit	9	90%
Moderate adoption		
Performance evaluation: controllable profit	10	89%
Product profitability analysis	10	89%
Performance evaluation:	12	87%
Benchmarking of product	12	87%
Strategic plans developed with budgets	12	87%
Budgeting for compensating managers	13	86%
Performance evaluation ongoing supplier evaluation	14	86%
Cost-volume profit analysis	14	86%
Performance evaluation: cash flow return on investment	15	84%
Benchmarking within the wider organisation	15	84%
Low adoption		
Product costing: absorption costing	16	80%
Activity-based budgeting	17	78%
Benchmarking within outside organisations	18	77%
Product costing: variable costing	19	76%
Strategic planning separate from budgets	20	70%
Product life cycle analysis	20	70%
Activity-based management	21	68%
Shareholder value analysis	22	64%
Performance evaluation: residual income	23	60%
Activity-based costing	24	56%
Operations research techniques	25	55%
Value chain analysis	26	49%

Table 3.10 Management accounting practices: past benefits and future emphasis in Australian companies

	Relative benefits (past 3 years) Rank	Relative future (next 3 years) Rank
High benefit		
Budgeting for controlling costs	1	1
Performance evaluation: return on investment	2	4
Performance evaluation: budget variance analysis	3	6
Performance evaluation: divisional profit	4	5
Capital budgeting tools	5	7
Strategic plans developed with budgets	6	9
Budgeting for planning financial position	7	8
Performance evaluation: controllable profit	8	15
Product costing: absorption costing	9	25
Formal strategic planning	10	2
Performance evaluation: customer satisfaction	11	12
Budgeting for planning cash flows	12	10
Strategic planning separate from budgets	13	34
Performance evaluation: non-financial measures	14	20
Product profitability analysis	15	3
Moderate benefit		
Budgeting to co-ordinate activities across business units	16	16
Performance evaluation: cash flow return on investment	17	22
Performance evaluation ongoing supplier evaluation	18	19
Budgeting to plan day-to-day operations	19	17
Performance evaluation: residual income	20	39
Product costing: variable costing	21	32
Performance evaluation: balanced scorecard (mix of financial and non-financial measures)	22	23
Budgeting for compensating managers	23	33
Performance evaluation: qualitative measures	24	26
Benchmarking of operational processes	25	13
Long-rang forecasting	26	11
Benchmarking of product characteristics	27	28
Performance evaluation: team performance	28	21
Benchmarking of management processes	29	14

Continued....

Table 3.10 Management accounting practices: past benefits and future emphasis (continued)

	Relative benefits (past 3 years) Rank	Relative future (next 3 years) Rank
Low benefit		
Product costing: target costing	30	40
Cost-volume profit analysis	31	35
Benchmarking within the wider organisation	32	18
Benchmarking of strategic priorities	33	24
Performance evaluation: employee attitudes	34	31
Benchmarking within outside organisations	35	27
Activity-based budgeting	36	30
Shareholder value analysis	37	37
Activity-based costing	38	29
Operations research techniques	39	41
Value chain analysis	40	42
Product life cycle analysis	41	38
Activity-based management	42	36

The finding indicated that the rates of adoption of traditional management accounting practices such as capital budgeting, return on investment for divisional profit measurement and long-range forecasting are higher than recently developed techniques (e.g. activity-based costing, economic value added, value chain analysis and strategic planning). Also, the benefits obtained from traditional management accounting techniques, such as budgeting for controlling costs, absorption costing and product profitability analysis were considered to be greater than the newer techniques.

The above survey suggests that new recently developed management accounting techniques have not been extensively adopted and that the process of change has been rather slow. It appears that the traditional techniques are still dominant. Whether this is due to traditional techniques proving to be still adequate today or a reluctance to change is an area for future research. A comparison of Chinese management accounting practices using an adaptation of Chenhall and Langfiels-Smith's research instrument will be presented in chapter 7.

3.4 Management accounting education and research

Previous management accounting research has been more concerned with developing normative theoretical models. These abstruse economic decision-making models are difficult to apply in practice and are often too complex to incorporate in undergraduate and professional accounting courses. This has resulted in the emergence of a considerable gap between the theory and practice of management accounting. The evidence from many empirical surveys suggests that organisations prefer simple and practicable rather than complex techniques. Also many accounting academics have pointed out that according to cost-benefit criteria, the use of simple techniques in practice may be quite rational.

A conclusion arising from the perceived gap is that conventional wisdom, as portrayed in textbooks and reflected in management accounting education, fails to address the reality faced by practitioners. To cope with the situation and narrow the gap between theory and practice, observations of practice are required so that conventional wisdom can more adequately reflect the reality faced by practitioners. According to Drury (1998) current and future research of management accounting should place more emphasis on positive research by seeking to explain the factors influencing observed practices rather than developing normative theoretical models.

Drury (1998) also concludes that future conventional wisdom should describe theory and practice with the latter representing some theoretical ideal and set of techniques that ought to be used in practice. Theory should represent a constantly updated stock of concepts and techniques that are available to practitioners and which should be considered alongside existing techniques used in practice. Also it should identify possible implementation problems and draw attention to how they might be modified to reflect the realities faced by practitioners.

Furthermore, the findings from fundamental research should be merged into education programmes and taught alongside conventional wisdom. Otherwise, without a significant presence of fundamental research in accounting education programmes, habits and thoughts are not altered and trained incapacity is strengthened (Lee 1989). Conventional wisdom should be constantly reviewed and modified to reflect the changing manufacturing, economic and social environment faced by practitioners (Drury 1998).

However, Scapens (1994) has urged researchers to 'Never mind the gap' and to focus more closely on the study of management accounting practices rather than comparing accounting practices with a theoretical ideal. Otherwise researchers may become unduly concerned with the gap and ignore important issues. Scapens concern is that theory is based excessively on questionable neo-classical economic assumptions. It is also important to seek to explain observed practices drawing off organisational, social and economic theories rather than relying on existing theories derived mainly from neo-classical economics.

Until recently most research has focused on describing rather than explaining existing accounting practice. But many researchers have recognised that an important area of research should relate to identifying and understanding the factors that influence and inhibit changes to management accounting systems. The evidence from the literature suggests that fundamental changes in management accounting systems are very difficult to implement in practice. There are many barriers to changing accounting systems that have become embedded in organisations (Bruns 1987). Drury (1998) suggests that further empirical studies are required to provide a detailed description and evaluation of these new systems and the factors that influence change. In addition, further field study research drawing off the neo-classical economic, organisational and social literature is required which explores why some companies have not sought to make fundamental changes to their management accounting systems even though they have had to face extensive changes in their manufacturing and competitive environment.

To summarise, the new techniques and concepts have already undergone a period of trials and tribulation and changes in management accounting philosophies will continue to emerge as technological advances and other societal shifts take place. It is possible that the future development of management accounting may enter a relatively stable stage providing the opportunity for the observed practices to be described and explained. In particular, attention should be given to the following:

- It is widely acknowledged that benefits of advanced management accounting techniques may not be available to all organisations without restructuring. For example, Chenhall and Langfield-Smith (1997) have found that some American innovations may not be adopted readily in various European countries because of cultural factors and historic difference in the development of management accounting systems.

- There is a need to identify the context for effectively implementing new management accounting techniques effectively and the factors that influence differences in their level of adoption. In addition, there is a need to examine the reasons why some organisations are reluctant to change their accounting systems

- In order to understand the observed difference in practice, a multiplicity of ways is required besides just the economic perspective. There is also a need to explain the observed practices by examining their role within the broader organisational, social, political and cultural dimensions within which accounting information is used (Drury and Tayles 1995).

- Students should be educated to examine new techniques and concepts of management accounting adopting a critical approach. Management accountants are required to encourage exploring theoretical techniques in the face of changes both in the manufacturing and service environment. The management accounting profession is required to continue to positively monitor the results of changes and continue the research efforts within the environment faced by practitioners. The professional institutes like CIMA are required to enhance their role of becoming a principal storage of information concerning the new techniques of management accounting and establishing themselves further as a leading authority on these matters (Bromwich and Bhimani 1994).

3.5 Summary

This chapter has provided an outline of the current situation of the application of management accounting practices in western developed countries, mainly in the UK in order to provide a basis for comparison with China.

Considerable changes have taken place in the business environment over the past two decades. Product lines have expanded, advanced manufacturing technologies have been introduced, a global competitive environment has emerged and great advances in information technology have occurred. These changes have created demands for more accurate product costs and more effective process control information facilitates efforts to control costs, to measure and to devise improved production processes.

A number of surveys have sought to ascertain the nature and content of current management accounting practices. The finding suggests that recently developed management accounting techniques are not widely adopted in the firms of western countries while traditional management accounting practices are still popular in these organisations.

CHAPTER 4

THE ADOPTION OF WESTERN MANAGEMENT ACCOUNTING IN CHINA

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China has been introducing western practices of management accounting for two decades. It is necessary to find out the answers to questions such as how these practices are currently used in today's Chinese organisations, whether or not these practices are suitable for the environment surrounding traditional state-owned enterprises and what problems were caused when these practices where adopted into organisations with different cultural context etc. This chapter aims to provide a presentation about the processes of the diffusion of western management accounting practices in Chinese organisations, particularly in state-owned enterprises and the problems arising from the adoption of these practices. The chapter begins with a review of China's accounting before the 'reform and opening' (section 4.1). Section 4.2 describes the diffusion of western management accounting practices in China and section 4.3 discusses the difficulties for Chinese state-owned enterprises to further adopting management accounting techniques. The chapter concludes with a discussion of future prospects for the adoption of western practices of management accounting in China (section 4.4). Section 4.5 provides the summary of this chapter.

4.1 China's accounting before the 'open-door to the outside world'

As one of the world's ancient civilised countries China has had a very proud history. It has had a highly developed accounting and auditing system for economic activities that was established two thousand years ago. Because of its long history of feudal autocratic rule and a fragile economy, change has been gradual and slow. As a result Chinese accounting has fallen behind that of western countries. At the beginning of the 20th century the double-entry system of accounting was introduced in a few factories in Shanghai. From that time until 1949, China had been involved in a series of internal wars and external invasion. This resulted in few developments in the national economy and no improvements in the accounting system.

Following the founding of the People's Republic of China in 1949, China adopted a socialist model and a socio-economic system that was largely modelled on the former Soviet model. This was based on the public ownership of the means of production and a centrally planned economy. Under this system, the industrial sector was dominated by state-owned enterprises that were tightly controlled by the government, including production plans, material supplies, cost targets and product distribution.

In such an economy, the primary objective of accounting was accountability to meet the needs of state planning. As a result, it led to a uniform accounting system becoming prevalent in China with the aim of integrating financial information into a national economic plan. The accounting system at that time played an important role in assisting the state in economic planning, implementing state economic policies and controlling the means of production (Xiang 1998).

In terms of management accounting, many large-sized enterprises employed 'work-teams' during the 1950s. These were the equivalent to cost centres at the lowest level. They were established for achieving groups' planned production, cost and the so called 'profit' targets (it was not real 'profit' as interpreted within a market economy because the enterprise's products were distributed by state plan rather than being sold in an external competitive market). Also during the 1960's the 'internal profit system' was used in many enterprises in order to increase the cost and 'profit' awareness of divisions within large-sized enterprises (Skousen and Yang 1988). Many of the western concepts and methods of management accounting, such as standard costing, inventory planning and control and responsibility accounting for cost centres were used in large-sized state-owned manufacturers during that period. At the same time, China explored and developed cost accounting methods.

Many Chinese academic researchers and practitioners are today still proud of these methods and systems. It is not certain that there was an attempt to adopt western practices of management accounting in China between the 1950s and the 1970s. This was because they were ex-Soviet but similar to those used by western countries during 1920s and 1930s. It appears that some of the western practices of management accounting relating to planning and budgeting that were appropriate for a centrally planned economy were applied in China between the 1950's and 1970's. Those practices that are more closely related to the market economy could not easily be applied during this period. For example, an academic paper which described cost-volume-profit (CVP) analysis in detail was published in the early 1950's in the *New Accounting (China)* magazine, but it was not until 30 years later that CVP and other western techniques of management accounting were formally introduced into China (Yang 1999a). It could be said that during the past three decades there was little opportunity for these methods to be developed. This applied particularly to the period of the Cultural Revolution in 1966-76 when western theories and techniques of management were regarded as a part of capitalist ideology. They were therefore criticised and rejected by Chinese society.

4.2 Diffusion of western practices of management accounting

From 1978 onwards China started to carry out the policies of economic reform and openness. Profound changes have occurred and the Chinese economy has gradually moved from a single, simple and closed centrally planned economy to a diversified, complicated and open economy, and further towards a market economy. In order to meet the requirement of economic reform, the Chinese government encouraged the importation of advanced management theories and techniques from western countries. Western capitalist ideology was no longer thought of as 'flood' and 'beast of prey' (Scapens and Meng 1993).

It is common knowledge that the development of accounting is mainly influenced by the environment and cultural background. The above changes considerably altered the Chinese accounting environment and western theories and techniques of accounting have been adopted by the Chinese accounting profession. China's accounting reforms have been largely responsive to its economic and enterprise reform. Western practices of management accounting were allowed into China and began their rugged process of diffusion and adoption. This process can be viewed as the innovation diffusion.

The literature defines an innovation as the use of a new idea or the adoption of an old idea in a new context (Firth 1996). Various models of the diffusion of innovations have been developed and a number of characteristics have emerged to explain the adoption of innovations. One of these stresses that a major shock or negative shift in economic performance is often a stimulus for a search for change or innovation. For example, Van de Ven *et al.* (1989) states that the presence of a champion of a particular innovation facilitates the adoption of an innovation. China's economic reform and opening up from 1978 provided the stimulus for accepting western managerial ideas, techniques and accounting culture.

The review of the diffusion and adoption of western management accounting practices in China identified four stages. The first stage simply involved 'introducing' western theories and practices of management accounting in textbooks, magazines and academic papers. The second stage consisted of initially 'experiencing' western techniques of management accounting in enterprises and the third stage can be represented by the cold reception given to these techniques. China has now entered the fourth stage which involves reconsidering and trying to find those practices that are suitable within a Chinese context and building China's version of management accounting.

The first stage occurred between the late 1970s and the early 1980s. In 1980, the Accounting Society of China (ASC) was reorganised. It was originally formed in the 1950s but was suspended during the period of the Cultural Revolution. By 1980 new concepts and methods of financial and management accounting started to appear in Chinese academic journals, forums, and conferences. Some notable pioneers of management accounting, such as Yu Xuying and Li Tianmin, first introduced western theory and techniques of management accounting by the translations of western textbooks and journals, primarily from the USA and also from the UK (Yu 1979; Li 1979). By the end of 1981, over 10 Chinese translations of western books were published (Yang 1982).

Another important channel for spreading western methods of management accounting was higher education. Management accounting began to be included in the syllabi of colleges and universities in business and accounting subjects. Training courses and seminars for practitioners in enterprises were initiated and foreign academics were recruited to conduct lectures in higher education institutes. Western theory and techniques of management accounting were viewed as new ideas and were of considerable interest to Chinese students and trainees. As a result, in just a couple of years, large numbers of the Chinese accounting populations had learned some of western practices of management accounting (Bromwich and Wang 1991).

The second stage of systematically studying western management accounting took effect around 1982. The Chinese accounting profession also began to practise western techniques of management accounting. In many state-owned enterprises a new division/office responsible for routine management accounting activity was established within accounting/finance departments to provide information for decision-making. In 1984, the book *Reference Information of Management Accounting*, edited by Professor Li Tianming was published. This book included some useful experiences practised by a number of enterprises, such as 'The Fourth Emery Wheel Factory', 'Shanxi Machinery Factory', and 'Nanjing Second Machine Tool Factory', etc. (Yang 1999a). During the following decade many western techniques of management accounting were tried in many state-owned enterprises, especially in large and medium sized state-owned enterprises. Scapens and Yan (1993) summarised these methods as including CVP analysis, operational budgeting, responsibility accounting, standard costing, variance analysis, contribution analysis, variable costing, transfer pricing, net present value, internal rate of return, pay-back period, present value index, and return on investment. Among these methods, CVP analysis, contribution analysis and operational budgeting were of special interest to Chinese enterprises because of their ability to link target profit with operation planning. During this period western techniques of management accounting became increasingly popular in China.

The reform of financial accounting at that time was much slower. The most significant change was the implementation of the *Accounting Standards for Business Enterprises (ASBE)* from 1st July in 1993. The diffusion of management accounting practices was much quicker and the development of management accounting in China was at the forefront of accounting reform.

After a 10-year period of earnestly learning and trying the western techniques of management accounting, it has been gradually found that the direct importation of these techniques might not help to meet all of the demands of enterprises' management for accounting information. More and more Chinese academics and practitioners have begun to query the suitability of western techniques. This may be partly due to the fact that the traditional Chinese accounting systems are still dominant. The clash between traditional accounting thought and the new western ideas and techniques arose when enterprises began to reform. Also Chinese academics became aware of Johnson and Kaplan's famous book *Relevance Lost --The Rise and Fall of Management Accounting* which contained strong criticisms of Anglo-American management accounting practices. The Chinese accounting profession began to realise that the western techniques of management accounting were far from perfect and could not offer a panacea for Chinese accounting reform. From the middle of the 1980s to 1997, a period in which ASBE had been implemented for 5 years, western management accounting was given a cold reception and began to be neglected in China.

Two items of evidence are provided to support this view. One is shown in table 4.1 that includes related data of state-owned manufacturing enterprises from 1993 to 1997 (the first 5 years' implementation of ASBE). It should be noted that very few western techniques of management accounting had been adopted by Chinese state-owned enterprises, particularly those with poor economic performance because only those profitable firms are able to consider adopting advanced western techniques of management accounting.

Table 4.1 Related data for state-owned manufacturing enterprises (SOMEs)

Data	1993	1994	1995	1996	1997
Profit on sales (%)		3.9	3.0	1.7	1.3
Rate of return on total assets (%)		4.8	4.5	3.5	2.8
Ratio of capital gain (%)		5.8	4.1	1.4	0.5
Loss for all stated-owned enterprises (hundred million)	479.4	624.5	802.1	1127	1420.9
Profit for SOMEs (hundred million)	660.2	705.6	630.5	368.5	295.7

Source: *China statistical yearbook* (1998) and *China economic yearbook* (1997)(Yang 1999b).

The second item of evidence was derived from the statistics of academic articles that were published in the Chinese top accounting magazine—*Accounting Research (China)* from 1990 to 1997. Within these articles, 465 papers were involved with financial accounting problems but only 71 papers were about management and cost accounting. The latter only accounts for 15% of the former. Priority of management accounting reform soon gave way to financial accounting reform (Meng 1999).

It is argued that a major reason for the above observations may be due to the role of national culture in relation to the importing and exporting of management accounting practices. A large number of studies have documented systematic cross-national differences in management and management accounting practices. Some of these studies have examined the impact of national culture (e.g. Bailes and Assada 1991; Birnberg and Snodgrass 1988; Brewer 1998; Daley *et al.* 1985; Harrison and McKinnon 1998; Laurent 1983 and Snodgrass and Grant 1986). The literature suggests that the diffusion and adoption of management accounting practices may be highly conditional on the national culture of the recipient nations. Although relatively few studies have directly examined how Chinese cultural values affect the consequences of alternative management practices, it is widely believed that Chinese culture and the application of management practices are quite different from those in other countries. Therefore, Chinese enterprises have to consider whether to import management accounting practices since they may be unsuitable within a Chinese context or may need to be modified for use within a Chinese setting.

In 1983, Professor Yu Xuying suggested a guiding principle for making western management accounting serve China, i.e. 'taking myself (China) as the heart, absorbing others' advantages, fusing and refining them and being unique in my style' (Yu 1983). This principle has aroused sympathy with Chinese academics and practitioners and become a common basis for developing modern management accounting with Chinese features.

In the mid-1980's when the Chinese accounting profession was becoming aware that simply copying western management accounting techniques was neither appropriate, nor helpful for solving problems faced by Chinese enterprises. Within the accounting profession there was a nation-wide discussion that focused on thinking more seriously about western management accounting and considering developing a Chinese version. It was argued that due to differences in the Chinese socio-economic system and market environment confronted by Chinese enterprises compared with those in the West, it might be necessary to keep some traditional methods and techniques of Chinese accounting practice. The key to developing a Chinese version of management accounting is to use the knowledge learned from western management accounting and to modify traditional Chinese methods and techniques. However, possibly because financial accounting reform took precedence the debate was suspended. Nevertheless, the thought of constructing a comprehensive theoretical framework of management accounting, and drawing on the western experience of management accounting has never stopped amongst Chinese academics and practitioners.

In 1997, *Accounting Research (China)* magazine held an activity named as 'Anyi Cup' that called for papers about the adoption and development of management accounting in Chinese enterprises. This was the first important activity devoted to academic articles about management accounting. A total of 18 papers were published in the magazine. These academic papers examined Chinese problems in adopting management accounting from various angles. The conclusions arising from these papers were as follows (Yang 1999b):

- Although the application of management accounting has progressed, big differences exist between practice and the conventional wisdom of management accounting as defined in textbooks.

- The extent to which management accounting is applied is influenced by size and the business circumstance of the enterprises.

- Enterprises' accountants have not qualified for the requirement of adopting management accounting. The professional qualities of the accountants in state-owned enterprises are low and therefore unable to meet the requirements demanded for adopting completed management accounting practices.

The second activity named as 'Kingdee Cup' calling for research papers on management accounting was also organised by the *Accounting Research (China)* magazine from September 1999 to August 2000. The activity aimed at summarising, abstracting and effectively popularising successful experiences in Chinese enterprises.

Considerable attention has been given by Chinese academics to the adoption of management accounting in recent years. In 1999, a professional committee named 'Management Accounting and Its Adoption' was set up in ASC and it has devoted itself to accelerating the diffusion and adoption of management accounting techniques in Chinese organisations. The committee plays a positive role in the development of management accounting. A greater number of academic papers, including some surveys about the adoption of management accounting techniques in enterprises, have recently been published in accounting magazines. These developments suggest that the adoption and development of management accounting in China may speed up in the future. This issue will be discussed in the following section.

4.3 Obstructions to further adoption of management accounting techniques in China

In 1985, a management accounting project work-team was established in Jinan University (Guangzhou). The results of its research relating to the main problems relating to the adoption of management accounting practices in China were published in 1995 (see *Accounting Research (China)* No11, 1995). They were:

- Most teaching and studying of management accounting in institutes merely 'translates and introduces' western techniques of management accounting;
- There is a shortage of management accounting academics;
- Poor organising in the adoption and extension of management accounting practices in enterprises;
- The study of management accounting places too much emphasis on techniques rather than studying the theory and the problems of implementation;
- Some of the content relating to cost, management and financial accounting is unnecessarily repeated in textbooks (in China, management accounting is separated from cost accounting).

This report and another similar one, which was published by *Accounting Research (China)* in 1997 (see previous section), can be viewed as an outline of the current adoption of western practices of management accounting in China.

This section has summarised the current problems and difficulties faced by Chinese organisations in spreading western practices of management accounting. In the next section a Chinese perspective on the diffusion and adoption of management accounting techniques will be described.

4.3.1 The limited use of the western practices of management accounting in Chinese organisations, especially in state-owned enterprises

The adoption of management accounting has been largely responsive to the change of enterprises' environment. China's management accounting reform cannot be placed in perspective without a full understanding of the evolution of enterprises' environment.

In China, state-owned enterprises used to be the major force within the national economy. However, there have been considerable changes over the past two decades in the structure and ownership of enterprises because of privatisation and the emergence of a multi-structure of ownership coexistence. For example, the industrial output of the different types of enterprises has varied as indicated in table 4.2:

Table 4.2 Industrial gross output valued by ownership types (percentage)

Year	State-owned	Collective	Private[1]
1978	77.6	22.4	0.0
1980	76.0	23.5	0.5
1985	64.9	32.1	3.0
1990	54.6	35.6	9.8

Source: *China Economic Yearbook(1978, 1980, 1985 and 1990)*

At the end of 1992, the private sector made up 36.8 of the economy, comprised of 15.3 million individual and commercial units with 24.6 million employees and a gross output valued at 113 billion Yuan (Hussain & Zhang 1997). By 1996, the non-state-owned sector had grown to become 63% of the economy, and by 1999 this figure further increased to 72% (*China Statistical Yearbook* 2000). Therefore in the past two decades the contribution rate of the non-state economy has reached about 70%, with the averaged growth rate doubling that of the state economy. The non-state economy accounted for three-fourths of GDP (gross domestic product) in 1998 whereas the state economy dropped to one-fourth (*Beijing Review* 1999, No12, Vol.42).

It can be seen from the above that the non-state sectors have been an important driving force in China's economic growth. However, the majority of them, especially collective and private sectors and even many foreign joint ventures, remain small in size. Hence, they are unlikely to have much demand for the adoption of management accounting techniques.

As far as state-owned enterprises, they can be divided into the profitable enterprises and the unprofitable ones. The latter, at present, are slowly being moved though the process of bankruptcy to maintain higher employment and ensure social stability. Alternatively, they are being sold as private enterprises. The former, are major large and medium-sized state-owned enterprises, especially in pillar industries. They are still wholly owned or majority owned by the state. The adoption of western management accounting has focused on these enterprises. However, there has been very limited use of management accounting practices in these enterprises, due to the fact that they are still subject to state control and to a number of external constraints.

Besides regulations, policies and directives, the Chinese government influences state-owned enterprises via the power of the communist party to intervene in enterprise decision-making. Examples include the appointment of managers, cadres and boards of directors (Hassard *et al.* 1999). However, such influence is not uniform across different industries and regions (Lin *et al.* 1998). In addition, the government's influence may shift state-owned enterprise management's attention away from efficiency or profitability. For example, the government always emphasise providing higher employment over efficiency out of a concern for social stability. These influences can reduce state-owned enterprise manager's intention to sharpen managerial discretion, improve organisational efficiency and adopt advanced enterprise management systems (Child 1994; Groves *et al.* 1994; Branie 1996; Peng & Heath 1996).

4.3.2 Western management accounting cannot play a positive role in Chinese organisations without the fusion with Chinese practices

The study of management accounting requires that the actual effects of adopting management accounting in practice should be examined. As stated above, many basic technical methods of western management accounting have been used in Chinese

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[1] Including foreign investment

enterprises to some extent, but the spread of these technical methods does not seem to render them theoretically acceptable for their practical application. However those new techniques and methods that retain the rational core of the Chinese traditional management techniques and that also assimilate western ideas and techniques, are widely used in the internal management of Chinese enterprises. Chinese responsibility accounting is a good illustration.

The most discussed management accounting problem in China has been how to establish a new Chinese responsibility accounting system combining Chinese and western systems. In fact, Chinese responsibility accounting has been successfully integrated with western management accounting.

An embryonic form of responsibility accounting was developed in China during the 1950s. It comprised of internal business accounting (IBA), normative costing and a type of standard costing borrowed from ex-Soviets in the 1950s. It was regarded as 'the Chinese traditional responsibility accounting'. The development of enterprises' management systems, such as three-level accounting system, internal business accounting (IBA) or internal bank resulted in the improvement of the Chinese traditional responsibility accounting. Many of the ideas and approaches employed in the Chinese traditional responsibility accounting bear considerable similarity to those familiar in western responsibility accounting. For example, the Chinese 'cost unit' is the equivalent of a western 'cost centre.' Also the assignment of plans to units (called target break-down) is similar to western 'responsibility budgeting' and performance measurement devices are similar to the western performance based incentive systems (although moral incentives tend to be used in China).

Because of its apparent compatibility with the 'contract system', which is one of enterprise's reforms, a new responsibility accounting based on a combination of the former Chinese traditional methods and the western ideas and techniques was strongly recommended by accounting academics. It was introduced in most state-owned enterprises by the government's directives. The new responsibility accounting retains the organisational framework of the traditional methods, such as the use of an internal bank and management by objectives, which were previously used in IBA. It also incorporates most of the concepts and techniques used in western responsibility accounting except those concerning investment centres (in China, there is an argument that if real investment centres exist in state-owned enterprises they should be subject to government' intervention).

In western enterprises, the sales budget is usually the key element in budget setting, whereas the production budget is the beginning of budget setting for most Chinese enterprises. But this situation is gradually changing. China's economy is becoming more and more market oriented and no longer a shortage economy. When enterprises are concerned about selling their surplus products in the market, they have to prepare a budget starting with the sales budget.

The importance of the new responsibility accounting is now widely recognised in China and it has played a positive role in the internal management of Chinese enterprises. The Chinese accounting profession wishes to retain those long-used approaches that are considered to be adaptable to the Chinese context because they are considered to be effective in the new environment and reflect specific requirements and ideas of Chinese organisation. For example, in the forum entitled 'Chinese characteristics of accounting theory and methods', held by ASC in 2000, Chinese characteristics of management accounting were summarised as follows (see *Accounting Research (China)* No1, 2001):

- Relating management accounting to the enterprises' environments.
- Using the development of responsibility accounting as a breakthrough point to develop Chinese management accounting.
- Paying more attention to the relationship between production technology/ economic methods and cost control and management.

4.3.3 There is a significant gap between academic research and accounting practice

Most of the published literature relating to enterprise's experience of management accounting was written by the accounting practitioners in these enterprises. Very few academics have been involved so the theoretical implications have not been fully examined. It has also been difficult to transfer good practices to other enterprises. Academics have not shown a desire to undertake field research and publish case-based research of observed successful practices. It was reported that, within a total 1,595 published papers of the first 100 issues of *Accounting Research (China),* only 13% involved in resolving practical problems, and only 2.5% were investigation reports (see *Accounting Research (China)* 1996, No. 2). If the focus had been only on management accounting the situation is likely to have been worse. Research that has been undertaken has been questionnaire-based rather than in-depth field studies. Therefore management accounting research has tended not to concentrate on explaining practice and has been divorced from reality.

Unlike in western countries there are no professional accounting associations consisting of both accounting academics and practitioners in China. As a result practitioners in western countries have mechanisms to establish contacts with academics. However in China, due to the absence of a professional organisation of management accountants like CIMA and other similar groups, accounting practitioners have little opportunity for contact with academics. In addition, CIMA publishes academic and practical magazines such as *Management Accounting Research* and *Management Accounting.* The former pays attention to academic and theoretical research and the latter places particular emphasis practitioner problems and experiences. Such opportunities do not exist in China. This provides a partial explanation of why most research on management accounting has focused on importing foreign theories and techniques without taking into account the specific features of Chinese environment.

4.3.4 There is little pressure for state-owned enterprises to adopt management accounting practices

Prior to the economic reform, the Chinese government owned all state-owned enterprises. The state provided financial resources and made investment and business decisions. All the profits of enterprises had to be remitted to the state and the government covered all losses. In such circumstances, the managers of state-owned enterprises had little or no managerial autonomy, and had neither the incentive nor the managerial authority to reduce costs and generate profits. In other words, there was no pressure to use the techniques of management accounting.

To revitalise the state-owned enterprises, the government has experimented with various measures in the enterprise's reform from 1978. These measures can be briefly grouped into two categories: contract system (known as the Contract System for Operation Responsibility) and corporatisation.

Many academic researchers have examined the content, features and development of the contract system (Liu and Zhang 1996; Xiang 1998; Scapens and Yan 1993; Bromwich and Wang 1991; Skousen and Yang 1988; Yang 1999b). The main objective of the system was to grant managerial autonomy and to motivate the managers and employees. Under this system, the once state-owned enterprises are required to meet the profit targets and other contract items. In return they receive incentives to develop the enterprise's facilities and/or increase employee's benefits according to profit-sharing rules with the government. Cost and profit therefore became important performance measures. The state-owned enterprises were first converted from production units into cost centres and later into profit centres with the managers of these enterprises being given authority to make product pricing, material purchasing, product mix, marketing and distribution decisions. By the end of 1993, more than 90 percent of the state-owned enterprises were governed by the contract system (Xiang 1998). Although several versions of the system have been experimented, the essential elements remain unchanged (i.e. encouraging entrepreneurs, stimulating managers and employees and maintaining the state's ownership).

Corporatisation or restructuring of state-owned enterprises is the main form of the modern enterprise system that was formally introduced from 1993 with the establishment of the securities exchange market in China. It refers to converting state-owned enterprises into companies with limited liabilities and joint-stock firms (known as shareholding system). The objectives of the corporatisation are to clarify the property rights of the state-owned enterprises by transforming former state-owned enterprises, for which the state has unlimited liability, into legal entities with limited liability and to rejuvenate the state-owned enterprises by protecting their management from the government's interference. The major difference between the contract system and corporatisation is that managers of shareholding companies in general get more managerial autonomy, especially in the field of investment decisions and profit distribution, than do the managers of the enterprises under the contract system. In other words, the aims of corporatisation are changing the state-owned enterprises from being quasi-government agencies to profit-oriented corporation and building a new ownership structure and corporate governance. Hence, corporatisation has been chosen as the preferred form for further enterprise reform. Until today, most large-sized and some medium-sized state-owned enterprises have been corporatised (small parts of them are listed companies).

Corporatisation provided a further momentum for using management accounting techniques. According to Jones and Xiao (1999), the modern enterprise system has four characteristics:

- Clearly defined property rights relationships;
- Clearly defined liabilities for enterprises;
- The separation of the government from the enterprises;
- The adoption of a scientific management system.

The first three points address improvements in the enterprise's environment for motivating the adoption of management accounting and the fourth directly requires the use of management accounting techniques.

Unfortunately, both the contract system and corporatisation have developed agency problems, which are serious dysfunctional side effects. During the implementation of the contract system, managers in these enterprises have pursued their short-term interests and neglected the longer-term investment. After an interview with some government officials and senior managers in China, Liu and Zhang (1996) summed up ten reasons for the formation of the short-term behaviour as follows:

- Inflation and keen competition;
- Proliferation of the fee-charging government agencies;
- Vicious cycle of government incentives;
- Lack of contracting laws;
- Inappropriate target base;
- Predominance of uncertainties;
- Lack of asset revaluation;
- Short contract period;
- Inappropriate performance measures;
- Appointment of contractors.

Taking the short contract period as an example, the period normally is three years. Such a short period is insufficient to make long-term planning decisions that are consistent with the cycle of the development of many products and technologies and asset renovation. Managers' major concern is how to achieve or supersede the profit target within the contract period and to provide more benefits for the employees in order to maintain their morale and to also avoid the state's interference in the decision-making process.

The same short-term behaviour also happens with corporatisation. Although there is no contract period limit, unreasonable mechanisms still exist for performance measurement and leadership. Firstly, a profit target is still used as the main performance evaluation criterion. This results in the managers of the enterprises paying undue attention to adding to the current profit whilst ignoring the long-term consequences. Any costs that can reduce the current profit and which do not have an immediate benefit, such as research and development (R&D) expenses, are minimised. Secondly, the managers of shareholding companies still have a duty term, normally three to five years. Those managers, who are concerned that they may have their contracts renewed, are motivated to delay necessary expenditure in order to transfer some of the costs, losses and, depreciation into the future periods. It is totally unrealistic to expect those managers to engage in behaviour that will reduce their own performance but which will enhance their successor's performance. This may account for the low proportion of R&D in China being 2.87% of sales for state-owned enterprises, 3.71% for the collective section, 4.1% for shareholding companies, 4.82% for the foreign investment section and 7.43% for private section (Yang 1999b). Similar figures for western developed countries are around 10%.

4.3.5 The lack of fully trained accountants and the absence of professional management accountants

The spread of western management accounting techniques is restricted by the following factors:

- A lack of knowledge on the part of the average accountant;
- Absence of professional institutes of management accountants similar to CIMA in the UK and certified management accountant (CMA) in the USA.

There are around ten million accounting personnel in China. Most of them are bookkeepers and accounting clerks and less than 10% are graduates from universities or institutes in higher education. Although management accounting is widely taught at all levels of higher education and professional training, the current education system is still incapable of generating enough fully trained accountants.

Another deficiency is that among the Chinese CPAs, many are elderly 'accounting experts'. It was reported by the Chinese Ministry of Finance in 1992, that 78% of them were over 60 years old (Liu and Zhang 1996). The proportion is gradually reducing with their retirement. These elderly CPAs have a rich management experience but very poor knowledge of western management accounting. They were granted the CPA title only by assessing their working experience because they were too old to pass CPA examination. However, the younger CPAs who have passed the examinations are considered suspect in relation to their competence for enterprise management. In contrast, the career prospects of those individuals who are professionally qualified are enhanced in the West. China must follow this approach to establish its accounting professional ranks.

China's CPA's re-organisation was resumed in the early 1980s in response to the open door policy and the forthcoming securities market, but the first CPA examination was delayed for more than 10 years until 1993. There is a huge difference between the supply and demand for qualified accountants. The Chinese government has estimated that China's economic reform will need hundreds of thousands of additional CPAs in the next decade requiring the supply to be increased by ten times the current CPAs. Furthermore, as mentioned above, the majority of the existing CPAs are neither professionally trained nor familiar with western practices of management accounting. Therefore, it is unrealistic to expect management accounting to be fully developed in China in the foreseeable future. This implies that the diffusion and adoption of management accounting will be inhibited and have to be undertaken with an insufficient supply of management accountants.

4.4 Prospects for the adoption of western practices of management accounting

In today's global business environment, managers are increasingly interested in knowing whether management practices and management information systems which are effective in one country can be used effectively in another (Birnberg & Snodgrass 1988). There is evidence to suggest that importing or exporting management practices across countries is influenced by national cultures because people of different national origins have different preferences for, and reactions to, management practices (Hofstede 1980, 1991; Chow *et al.* 1991; Birnberg & Snodgrass 1988; Merchant *et al.* 1995). Therefore, the diffusion and adoption of management accounting practices may be highly conditional on the national culture of the recipient nations. China's process in the diffusion and adoption of western practices of management accounting may provide evidence as to whether various management accounting systems employed in free market economies are appropriate for a non-completed market economy is problematic (Scapens & Meng 1993).

However, some researches question national culture determinism in the design of management accounting systems. Granlund and Lukka (1998) find that there is a global tendency for management accounting system designs and general ideas to converge. They argue that the drivers of convergence in management accounting practices have started to dominate those of divergence, thus creating a great global homogeneity in management accounting practices at the macro-level.

Similar studies provide a wide field of vision for examining the relationship between culture and management practices and emphasise the impact of organisational culture on corporate practices. They suggest that organisational culture change is possible, regardless of considering culture as based in shared practices (e.g. Hofstede's framework) or in shared values. Theoretically those prevalent organisational values which are more central than other national values (as mentioned earlier) should be a force that strengthens organisational culture. Therefore, in order to fit managerial purposes, the management in organisations may make a deliberate effort to drive organisational culture change so long as meet cost-benefit relationship (O'Connor 1995; Harrison and McKinnon 1999). Thus organisational culture can gradually be homogeneous to a certain degree. At the institutional level, a homogeneous organisational culture can be a promoter of new and standardised practices, such as the implementation of ABC and standardised management software. Burns and Scapens (2000) claim that organisational culture should be in line and supportive of the new practices. O'Connor (1995) even examines the role of socialisation, training and selection in creating an organisational culture distinct from the national context. He argues that organisations can decide not to adapt to local national culture and can choose only personnel who are suitable for the desired organisational culture.

Many recent surveys have been conducted on the usage of different types of management accounting techniques and the benefits derived from them in different countries. Examples include studies in the U.K. (Drury *et al.* 1993; Dugdale 1994; Bhimani 1994; Innes and Mitchell 1995), the U.S.A. (McKinnon and Bruns 1992; Green and Amenkhienan 1992), Australia (Joye and Blayney 1990; Dean *et al.* 1991; Chenhall and Langfield-Smith 1998), France (Roberts 1995; Lebas 1996), Belgium (Bruggeman *et al.* 1996), Germany (Scherrer 1996), Denmark (Israelsen *et al.* 1996), Netherlands (Groot 1996), Italy (Barbato *et al.* 1996), Greece (Ballas and Venieris 1996), Sweden (Ask *et al.* 1996), Spain (Saez-Torrecilla *et al.* 1996), Norway (Bjornenak 1997), Japan (Yoshikawa *et al.* 1989), and Finland (Lukka and Granlund 1996). The common findings emerging form these studies is that, overall, the rates of adoption of traditional management accounting practices are much higher than recently developed techniques. The benefits obtained from traditional management accounting are higher than those of newer techniques. These studies also indicate that there are some differences in relation to the adoption and benefits of management accounting practices in different countries and organisations.

There is very little Chinese evidence relating to the adoption and benefits provided by both traditional and recently developed management accounting practices. Hence there is an urgent need for surveys to identify the extent to which Chinese enterprises have adopted certain traditional and recently developed management accounting practices, the benefits received from those practices and the intentions to emphasise certain management accounting practices in the future.

The aim of the current research project is to undertake a survey to remedy this deficiency. The findings from the study by Chenhall and Langfield-Smith (1998) in Australia provide further support for repeating a similar survey in China. Their research raised several issues arising from their own and other studies such as:

- It may be premature to assume that traditional management accounting techniques lack relevance;

- The nature of the dependence between traditional and recently developed management accounting techniques needs further investigation;

- The relatively lower benefits associated with recently developed techniques raises the question of the conditions necessary to effectively implement these techniques.

The surveys undertaken in different countries described above provide a useful source for comparing the adoption of management accounting practices in capitalist societies with China. Furthermore, although there have been many studies and anecdotal accounts about the transfer of managerial innovations across borders, they have concentrated on broad managerial styles and socio-economic theory rather than undertaking empirical studies relating to the usage of specific management accounting techniques procedures.

Although there have been few empirical studies examining the diffusion of western techniques and practices of management accounting in China. Firth (1996) provides empirical evidence relating to their transfer to a Chinese setting. He hypothesises that the management accounting systems employed by the foreign joint ventures which are invariably designed by the foreign partner, will have a significant influence on the development and content of, management accounting in the Chinese partner.

Firth's questionnaire was sent to (1) the foreign joint ventures in China; (2) the specific division of the foreign company that is involved in the joint venture; (3) the Chinese partner (state-owned enterprise) and (4) a Chinese state-owned enterprise that is not involved in a joint venture but is in the same industry and of a similar size to the above Chinese partner. The survey results indicated that those Chinese enterprises who operated joint ventures with foreign partners appeared to incorporate the more detailed and the newer western management accounting techniques to a much greater extent than other state-owned enterprises without foreign partnered joint venture operations.

Besides supporting the idea that joint ventures represent an important avenue for the diffusion of western management accounting practice, Firth's contribution also supports the view that operating within a global business environment may influence the adoption of western practices.

4.4.1 China will retain effective traditional management accounting techniques for some time

Taking into consideration the current circumstances of China's economic reforms and the changes in the Chinese enterprise' environment arising from the reforms, it is unlikely that there will be a large-scale adoption of western management accounting in the near future. The following section discusses the factors why China has to retain its self-creative and characteristic methods of management accounting to meet the requirements of Chinese enterprise and accounting reform.

As was mentioned above, Chinese management accounting should be designed to serve Chinese large and medium-sized enterprises that are characterised by extensive management autonomy and an effective separation of ownership and control. At present, these enterprises in China still operate in an accounting environment that differs considerably from that which is typically presumed under western management accounting. These differences are discussed below.

Firstly, although the assets of these state-owned enterprises no longer belong directly to the state, the state continues to exercise control, both as a major shareholder and as the regulator of the economy. This applies particularly to strategic areas. For example, decisions on capital investment and enterprise extension often have to follow the industrial policies of the government. In particular, opaque, uncertain and unpredictable regulatory frameworks often are formed by both central and local governments (O'Connor *et al.*, forthcoming).

Secondly, the underlying assumptions of western management accounting are not relevant to the environment faced by Chinese state-owned enterprises. Scapens (1984) argued that the conventional wisdom of western management accounting, which was introduced into Chinese organisations and informed academic debates about management accounting in China, was based on decision models derived from neo-classical economics. The major assumptions of these models include: the objective of business activities is to maximise profits; there is no uncertainty regarding the consequences of particular actions; all necessary information can be obtained at no cost and the decision-maker is the owner or shares the owner's goals.

It is questionable whether the profit maximising assumption can be fully applied to Chinese state-owned enterprises. Originally, defining profit as the primary objective of enterprises could motivate enterprises to utilise limited resources more efficiently. It also coincides with the general requirements of market-oriented reforms. Nevertheless, the enterprise environment in China is far different from those in the West. Although earning profit is an important objective for Chinese state-owned enterprises, it is not the main objective. The state requires large state-owned enterprises to bear a heavier share of the burden from retirement pensions, other social–welfare costs and redundant workers (Lin *et al.* 1998; Goodall & Warner 1999). For instance, these enterprises have the responsibility of housing their employees, providing them with nursery, schools, hospital etc. For example, Shenyang Aeroplane Manufacturing Co. in Liaoning Province is a dated state-owned munitions enterprise. The company has to carry out such a heavy social burden, with 17,000 staff, 11,000 retirees and eight schools to support (*Beijing Review* 1999, No.17, Vol.42). It is impossible for an enterprise like this to compete fairly with other types enterprises in the market, such as collective, private and joint ventures. Although recent economic reform requires separating business activities and social services, this is a big social transformation project and cannot be finished in a short period of time.

According to the market rule in the West, if an enterprise fails to earn sufficient profits, it will become bankrupt in the long run. It is inappropriate and unfair to use this principle to those state-owned enterprises that have to bear such a heavy social burden. Thus, from 1986 when the Chinese Bankrupt Law was effective to 1993, very few enterprises have actually been made bankrupt. Of course, these circumstances have begun to change in recent years. Many enterprises have become bankrupt in the process of adjusting their economic structure. By 1998, a total of 1,028 enterprises had been merged or had become bankrupt (*Beijing Review* 1999, No.17, Vol.42), but most of them are not large-sized state-owned enterprises which have to operate under the government's protection in varying degrees. It was reported that China's second largest trust and investment company—Guangdong International Trust and Investment Co. (state-owned) had become bankrupt in early 1999 due to its failure to repay old debts, which was the first Chinese enterprise applying for bankruptcy in accordance with the market rule (*Beijing Review* 2000, No.4, Vol.43). If unprofitable state-owned enterprises were to become bankrupt, larger numbers of workers would lose their jobs. Due to the lack of essential social welfare systems, this could cause political and social instability. Therefore, even though state-owned enterprises have been subject to the discipline of the market, they remain relatively protected.

Thirdly, most Chinese accounting practitioners have not seriously considered the adoption of management accounting techniques. The opinions of managers and accountants in Chinese state-owned enterprises are very old fashioned. They would like to attach great importance to financial accounting rather than paying more attention to management accounting. This is because the current enterprise environment has not created the pressures on managers to use management accounting. On the one hand, as already mentioned, owing to the state's interference, managers in Chinese state-owned enterprises have not been given as much autonomy relating to financial management compared with their western counterparts. On the other hand, management controls in Chinese enterprises, whether collective, private or state-owned, are largely based on loyalty, seniority and trust. Chief executives are usually very authoritarian and manage enterprises by direct involvement and personal relationships with preference for their own business experience, rather than through relying on reporting systems based on scientific management rules.

Fourthly, Chinese traditional management norms can impede the adoption of more formal, transparent processes and controls of management. Examples include security of employment, formal centralised bureaucracy, respect for status and seniority, and a strong sense of egalitarianism (Davidson 1987; Von Glinnow & Teagarden 1988; Baird *et al.* 1990). These norms generally reflect a preference for well-established routines and procedures and are likely to be an obstacle to change in older state-owned enterprises (O'Connor *et al.* Forthcoming).

The above are only some of factors which affect the diffusion of western management accounting in Chinese enterprises. Other factors, for example, short-term behaviour, poor training and practice for accountants etc. were mentioned earlier. The adoption of management accounting practices requires the appreciation and willingness to adapt from enterprises. If the practices are merely forced on to firms by the government, there will be reluctance on the part of firms. This is likely to result in enterprises deceiving the government and the practices not being carried out effectively. The likely implication of this scenario will be that the desired effect of management accounting would not be achieved, leading to much wastage of time and resources. It probably becomes a mere formality to force practising the techniques of management accounting in enterprises without their self-demands. In other words, unless Chinese enterprises do really have a free enterprise environment as their western counterparts, western management accounting is unlikely to play a major role in the management of Chinese enterprises.

In the past China has shown a willingness to adopt foreign management systems but this has probably been due to the systems being transferred from countries with similar socio-economic systems and cultural backgrounds. For example, some researchers have questioned why China has readily accepted two foreign management systems that differ from the Anglo-American system to varying degrees— the ex-Soviet system and the Japanese system (Bromwich and Wang 1991). China and the ex-Soviet system shared the same basic socio-economic system for three decades before China's "open door" policy. Thus their management systems had much in common and encountered similar problems when it came to reforming, e.g. authoritative intervention and subjective performance evaluation. Probably this explains why cost accounting and control which was imported from the West earlier by the ex-Soviet Union, and then copied by China, did not evolve in the same way as in the West. Instead, they were conditioned by the control characteristics of the socio-economic system (i.e. the centrally planned economy).

In the control area, cultural differences still affect people, their thinking and behaviour, and therefore influence managerial philosophy and practice. China and Japan seem to share many of the same cultural patterns from ancient times, such as obedience to authority, the desire to achieve, working hard, etc. Therefore China tends to accept many Japanese management systems and methods, e.g. management by objectives, total quality control, etc. Moreover, Chinese employees used to enjoy and still admire Japanese lifetime employment. Hence, the difference in cultural factors between China and the West could reasonably be expected to cause management systems (including management accounting) to differ to a greater or lesser extent.

Besides the differences with the West relating to the socio-economic system and the cultural background other differences also exist. For example, differences in the political system, the forms of ownership, the unbalanced economic development levels in various regions, the level of sophistication of business management and the legal structures etc. Previous research has drawn attention to the fact that when a centrally planned system is demolished, both task and institutional environments become more uncertain, unpredictable and unverifiable (Nee 1992; Perkins 1994; Naughton 1995). The forum entitled 'Chinese characteristics of accounting theory and methods', held by ASC in 2000, and summarised the major environmental factors that determine Chinese accounting characteristics. They include the political, economic, legal, institutional, cultural environments, and the level of education development. For example, Chinese traditional culture determines that the government's accounting regulations have absolute authority' (see *Accounting Research (China)* 2001, No1*)*. Also many new situations and issues are encountered in the diffusion of management accounting due to rapid developments of economic and enterprise reform and these must be taken into account.

Finally, western management accounting itself is far from perfect and the reluctance to replace traditional techniques with new techniques has been criticised. In the previous chapter (see section 3.4) it was pointed out that many western academics, besides Johnson and Kaplan (1987), have questioned the relevance of western theory and practice of management accounting. Given the publicity that has been given to western management accounting techniques and the reluctance of the West to accept the newer techniques, it would not be surprising if China were reluctant to adopt them.

Even after over a centenary development history, management accounting in the West, its relevance and usefulness continue to be questioned. Therefore, a possible and rational inference for the Chinese management accounting profession is that western detours should be avoided by China. Instead, a Chinese version of management accounting should be developed based on the absorption of the knowledge gained from studying western management accounting and modifying traditional Chinese techniques.

4.4.2 Future prospects for the adoption of western management accounting in China

Differing from others who have typically emphasised the differences of management accounting practices across countries, Granlund and Lukka (1998) argue that there currently is a global tendency for management accounting system designs and general ideas to converge. Their study suggests that the drivers of convergence in management accounting practices at the macro level (e.g. concepts, ideas, techniques, system designs etc) have started to dominate those of divergence in management accounting practices at the micro level (e.g. behavioural patterns and styles of information use).

Therefore they claim there is a global homogenisation of management accounting practices at the macro level.

Granlund and Lukka establish a framework, which includes both economic and institutional perspectives. They identify the factors directing management accounting practices towards convergence as follows:

Economic pressures

- Global economic fluctuations/recessions, deregulation of markets
- Increased competition (the globalisation of markets)
- Advanced production technology (e.g. JIT)
- Advanced information technology (e.g. management accounting software package, internet, Electronic Data Interchange)

Coercive pressures

- Transnational legislation (e.g.EU)
- Transnational trade agreement (e.g. WTO, APEC, EU)
- Harmonisation of the financial accounting legislation
- Transnationals' (especially global firms) influence on their subsidiaries
- Headquarters influence in general

Normative pressures

- Management accountants' professionalisation
- University research and teaching

Mimetic processes

- Imitation of leading companies' practice
- International/global consultancy industry

Applying this framework to China's accounting environment in the future seems to indicate a convergence of management accounting practices in most of these variables. China is likely to have a new altitude to adopting the advanced techniques of management accounting in the future. This is because China now stands at a historic turning point. Although there are a growing number of studies addressing the differences in management accounting practices between China and western countries most forecast a narrowing of the differences in the coming years (Firth 1996). The remaining discussion in this section describes various factors occurring within the Chinese environment which are likely to have a longer-term impact of the adoption of western management accounting practices.

(1) China has achieved astonishing progress after two-decades of an 'open door' policy

Before 1978, China was the largest poverty country in the world with a huge population and closed, autocratic rules. It played a very insignificant role in the world's affairs. Since the open-door policy was introduced in 1978 China has been subject to a considerable amount of change. Statistics show that, from 1979 to 1998 China's GDP has been growing at an average 9.8 percent annually. This is the highest growth rate in the world and China was ranked seventh in the world's top 10 economic giants by World Bank. The higher rankings are the United States, Japan, Germany, France, Britain and Italy (*Beijing Review* 1999, No.42, Vol.42). Some key data indicating China's international ranking are shown in table 4.3.

Table 4.3 China's international ranking in 1978 and 1997

	1978	**1997**
GDP	362.41 billion yuan	7477.24 billion yuan , 7th
Foreign trade	27th	10th (9th in 1998)
Foreign trade volume	US$20.64 billion	US$325.1 billion
Import	27th	US$142.4 billion, 12th
Export	28th	US$182.7 billion, 10th
Foreign exchange reserves	US$167 million	US$139.9 billion, 2nd
Absorbed foreign capital		2nd
International tourism income	US$260 million	8th

Source: *Beijing Review*, 1998, No.45, Vol.41

China has successfully reduced its poverty problems. The poverty population was reduced from 250 million in 1978 to 42 million in 1998 (reported by *21st Century Forum, Conference 2000*, Beijing). There has also been a rapid improvement in the living standards of the people in the past two decades. The Chinese experience thus provides a good example for many other developing countries.

China has considerable potential for growth. China's market has attracted huge foreign investment. 'At present, there are over 200,000 foreign-invested enterprises from over 170 countries, and among the world's 500 largest enterprises 200 have invested in China. Until 1998 foreign capital in China accounted for over 40 percent of the overall foreign investment in developing countries. In 1999, foreign funded enterprises contributed nearly 16% of the gross industrial output (*China Statistical Yearbook* 2000). China is the second large foreign investment country only after the United States (*China Today* 2000, No.3). By establishing a joint venture, a state-owned enterprise has more opportunities to model itself on the foreign partner and increase the adoption of capitalist style management skills and management accounting practices. Foreign partners also normally assist state-owned enterprise partners through on the job learning and formal in-house training, support of outside training in local schools, and trips overseas (Child & Makoczy 1993; Firth 1996; Yan & Gray 1994). These forces should push towards greater use of western management accounting practices (O'Connor *et al.* Forthcoming).

Through 20 years of reform and opening-up China has gained a clearer understanding of the world. *Fortune*, a magazine of the American Time Warner Inc., enjoys a high repute in the global media. In 1995, *Fortune* launched the annual Fortune Global Forum, inviting board chairmen, presidents and chief executive officers of multinational companies and renowned politicians and scholars worldwide to discuss problems faced by global business circles. Fortune Global Forum 1999, with the theme of "China: in the coming 50 years" was held in Shanghai. Most attendants shared the view that China's economy enjoys good prospects for development and has tremendous potential for continuous growth, and is an ideal co-operative partner in the global economy. It is predicted that China will enter a completely new phase of development.

China's goal is to become a "near developed country" by the middle of the 21^{st} century. Therefore, the current Chinese political and economic elite is pushing hard toward greater integration into the world's markets as a mechanism for economic development. At the end of 2001, China was approved to join the World Trade Organisation (WTO) with the signal of integrating its national economy into the world economy. Also China is a member of Asia-Pacific Economic Cooperation (APEC).

(2) The opportunities and challenges to China's arising from the WTO accession

Becoming a WTO member brings China both advantages and disadvantages. Also the Chinese have a complicated feeling toward the entry into the WTO. They have been looking forward to it, with joy and worry. With China's accession to the WTO, China is opening up fully to the rest of the world, and tremendous changes are occurring in many aspects of China's society. Below are some positive and negative impacts:

Firstly, benefiting from further reform. After two decades of reform experience, China is at a vital moment with various contradictions to be solved and reform to be deepened. The entry into the WTO enables China to be involved in the international division of labour and co-operation and provides a more stable external environment for China's economic development. This should greatly promote the acceleration of enterprise reform. Also from a longer-term point of view, the liberalisation of trade and investment will facilitate Chinese enterprises to make use of the domestic and international markets and resources to quicken the upgrading of its industrial structure. Probably China can benefit from the solution mechanism of multilateral disputes to safeguard its rights and interests to the greatest possible extent.

Secondly, the improvement in China's international position. With its entry into the WTO, China can take a more positive attitude toward participating in globalisation and gradually further expand its industries including commerce, foreign trade, finance, insurance, securities, telecommunications and tourism. Thus, China will hold a stronger position in the international trade environment and play an active and constructive role in establishing a new international economic order. This should enable China to become an economic global power. Furthermore, by becoming a leader within developing countries, China's integration into the world economy would give developing countries a bigger voice in the world and help build a prosperous and stable new century. All these achievements should, in turn, stimulate Chinese economic development.

Thirdly, absorbing more foreign investors and expanding foreign trade. After a transition period of five years following China's entry into the WTO, all foreign companies and banks will enjoy 'national treatment'. This will provide fresh opportunities and broad markets for foreign investors. By that time, more foreign capital will pour in. For example, according to regulations, if a foreign bank wants to establish a business organisation in China, it should bring in at least 100 million RMB yuan (Chinese currency) (*China Today* No.3, 2000). This should lead to the expansion of the foreign-oriented economy. Conversely, investment in foreign countries by Chinese enterprises will also encourage the promotion of foreign trade exchange and co-operation between China and other countries. It is predicted by experts that 'once China is admitted into the WTO, the share of its foreign trade in global trade will double in five years to reach 7%' (*China and World* January, 2000).

Fourth, following market rules and setting out relative laws and regulations. Economies must put in place sound institutions, governed by laws and regulations, to help the benefits of growth reach all levels of society. Once China joins the WTO, working through international economic institutions can help it learn how to improve its system of economic laws and regulations and protect its own interests with international economic rules and legislation. Finally, China can find ways to ensure a strong global economic framework that facilitates trade, sets clear rules, promotes transparency and responds quickly and effectively to crises.

Fifth, enhancing the living conditions of the Chinese people. After China formally enters the WTO, import tariffs will be gradually lowered and the price of cost of living products will drop with reliable quality and comprehensive after-sale services, which will provide more benefits to over billion Chinese common consumers.

Sixth, heightening the international competitiveness of Chinese enterprises. WTO entry will speed up reorganisation of Chinese enterprises. By entering into co-operation with multinational companies, establishing Sino-foreign joint ventures or working with overseas small and medium-sized businesses China's enterprises can acquire advanced foreign concept technology and management expertise (including management accounting). Although in the near future Chinese enterprises will face sharper competition it is expected that China will improve its competitiveness in the longer-term.

In the transitional period it is inevitable that China's economy may be under pressure. More foreign competitors may enter the Chinese market and this will make it more difficult for some domestic industries. There is a risk of economic stagnation and mass unemployment which could trigger economic and political instability and social unrest. If this happened, China would pay a high price for the WTO entry. After the transition period China will have a powerful development impetus and a wider development opportunities throughout the world. Most agree that as long as the economy enjoys a fast and steady growth China will certainly become a major economic power.

(3) The prospects of further reforms of enterprises

It was pointed out earlier that state-owned enterprises represent the major enterprises where management accounting is currently applied. Thus how the state-owned enterprises will develop in the future has implications for the future developments in management accounting. This section examines the potential future developments in state-owned enterprises.

Since the 1980s there have been many reforms of state-owned enterprises including the contract system and the modern corporation system (corporatisation or restructuring of state-owned enterprises). Currently state-owned enterprises' reform continues to be a widely discussed topic and there is an urgent need to speed up the reforms. State-owned enterprises have become established as the pillars of the Chinese national economy. Despite the progress that has been made arising from the reforms the traditional planned economic structure has left these enterprises with a number of burdens. They relate to funding, staffing, social burdens and an outdated ideology. Examples include capital shortages, heavy debt burdens, outdated equipment, irrational product mixes, surplus employees, etc. These have resulted in low economic returns and an increasing number of loss-making enterprises (for example, the ratio of losses for state-owned enterprises was 47.3% in 1990 but increased to 68.8% in 1998). This has been accompanied by increases in unemployment (Chen 2001).

There are many reasons for the difficulties of the state-owned enterprises. At the macro-economic level years of duplicated construction have led to immerse idle capacity. In some cases, new projects were launched without equity capital, creating a heavy debt burden. At the micro-economic level the main reasons include lax management, low efficiency, insufficient supervision over enterprise leaders and the failure of partial enterprise managers to adapt themselves to market competition (Chen 2001).

The reform of state-owned enterprises is a crucial step in China's economic reform. The Chinese government decided to help most large and medium-sized loss making state-owned enterprises operating through further enterprise reform starting from 1998. These reforms are discussed in the following paragraphs.

Firstly, emphasis was given to reducing losses and increasing profits in key industries and enterprises by restructuring and reorganising them. For example, 25,800 illegal and irrationally structured small mines were closed in 1999 (*Beijing Review* 1999, No.2, Vol.42).

Secondly, efforts were made to merge bankrupt enterprises and enhance efficiency through cutting the number of employees and implementing a new social security system (incorporating unemployment insurance). By 1998, a total of 1,028 enterprises had been merged or become bankrupt (*Beijing Review* 1999, No.17, Vol.42) and even poorly managed listed state-owned enterprises were acquired by private companies (Cheng 2001). Merger and bankruptcy policies have not only helped to achieve the target of getting state-owned enterprises out of their plight but also established a survival mechanism for the fittest, thus concentrating resources on well-performing enterprises. By the end of September 1998, all enterprises that laid off workers had set up re-employment service centres or similar organisations, handling 7.011 million of the 7.144 workers laid off by state-owned enterprises.

Thirdly, help was given to enterprises in raising equity capital and reducing their debts. According to statistics, since 1978 the state-owned enterprises' average liability rate on assets has kept rising, from 18.7% in 1980 to over 79% in 1994 (*Beijing Review* 1999, No.47, Vol.42). China's state-owned enterprises experienced an unprecedented liability crisis. In 1999, the Chinese government introduced the debt-to-equity transfer policy in some key large and medium-sized state-owned enterprises. The practice was designed to change the creditor-debtor relationship between banks and enterprises into shareholding relationship between finical assets management companies and enterprises and to replace principal and interest payment of bank loans with dividends linked to the amount of shares. Outstanding principal and interest of 57.7 billion yuan in loans was converted into state equity capital. In 1998 another 93 enterprises were listed abroad raising 67.69 billion yuan through the stock market. In addition, local governments have added a great deal of capital to enterprises by refunding their income tax (*Beijing Review* 1999, No.2, Vol.42).

Fourthly, an attempt has been made to promote the sound development of all types of enterprises. In light of the requirement of a modern corporate system, restructured large companies and business groups were standardised and refined. The formation of large business groups was advanced in line with market rules. Support to key state-owned enterprises continued to be reinforced. Positive and prudent ways were taken to further liberalise and invigorate small state-owned enterprises.

Fifthly there has been speeding up of technological progress and raising enterprise technological innovation capabilities. The weak capacity for technological development and innovation is a major factor restricting the competitiveness of state-owned enterprises and inhibiting their development. In connection with the reform of scientific research institutions, some technology development centres were integrated into large state-owned enterprises. The research and development of key products and the absorption of imported technology were organised. Efforts were also made to promote the integration of industrial enterprises, universities and research institutes to accelerate the transfer of research results to commodity production.

Successful reforms can be only curried out when the conditions are mature. A single reform needs the support of other measures so as to proceed in an orderly way that is accepted by society. The reform of state-owed enterprises is the most difficult problem to tackle. The problems plaguing state-owed enterprises have accumulated over a long time period the efforts to overcome their difficulties within three years can only provide the foundations. A longer time period is required to help state-owed enterprises genuinely achieve sound and rapid development.

(4) The future adoption of management accounting in China

Understanding the factors that influence state-owned enterprises' adoption of management accounting practices can enhance the success with which such practices are disseminated (O'Connor *et al.* Forthcoming).

As can be seen from the above discussion the reform measures will have a greater impact in the longer-term. They will provide a substantial base for enterprise's sound development and also provide a wider arena for the future development of management accounting.

The future rapid changes will represent a sudden shock to the economic system and should act as a great stimulus to the diffusion of accounting ideas. This should encourage Chinese enterprises to quickly adapt to the new economic circumstances and acquire new management skills and enhance the adoption of western technologies and techniques. The diffusion and adoption of advanced management accounting techniques needs to be accompanied by a matching level of enterprise technological innovation and a supply of qualified accountants and well-training staff. The following paragraphs provide a justification for the above conclusions.

First, progress has been made on deepening the reforms of the management system for science and technology. As a result 80% of the 242 scientific research institutes affiliated to 10 state administrations were restructured and incorporated into enterprises (*Beijing Review* 2000, No.15, Vol.43). This is important for shortening the procedure of technological innovation and, to accompany such innovations, advanced management accounting techniques will be required.

Second, the adoption of western management accounting practices is an innovation. The adoption of an innovation depends on whether an organisation has sufficient existing labour skills to implement the innovation. An effective education system is required for the diffusion of newer ideas relating to management practices. Recent developments in higher education are encouraging. For instance, in 1999, universities and institutions enrolled 1.64 million full-time students, an increase of 47.4% over the previous year (*Beijing Review* 2000, No.15, Vol.43). This increased to 2.04 million in 2000. Many of these students will join business enterprises and thus improve the quality of the labour force.

Third, entrepreneurs are returning to universities and institutions to enhance their education. For example, in 1999, Beijing University (the top university in China) initiated a special training school for more than 200 entrepreneurs from all over the country. These entrepreneurs refer to this as 'brain washed', i.e. 'getting rid of old ideas and acquiring new modes of thought'. Many institutes and universities offer similar courses for entrepreneurs at all levels. These entrepreneurs will form the backbone of promoting and supporting the adoption of advanced management accounting techniques. The following statement was made by one of these entrepreneurs. 'You may have a luxury car, but that does not mean you have the knowledge you need for the future. In the era of the knowledge economy, only those who have mastered certain scientific and technological principles can get ahead' (*China Today* No.4, 2000).

These pressures from economic, coercive and normative reasons are underlying forces driving Chinese management accounting practices towards the global homogenisation. According to institutional theory, in the process of responding to such a changing environment, state-owned enterprises will adapt their management and management accounting practices to gain legitimacy and to ensure their survival (DiMaggio & Powell 1983 and 1991; O'Connor *et al.*, forthcoming). However, the adaptation may also include voluntary responses to pressures to conform with accepted standards of practice or involuntary responses to coercion by powerful institutional forces (DiMaggio & Powell 1983 and 1991; O'Connor *et al.*, forthcoming; Scott 1987).

When modern Chinese organisations, whether they are state-owned enterprises or foreign joint ventures, face intensified globalisation of markets and large competitive pressures, they have to deal with creating competitive strategies in their business operation. Hence they are likely to seek standard solutions of management accounting system. At the same time, management accounting practices are adaptive to changes in their environment. For instance, in order to obtain and maintain competitive advantages more and more Chinese firms are willing to adopt advanced production (such as CAD, CNC, CAM, FMS and JIT) and information technologies (e.g. EDP, financial and management accounting software packages). Market competition has also generated considerable pressure to improve both cost and quality, which in turn has also increased the need for more formal management controls (Li 1997). Foreign competition also provides both the impetus and opportunity for state-owned enterprises to imitate foreign firms as models (Guthrie 1999). This results in a convergence in enterprise practices and also has important consequences for management accounting systems because of the increased environmental complexity, and information processing demands in turn increase the need for mechanisms capable of dealing with the complexity (Tushman & Nadler 1978).

Although joining the WTO and APEC may not have a direct effect on the management accounting systems of the Chinese organisations, they will speed up the process-international harmonisation of financial accounting legislation and management practices as international firms tend to apply internationally accepted accounting principles and practices. Along with more and more foreign companies and joint ventures established in China, it is common for the headquarter/parent company of a transnational corporation to force its foreign subsidiaries/partners to adopt similar reporting systems or performance measurement frameworks to those used in the headquarter/parent company (Granland and Lukka 1998).

Given the above discussion, there are strong grounds for believing that the adoption of management accounting in China may flourish in the future. Compared to attempts to introduce it in the 1980's which were based on simply translating, introducing and blindly copying western practices, future attempts are likely to be based on the adaptation of the techniques. They will also be implemented into an environment that will more similar to the west than the 1980's. After suffering from past setbacks and failures of using western management accounting, the Chinese accounting profession has learnt more about how to treat and use the western theories and techniques rationally rather than acting impulsively. In recent years, Chinese academics have begun to pay more attention to helping enterprises choose suitable management accounting methods. A bridge linking theory with practice—involving a case study has been given top priority. In a bid among '1999 key tasks of management research' posed by the Accounting Society of China (ASC), the task of a 'typical case study for adopting and developing management accounting' was awarded top funding. From April 1999, the committee 'Management Accounting and Its Adoption' in ASC launched a movement called 'summarising and researching typical case experience of Chinese management accounting', with the help from 'General Accountants Association of China'. In this movement, the Chinese accounting academics and practitioners have begun to display a high level of co-operation.

By investigating typical cases within large and medium-sized enterprises of different industries, their hope is to systematically summarise and communicate the successful experiences used by Chinese enterprises. The aim is to establish a theoretical and methodical system of management accounting integrated within the Chinese context (Meng 1999).

4.5 Summary

As stated in Chapter 1, one of the objectives of this research is to examine the current adoption of western practices of management accounting in Chinese organisations, especially in state-owned enterprises. It was therefore appropriate to examine the literature in this area. This chapter has examined the attitudes of the Chinese accounting profession and organisations towards western practices of management accounting. It has provided a description of the reasons why western practices could not be widely used in Chinese organisations at the current time and predicted a more widespread adoption in the future.

From the early 1950s to the 1960s, Chinese state-owned enterprises experienced some of the simpler western management accounting practices. These techniques and other methods that originated from the management practices of state-owned enterprises served the centrally planned economy at that time. Until today, these traditional techniques and methods have been to some extent used in large and medium-sized state-owned enterprises.

The diffusion and adoption of western practices of management accounting in China ranged from simply copying or imitating western practices to considering developing a Chinese version of western management accounting. Thus the Chinese accounting profession and organisations began to show an interest in management accounting.

It is argued that the diffusion and adoption of management accounting practices are highly conditional on the national culture of the recipient nations. The diffusion and adoption of western practices provide some evidence to suggest that various management systems employed in free market economy may not be appropriate for a non-completed market economy.

The adoption of western practices of management accounting in China is currently focused on large and medium-sized state-owned enterprises. These enterprises, however, still operate in an environment that differs considerably from that which is typically presumed under the western practices of management accounting. For example, there are considerable differences between the socio-economic and political systems, the forms of ownership, the legal structures and the qualifications of staff. All of these aspects have linkages with the extent of the adoption of management accounting practices and provide some explanations for the limited use of western practices. Also these differences suggest that there is a need for the Chinese accounting profession to develop a Chinese version of management accounting that absorbs the knowledge gained from studying western practices and modifies the traditional techniques that have been used for many years by the state-owned enterprises.

Although it was concluded that western practices of management accounting could not be widely used in Chinese state-owned enterprises in the short-term, the long-term prospects are more encouraging. As China joined the WTO in 2001, China's economy is gradually developing towards a mature market economy. The internal and external environments faced by Chinese enterprises are changing. It was suggested that these changes would provide a wider arena for the development of management accounting. In addition, Chinese academics have begun to work closely with enterprises to determine appropriate management accounting techniques. Bearing all of these changes in mind, it would seem reasonable to expect that the adoption of management accounting practices in Chinese organisations may flourish in the future.

CHAPTER 5

THE MANAGEMENT OF FOREIGN JOINT VENTURES IN CHINA

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A Sino-foreign joint venture involves the participation of Chinese and foreign partners in the creation of a new corporation, which involves a mixture of different cultures. The management accounting practices in these organisations are normally introduced by their foreign partners. There is a need to determine the role that joint ventures have played in the diffusion of management accounting practices in China and ascertain the differences between the joint ventures and the state-owned enterprises in the adoption of western practices of management accounting. In order to examine the influence of foreign joint ventures in disseminating these practices, this chapter attempts to establish a theoretical foundation to evaluate their roles and to identify the characteristics on adopting these techniques in joint ventures. Section 5.1 refers to a brief description of the development of foreign joint ventures. Section 5.2 demonstrates the imitation and innovation of foreign joint ventures based on organisational theories and section 5.3 examines the characteristics of management control systems in joint ventures. Organisational innovations in joint ventures are also described in this section. Section 5.4 provides a summary of this chapter.

5.1 Development of foreign joint ventures in China

China's leadership has followed a policy of self-reliance since the foundation of PRC in 1949. The policy viewed private foreign capital as antithetical to socialist development goals. This view was rooted in the historically and ideologically grounded belief that private foreign capital investment in China would lead to a number of negative results. Examples include the loss of state control over the country's economy, loss of political independence and the potential for foreign influence to contaminate traditional and socialist values. Because of this, China's new reform policy of 'open to the outside world' in the late 1978 was viewed as a dramatic shift in foreign economic policy. The new Chinese leadership believed that China could selectively absorb the good things and boycott the bad things from abroad. By absorbing foreign investment, China would gain access to new sources of capital, advanced technologies and management skills, as well as to international markets that would absorb China's exports and provide foreign exchange to finance China's import needs.

5.1.1 Achievements in attracting foreign investment to China

Since the 'open and reform', Chinese leaders have thought that modernisation and economic development could not happen in isolation. It was also necessary for China to depart from isolationism. Thus, science and technology are viewed as an increasingly important part of the productive forces and foreign trade and investment have become important forces to achieve Chinese modernisation. Deng Xiao-ping's speech at the Opening Ceremony of the National Science Conference in 1978 clearly expressed this idea. The following is an extract from his speech:

> "...Of course, to raise China's scientific and technological level, we must rely on our own efforts, develop our own inventions, and adhere to the policy of independence and self-reliance. But independence does not mean shutting the door on the world, nor does self-reliance mean blind opposition to anything foreign. Science and technology are a kind of wealth created in common by all mankind. Any nation or country must learn from the strong points of other nations and countries, from their advanced science and technology" (report by National Science Conference 1978).

In order to attract foreign investment as soon as possible, the Chinese government has launched many continuing reform measures. These changes can be generalised into three aspects: institutional reform, environmental reform and legal reform. Examples include the establishment of MOFTEC (Ministry of Foreign Trade and Economic Cooperation), the establishment of the Special Economic Zones (SEZs) and the promulgation of the Law of the People's Republic of China on Chinese-Foreign Equity Joint Ventures, the Law of the People's Republic of China on Chinese-Foreign Contractual Joint Ventures, and the Law of the People's Republic of China on Foreign Capital Enterprises, etc. All these measures have been carried out for two purposes, first to improve the investment environment for foreign investors, and second to decentralise decision-making in foreign trade and investment.

With the improvement of the investment environment over the last two decades, China's foreign investment has increased dramatically. By the end of 1998, the Chinese government had approved 324,620 foreign-funded enterprises, involving US$572.5 billion worth of contractual funds and US$267.11 billion worth of paid-in investment from over 180 countries and regions. In 1998, the industrial output value of foreign-funded enterprises reached 1,553.2 billion-yuan (Chinese currency), representing 27 percent of the national total (5,819.52 billion-yuan). The increased amount of these enterprises accounted for 37.3 percent of the national total. Taxes paid by enterprises involving foreign investment in 1998 reached 123 billion (98 percent coming from foreign-funded enterprises) accounting for 14.38 percent of the national aggregated industrial and commercial tax revenue (855.17 billion-yuan) (*Beijing Review* 1999, No.49, Vol.42).

The Chinese market is already very attractive to foreign investors because it is growing very rapidly. Among the world's 500 largest multinationals over 200 have invested and more than 400 have set up their representative offices or branches in China. China accounts for over 40 percent of the overall foreign investment in developing countries, ranking it first among these countries. Also China is only second to the US in terms of attracting foreign investment.

China has become a venture investor's heaven. More and more foreign investors are recognising that investing in China is investing in the future. As one of Japanese venture capitalists said: 'If a venture capitalist misses the opportunity to enter the venture capital market in China, it will miss the 21st century' (*Beijing Review* 2000, No.26, Vol.43).

Foreign investors believe that a long-term view is essential in China. For example, as early as 1995, the European Commission proposed a Long Term Policy for China-Europe Relations. The report concluded that 'China has further developed its role as an important actor on the world stage and as a major economic and political power and is in the process of integration into international economic, security and political structures'. 'The unprecedented development that China is undergoing suggests that it will shortly assert itself as a world power both in the political and military field and also in the economic field. It is therefore a matter of priority for Europe to establish a relationship with China that will reflect the country's actual and potential influence at world and regional level'.

Since 1995, when the EU adopted a new long-term strategy for China, EU aid money to China has increased by three times. China is the EU's 4th largest export market and 4th largest supplier. In 1997 the Union's annual contribution to support China's economic development is 59 million ECU, equivalent to about to 67 million US dollars (a report by European Commission Delegation in China 1998).

Britain ranks first among EU countries and eighth among all 180 countries that invest in China. By May 2000, more than 2,600 British-funded enterprises with an investment of 8.9 billion US dollars had been set up in China (a report by MOFTEC in May 2000). 'We are already co-operating more closely on more issues than ever before, ... All have significant investments and long-term commitments in China, ... Britain has a lot to offer China. 42 of Europe's 100 companies are British. We are increasingly strong in the knowledge-based industries of the future' (an article by the British Prime Minister, Tony Blair, in *The Peoples Daily,* Beijing, 6 October 1998).

China's policy of reform and opening up to the outside world over the past two decades has created favourable conditions for the country to participate in economic globalisation. There are two major reasons for the influx of foreign investors in China: first, they wish to explore the Chinese market and market their products and services; and second, they want to use China's cheap labour and other advantageous production factors to lower their overall costs. For example, General Motors, which has been at the top of the Fortune 500 for three straight years, has set up five joint ventures and exclusively funded business in China. Nokia, which has already established seven production bases and one research and development centre in the country, recently decided that it will invest another US$1 billion in China over the next few years (*Beijing Review* 2000, No.2, Vol.43).

With its international investment China has successfully integrated itself into the global economy and become the fastest growing economy in the world. Foreign-funded enterprises' contribution to national and local economy cannot be under-estimated. For example, Shanghai is one of most attractive Chinese cities to foreign investors. Currently, foreign-invested companies in Shanghai are contributing 40 percent of the output value of the city's six pillar industries.[1] (*Beijing Review* 2000, No.21, Vol.43*)*. Tianjin, one of municipalities, has so far approved more than 10,000 foreign-funded enterprises with 4,328 already going into operation. These foreign ventures in Tianjin realised sales of more than 107 billion yuan in 1999 alone, with their output value, profit, tax, and exports respectively accounting for 42 percent, 52.6 percent, 50 percent and 70.9 percent of the city's total (*Xinhua* June 10, 2000).

Becoming a near developed country by the middle of the 21st century is China's goal. Opening up and reforming, and continuing to attract foreign investment will be a long-term development strategy. 'China will take a more positive attitude toward participating in economic globalisation in the decade', said Chinese Premier Zhu Rongji (*China and the World* January 2000). 'China cannot develop without help from the rest of Asia and the world, just as the rest of Asia and the world cannot develop without China', Premier Zhu said at the 21st Century Forum (in Beijing, June 2000).

5.1.2 Foreign joint ventures in China

From the 1980s, joint ventures have become a popular device in the business world as a sound and flexible means of developing new business activities and, in the context of a cultural trend of decentralisation, an alternative to the strategy of corporate acquisition (Berger 1999). Joint venture relationships have increasingly become an important strategy for multinational corporations for their global expansion into overseas markets. Joint ventures are also one of the main forms for China to attract foreign investment.

[1] These are automobiles, telecommunications, pharmaceuticals, and household electrical appliances, electronics and chemicals

The main purposes for the Chinese government encouraging foreign investors to form joint ventures are summarised as follows by Tang (1992):

- To acquire advanced technology, introduce modern production systems into China, thereby raising the productivity, improving product quality, reducing waste and inefficiency.

- To supply capital for the development of the economy.

- To obtain managerial expertise and skills to raise the level of enterprise management and train domestic employees.

- To achieve the international balances of payments of foreign exchange during the period of rapid growth of the economy and generate foreign exchange by increasing exports and imports substitution.

The forms of foreign investment and Equity joint ventures in China

The forms of foreign investment in China can be generally divided into two parts: direct investments and other investments. Direct investments include equity Joint venture, contractual (or co-operative) joint ventures, wholly foreign owned enterprises and co-operative exploration. Other investments include compensation trade, processing and assembling and international leasing, etc.

The equity joint venture involves the establishment of a limited liability company with equity investment by Chinese and foreign parties. The equity investment can be in various forms - in cash or in kind, such as equipment, propriety rights, a factory site, buildings and so on. Equity joint ventures are the most favoured form of investment in China since they provide the opportunity for the transfer of capital equipment, advanced technology, technical know-how and managerial skills within a relatively controlled environment (Akroyd1996). Table 5.1 shows the importance of the Equity Joint Venture as a form of foreign investment in China.

Table 5.1 Actually utilised foreign investment in 1998

Unit: US$ 100 Million

Equity Joint Venture	188.35
Co-operative Joint Venture	93.41
Wholly Foreign Owned Enterprises	165.16
Stock Enterprises with Foreign Investment	6.03
Co-operative Development	2.87
Overseas Share Issuance	6.24
International Leasing	3.77
Compensation Trade	0.91
Processing & Assembling	12.42

Source: MOFTEC

Equity joint ventures thus play a central part in the Chinese government's strategy to attract foreign investment. They are the government preferred mechanism for introducing foreign direct investment into China and because of this preference the government has given top priority to codifying the legal status of equity ventures (Pearson 1992). Hereafter, the term foreign joint venture (Sino-foreign joint venture) will be used instead of the term foreign equity joint venture (Sino-foreign equity joint venture). This study will concentrate on the influence of foreign equity joint ventures in disseminating western management accounting practices in China.

5.1.3 A brief review of the problems in managing foreign joint ventures

Foreign joint ventures have proved to be an ideal form of co-operation in a wide variety of settings since the 1980's. Because it has offered a way of sharing risks with other companies, this may enable joint ventures to benefit from the advantages of size and economies of scale. However, joint ventures face a number of challenges and management problems. Büchel *et al.* (1998) summarised typical problems in joint ventures analysed by various dimensions. These are shown in table 5.2.

Table 5.2 The relationship for describing joint ventures and some typical problems in joint ventures

Joint venture dimension	Potential problems in joint venture's management
Relationship between partners	Conflicts between partners if they are also competitors; delineation of areas of responsibility; mistrust; fear of loss of know-how; buy-back agreements
Internationality	Cultural barriers; different negotiating styles; differing ideas about people; pay systems; business practices; recruitment of personnel for the joint venture
Position in value-added chain	Strategic significance for the partners; partners' needs for safety and control; autonomy crises; compatibility of joint venture products with partner organisations
Property relations	Profit-sharing; authority to make decisions; dominance of one partner in the new entity; structuring of contracts; control mechanisms; protection of minorities; autonomy of the joint venture; dominance of one partner
Strategic orientation of the joint venture	Autonomy of the joint venture versus ties to the partners; measurement of success in achieving goals; need for coordination and continuous renegotiation; adaptability; task sharing between the partners; strategic dominance of the individual partners

Source: Büchel *et al.* (1998)

It is believed that during the past two decades, no other developing country has seen the formation of more joint ventures with foreign companies than China. For the managers of many foreign companies, a Sino-foreign joint venture was their first experience with joint ventures in a former planned-economy that is now moving towards a market-oriented, developing country.

Many researchers suggest that the problems encountered by foreign joint ventures in China are quite different from those met by similar organisational forms traditionally used in developed countries, and these foreign joint ventures are also different from wholly owned subsidiaries. Therefore, traditional management control systems, performance evaluation procedures and accounting information used to control and evaluate home joint ventures or wholly owned subsidiaries, may not be applicable to Sino-foreign joint ventures (Beamish and Wang 1989; Blake *et al.* 1997; Luo and Chen 1995; Luo and O'Connor 1998; Luo 1995b; Yu and Tang 1992; Osland and Cavusgil 1996).

Listed below are some of these problems and related survey results, the detail and related research will be introduced and developed more fully in later sections of this chapter.

Being a socialist country, the Chinese government's administration system reflects the socialist public ownership and the Party ideology. With public ownership, the government plays a role both as a representative of the society's interest and as the only owner of public property. With respect to economic production, this means the existence of a top-down decision-making process. Supervised by various regulations and mandates from the central government, this ranking administration system is designed to guarantee decisions being carried out in accordance with Party policy and the centralised decision-making process (Sun 1995).

China has employed a dual-edged strategy: to absorb enough foreign capital to provide the desired developmental benefits, but at the same time, to maintain state control over the terms of investment. But this control is also the source of difficulties in attracting more foreign investment. Foreign investors have to deal with the government's bureaucracy agencies and officers. Beamish (1993) found that the frequency of association with government partners tended to be higher in developing countries, and nowhere was the frequency higher than in China.

Shi *et al.* (1995) identified the following features as proof that the authorities in China often intervened with the negotiation process:

- The Chinese negotiating team does not have the final right to sign the contract, are drawn from various bodies and may change during the discussions.

- Senior management may not be hired or fired without the approval from the authorities.

- The authorities prescribe the split between domestic and export production.

- Export prices are set by the joint venture but domestic prices by the authorities.

Some complaints from foreign investors recorded by Sun (1995) were: 'firms doing business in China are stymied by hassles'; 'foreign firms still struggling in China'; 'China needs tougher laws for investors'; 'if only the Chinese can provide a more workable legal framework for trade rather than using moral judgement'...

One of the major problems in managing and controlling foreign joint ventures in China stems from the presence of two or more parents (Yan and Gray 1995) from different developed countries and China which is a developing country. Conflicts between joint venture partners arise from incompatible management styles and approaches, different cultures and values within organisations and nationality can affect joint venture performance (Ding 1997).

There is also the issue of shared or dominant control, that is whether a foreign or Chinese partner should have the majority control of the joint venture or whether overall control should be shared by both partners, and what is the best resolution for the performance of foreign joint ventures. Ding (1997) surveyed by questionnaire a sample of US-Chinese joint ventures established in China during the period of 1979-1989 and found that dominant managerial control exercised by a foreign partner had a positive impact on perceived joint venture performance. Yan and Gray (1994), however, found that the control-performance relationship was not always positive and direct. Given these results, future research is required to clarify the situation.

Shenkar and Zeira (1992) pointed out that past studies on conflicts in international joint ventures mostly concentrated on areas of personnel, organisational and cultural levels rather than the more influential variables such as economic, social, and political system. Concerning the different criteria of performance evaluation for foreign joint ventures in China, Liu and Zhang (1996) sent 150 questionnaires to manufacturing joint ventures in China and interviewed 34 Chinese managers, 19 foreign representatives and 26 officers in some government agencies closely connected with these joint venture businesses.

Their investigation showed that, in evaluating the efficiency of the foreign joint ventures from the government's viewpoint, more emphasis should be put on their contribution towards the national and regional economy rather than the efficiency and management of the individual joint ventures. At the enterprise level, the most important purpose for the formation of the joint venture was to improve the economic efficiency and management quality of the enterprises concerned. In detail, the Chinese managers interviewed are mostly concerned about the share of the foreign capital, advanced level of the imported technology and the length of the joint venture contract. From the foreign partners' standpoints, they are interested in China's potential market of 1.2 billion people, the relative cheap labour and its increasing emphasis on global development. Hence, they are concerned about sales, market share, profit, costs, public image and social responsibility.

The different evaluation criteria of the joint venture performance among each party has resulted in some researchers trying to design a set of comprehensive performance measures, which can reflect the requirement of all the parties (Liu and Zhang 1995). Whether these measures are feasible in practice, and how to improve the criteria in a changeable context, needs empirical evidence and further research.

Very few empirical studies on the use of accounting information in the management of foreign joint ventures have been undertaken (Giacobbe and Booth 1999). However, Firth's (1996) exploratory study confirmed that the accounting systems employed by foreign joint ventures operating in China have a significant influence on the development of management accounting in the Chinese partner. His study investigated the influence of foreign joint ventures on the diffusion of new management accounting practices within China. The general results showed that Chinese enterprises' participating in foreign-partnered joint ventures made more changes to their management accounting systems when compared to similar Chinese enterprises that had no collaborative venture operations with foreign firms. Details of the findings are summarised below:

- The joint ventures' management accounting systems were generally based on the design and wishes of the foreign partner and generally were less detailed than those of the foreign partners' domestic accounting techniques.

- The Chinese partner prior to the formation of the joint venture had less detailed and fewer management accounting procedures in place than the foreign partner.

- There was a dramatic change in the techniques adopted by the Chinese partner in the years after the formation and operationalisation of the joint venture. The change was for both the types of technique utilised and the depth of details.

- Chinese joint venture partners appeared to incorporate more detailed and newer management accounting techniques than other state-owned enterprises without foreign joint ventures involvement.

- The techniques that were used by Chinese partners were extensions of existing practices such as standard costing and budgeting.

5.2 Organisational imitation and innovation

5.2.1 Concept of isomorphism

Much of modern organisational theory assumes diverse organisations and seeks to explain variations among organisations in terms of structure and behaviour (DiMaggio and Powell 1983). However, in recent years more researchers have begun to explore why and what makes organisations so similar? (DiMaggio and Powell 1983; Orrù *et al.* 1991; Van de Ven *et al.* 1989; Child and Bate 1987; Westney 1987; Kogut and Zander 1992). They observe that in the initial stages of organisations' life cycle, disparate organisations show considerable diversity both in approach and in form. However, once these organisations in the same line of business are structured into an actual field, there are inexorable forces pushing them to become similar to one another. This is called homogenisation. In fact, under the integration of global economy, organisations are becoming more and more homogeneous.

The best expression for the process of homogenisation is the concept of isomorphism. In Hawley's (1968) description, isomorphism is a constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions (DiMaggio and Powell 1983). There are two kinds of isomorphism: competitive isomorphism and institutional isomorphism. DiMaggio and Powell suggest that competitive isomorphism is most relevant for those fields in which free and open competition exists, such as industrial companies in a market economy, while institutional isomorphism is likely among organisations which seek political power and institutional legitimacy, for example government agencies. Orrù *et al.* (1991) challenges the view. They use data relating to East Asian businesses and prove that the institutional approach has a paramount role and can be observed at the very core of market-regulated, technically dominated environments. Therefore, the concept of institutional isomorphism is a useful tool for understanding modern organisational life.

In institutional isomorphism, organisations in a common institutional environment begin to look like each other as they respond to similar regulatory and normative pressures, or as they copy structures adopted by successful organisations under conditions of uncertainty (Orrù *et al.* 1991). DiMaggio and Powell further identify three mechanisms of institutional isomorphic change: coercive isomorphism, mimetic isomorphism and normative isomorphism. According to them, coercive isomorphism originates from political influence and the problem of legitimacy. It results from both formal and informal pressures. In many circumstances, changing organisational behaviour and structure arises directly from responding to government's directives and the legal environment. For example, enterprises employ qualified accountants to meet tax law requirements, adopt new pollution control technologies in order to conform to environment regulations and build a complex organisational control system to cope with a rationalised legal system. As nation states and large organisations expand their influence over more aspects of social life, organisational structures will reflect rules institutionalised and legitimated by the state and the large organisations. It leads organisations to become increasingly homogeneous accompanied by decreasing the constraints posed by technical activities. A common example is for subsidiaries to be the subject of coercive isomorphism in the form of having to adopt accounting practices, performance measures and budgeting systems that are compatible with the systems of the parent company.

Mimetic isomorphism stems from standard responses to uncertainty. Many organisations can be observed to model themselves on other organisations that they perceive to be more legitimate or successful in their field. It is more likely to occur when organisational technologies are poorly understood, when goals are ambiguous or when the environment creates symbolic uncertainty. Hence uncertainty is a powerful force that encourages imitation.

Normative isomorphism is derived primarily from professionalisation. There are two important sources of isomorphism in professionalisation: one from formal education and legitimation provided by university specialists. They are the main forces for the development of organisational norms among professional managers and qualified staff. The second source is from professional networks that diffuse new models rapidly. The filtering of personnel is another important mechanism for encouraging normative isomorphism. Organisations can enhance their professionals in special ways, such as through the employment of individuals from companies within the same industry or through the hiring of top executives from financial or legal departments.

By using data about East Asian business with 162 groups in Japan, South Korea and Taiwan, Orrù *et al.* (1991) have found that business groups in these countries show a remarkable degree of intrasocietal isomorphism and continuity over time. The isomorphism can enhance the organisation fitness and so the institutional traits of different East Asian businesses become one of the ingredients to their economic success and organisational fitness.

From an anthropological perspective, China shares broad cultural traits with the above East Asian countries. Whether some degree of intrasocietal isomorphism exists in China and whether the isomorphism has intensified its economic success and organisational suitableness is an area for future research.

Granlund and Lukka (1998) apply the isomorphism theory to examine the homogenisation of management accounting practices in organisations. They establish a framework that identifies the drivers of convergence and divergence of management accounting practices including economic, coercive, normative and mimetic factors (see section 4.4). Relevant analyses (Granlund and Lukka 1998), involve both at an inter-firm perspective (i.e. among distant firms) and at an intra-firm environment (e.g. within internationally operating companies such as foreign siderites and joint ventures).

5.2.2 Organisational innovation

Another important organisational theory is organisational innovation. According to Van de Ven *et al.* (1989) an innovation is a new idea. This may take the form of a recombination of previous ideas, a new scheme that challenges the present order, a formula for change or a unique approach to an old problem that is perceived as new by the people involved.

Based on seven innovation cases, Schroeder *et al.* (1989) have developed a series of observations, describing how innovation ideas develop over time. The key points of these observations include:

- Innovation is stimulated by shocks, such as new leadership, product failure, a budget crisis, and impending loss of market share, etc, either internal or external to the organisation. The overall observation describes that innovation is more prevalent when major changes have occurred in the organisation or its environment.

- During the innovation process an initial idea tends to stimulate the innovation being proliferated over time into several ideas.

- In managing an innovation effort, unpredictable setbacks and surprises are inevitable; learning occurs whenever the innovation continues to develop.

- As an innovation develops, the old and the new exist concurrently. The new idea often represents a threat to the established order, and thus there is opportunity for establishing new organisations and linkages.

- In the process of innovation, restructuring of the organisation often occurs in many forms, for example joint ventures, changes in organisational responsibilities and altered control systems.

- Throughout the innovation period, top management is directly involved in all major decisions.

The relationship among these observations is that an idea seems to start off with a shock, then proliferates, and is subject to setback and surprises, and then links with the old organisation along the way. Restructuring of the organisation occurs and top management maintains hands-on involvement until the innovation finally becomes part of the accepted order or establishes a new order.

People and context are two important factors influencing innovation ideas and processes. It is people who push, develop, modify and drop ideas while context is the setting or institutional order within which innovation ideas are developed. Furthermore, organisational innovation occurs in organisations that provide a context that contains both enabling and motivating conditions for people, and innovation will not occur where either factor is missing.

The transfer of organisational forms across societies, or the successful imitation of foreign organisational patterns, requires innovation. The environment in which the organisational model was launched in its original setting will inevitably differ from the one to which it is transplanted. Thus all organisations, whether conscious or unconscious innovations, must draw on the surrounding environment for resources and must respond to the external demand for their products or services. Westney (1987) states that even the most assiduous emulation will result in alterations of the original patterns to adjust them to their new context, to make it a more favourable setting for the emerging organisation. No matter how much a new organisation founders, they may want to build an exact copy of a model drawn from another society. They can never replicate it completely in the new setting.

Today, many foreign and multinational corporations have been involved in the Chinese economy through different forms, such as organising a joint venture with Chinese enterprises. The direct involvement of Chinese organisations is likely to lead to an extensive cross-societal organisational imitation. Thus, it is possible that cross-cultural values, management thought and methods will clash in the process of organisational emulation. In the next section, the issue will be addressed as to how Chinese state-owned enterprises and foreign joint ventures respond respectively to the transfer of the western organisational model and advanced approaches of technology and management. In particular, how these differences influence the application of western management accounting in the two kinds of enterprises will be examined.

5.2.3 Imitation and innovation of foreign joint ventures in China

Today almost all countries are faced with an imperative pressure to make better use of their economic resources and improve their enterprises' performance, in order to deal with intensifying global market competition and the more challenging enterprise environment. Because this pressure has become worldwide, the consequence will be an increased similarity in approaches to the design and management of organisations within various systems.

On the other hand, most successful enterprises in the world depend critically on superior design, quality and reliability, while these competitive features of organisational development rely importantly on product and process innovation, and further organisational innovation. All successful multinational corporations use advanced technologies and management methods as means of major organisational changes without any exception. Therefore many ambitious enterprises continue to pursue advanced production and management technologies and methods, and model themselves on other example companies. This leads to global organisational imitation and innovation.

Technology and management transfer moves quickly from capitalist countries to socialist countries, from the West to the East. China is one of the eastern socialist countries, which is attracting high levels of foreign investment and cooperating with western countries. In this way, modes of western organisation that are informed by capitalist practices and values can be introduced into China, which is currently under the socialist system.

The Chinese government has carried out overall reforms of many aspects of and helped state-owned enterprises introduce advanced western technology and management smoothly. This pressure is encouraging enterprise managers to adopt the business frame of mind of their capitalist counterparts and learn the management styles from foreign joint ventures. In today's Chinese enterprises, organisational imitation and innovation are common. However, such practices are only in their initial stages and Chinese enterprises are trying to find new models that will be suitable for them. It seems to have a long way to go before the term rational shopper' fully applies.

Most state-owned enterprises in China were established during the centrally planned economic period. In the transit to market economy, their management systems have passed through four stages: centralised management systems, combined central planning with partial autonomy, combined central planning with an enlarged autonomy and maximum autonomy of economic enterprises under socialist market economy. As mentioned earlier, being a socialist country the Chinese government's system of administering state-owned enterprises reflects the socialist public ownership and the Party ideology. It leads to state-owned enterprises having to be supervised by various directives and policies from the central government to guarantee that decisions are carried out in accordance with the requirement of the Party and the government. So although state-owned enterprises have been reborn under the reform they have not thoroughly remoulded themselves to the capitalist organisational model.

Joint ventures directly involve the establishment of a limited liability company with equity investment by foreign companies and partial Chinese state-owned, collective, or private enterprises. They also have a capitalist organisational model and management rule. In other words, joint ventures themselves are a form of organisational innovation brimming over with external capitalist vigour.

5.2.3.1 The different organisational characteristics between socialist and capitalist organisations

Child and Bate (1987) explored the characteristics of socialist and capitalist constituent organisations and identified two kinds of organisation from four aspects:

- The nature and function of organisational hierarchies.
- The core process of planning, resource allocation, and control.
- Fundamental organisational objectives and relationships.
- The ideological basis for organisation.

The following is a comparative analysis between state-owned enterprises and joint ventures based on these considerations:

Starting with organisational hierarchies, the typical socialist organisational hierarchical model shows more complex features with many levels, dual lines of authority and a multiple centre of power. This organisational model is still retained in current state-owned enterprises. Despite the so-called "directors and managers in charge system", a communist party committee parallels the managerial line within every enterprise. Important business decisions made by directors and managers must be approved by the party committee and they are also responsible to the committee for their conduct and performance. In contrast, as with capitalist societies, joint ventures are formally supervised by one board, which legally represents the interests of ownership. The board has charge of strategic policy and planning, provides for a single hierarchy of executive authority accountable through it to the owners of capital.

With regard to planning, resource allocation, and control, Child and Bate (1987) suggest that the hierarchical bureaucratic process of central economic planning and control is associated with socialism. Capitalism is seen to be conductive to organisational decentralisation through the establishment of internal market-allocation mechanisms on a semi-autonomous profit centre basis. The conclusion appears too absolute according to today's circumstances in China. For example, whether in state-owned enterprises or in joint ventures, profit centres work well. Only the profit centres within semi-autonomous joint ventures permit subsidiary units the initiative to respond without delay to developments in their external markets. Thus, joint ventures are highly sensitive to external markets and can more easily renew their products, equipment, technology and management. The profit centres in state-owned enterprises seem to be mainly used as means of internal performance assessment, reward and resource-allocation other than as a mirror to external markets. Of course, using profit as a criterion for performance assessment and resource-allocation moves enterprises ahead but it seems that the profit centres in state-owned enterprises should be given more autonomy so that they can accept the risks entailed in any innovation.

Concerning the organisational objectives and relationships, in principle, the objectives of capitalist enterprises are directed towards profit maximisation. The owners of these enterprises are likely to transfer the cost and risk caused by adjusting organisational structure and technological process onto labour. One of their motives for introducing new technology is to reduce production cost and this often involves the displacement of labour.

Compared to state-owned enterprises, joint ventures in China have much more autonomy to employ and dismiss employees but related labour laws and regulations govern this process. In the case of state-owned enterprises, as discussed in the last chapter, the profit maximising assumption cannot be applied to these enterprises. The government requires them to carry a lot of redundant and retired personnel and even these enterprises cannot dismiss their employees. As a result, the excessive stability and absence of competitive threats to organisational personnel may reduce the motivation for technological and organisational innovation.

With regard to the ideological basis, capitalism holds the view of economic improvement through individual initiative. Capitalist ideology views an entrepreneur as a person who brings dynamic improvements to the organisation and provides a model for other ordinary people in the organisation to emulate. Therefore it is very common for directors and managers of joint ventures to directly award successful entrepreneurship, which may provide a further stimulus for organisational innovation. In contrast, the socialist ideology emphasises collective identity and regards innovation as a matter for social rather than individual decisions. This implies that everyone in state-owned enterprises should share equally in the rewards according to their efforts. General social solidarity and economic security are emphasised over the partial and individual interest. Thus in state-owned enterprises there is a strong reward equalitarianism involving a group basis. There is also likely to be a strong ideological obligation to discuss proposed innovations with workers' representative units and to incorporate their views.

5.2.3.2 The differences in organisational imitation and innovation in state-owned enterprises and joint ventures

Regarding the organisational imitation and innovation in state-owned enterprises, the most significant characteristics are selective and limited innovation. Guided by the principle which was formulated by the government for importing western management practices (i.e. discarding the dross and selecting the essence), the leaders of enterprises try to avoid some of the shortcomings and only choose certain features that do not conflict with valued local patterns. The government often issues policies to promote some successful organisational models from pioneer state-owned enterprises and stop some failed models evidenced by other enterprises. Such an inflexible authoritative promotion or prevention cannot be suitable for the circumstance of every enterprise since they operate in considerably different geographic or demographic contexts. This results in lack of enthusiasm for innovation through innovation within state-owned enterprises.

There are two important reasons explaining selective imitation and innovation. First, the foreign organisational model may be used to legitimate changes that are desired by the innovators, but which require justification by the appeal to an outside model. In such cases, only the desired features will be drawn from the model. A typical example of this is that in form, although state-owned enterprises widely copy similar western enterprise forms, they cannot become bankrupt according to western market rules. However, the urgent need to adopt a foreign model to a significantly different social context in which the organisation is introduced often becomes a source of deliberate innovation, especially in national systems. That is why the Chinese government is always involved in guiding the state-owned enterprise's organisational model.

Turning now to the organisational imitation and innovation in joint ventures, one of main purposes for Chinese partners joining the ventures is to obtain advanced western technology and management. Initially, they tend to have an uncritical acceptance of the organisational model introduced by foreign partners. Because foreign partners are not familiar with the Chinese environment, they become accustomed to the initial reactions. Therefore at the initial stage of a joint venture the original model, will tend to be fully adopted. But in the latter stages, conscious and unconscious departures from the original model gradually arise.

Westney (1987) suggests that unintended departures could constitute one source of innovation that is rooted in culture because of the powerful implicit models. Deliberate departures have three major causes: selective emulation, adapting the patterns of the model to a different societal scale and adapting the new organisation to an environment that lacks some of the organisations that support it in its original setting.

All these features can be found in the transfer of the organisational model in joint ventures. Firstly, the new organisational models face new Chinese employees unfamiliar with the western management system but who bring Chinese culture and education knowledge. They are used to a Chinese thinking style in managing joint ventures and this results in an unconscious departure to some extent between the new model and original model. Secondly, new models are implemented in a considerably distinct institutional environment based on different geographic and demographic context, different political and economic systems and a different societal ideology compared to western countries in which the original models were developed. New models have to be adjusted to fit local conditions to different degrees and this is one source of conscious departure. Finally, it seems that the introduction of original models by foreign directors or managers may not be perfect because of artificial misunderstandings, and as a consequence, unconscious departures arise to a greater or lesser extent.

Moreover, another important concept that can help understand a joint venture's departures from the original model is the organisation-set which is a useful one in examining societal patterns of organisational development, especially in terms of the cross-societal transfer of organisational forms. One of the key differences between the environments of the original model and that of the new organisation is that the organisation-set in which the original organisation functioned is not completely in place in the new setting. In China, all joint ventures have to keep themselves within the bounds of laws and regulations relating to joint ventures and it lends to joint ventures in China becoming more and more homogeneous.

Based on the above analysis, it would seem reasonable to say that although Chinese reforming started over 20 years ago, its organisational models are still different from the western ones. These departures should be thought of as a sub-category of organisational innovation. To be more exact, the organisational model of state-owned enterprises has moved towards the advanced western model from a former backward-planed economic organisational model. In contrast, joint ventures have had to be changed to match the current environment faced by joint ventures in China. Compared with state-owned enterprises, the organisational model of a joint venture is closer to the western model. In other words, the extent of organisational imitation and innovation in joint ventures is much higher than in state-owned enterprises.

The following discussion focuses mainly on the organisational innovation of joint ventures. Organisational innovation is a joint function of member's personal attributes and the context for innovation in their organisation. It only occurs in those organisations that provide a context that contains both enabling and motivating conditions for innovation and will not occur where either factor is missing (Angle 1989). In contrast to state-owned enterprises, a joint venture is a new organisation that recruits more new, young and educated staff. It is organised in terms of a new structure and system and uses advanced technique and management. The dynamic nature of such an enterprise is beneficial to innovation.

Angle (1989) explores some factors that influence innovation effectiveness. Innovation effectiveness is positively associated with the frequency of communication among persons having dissimilar frames of reference. Personnel of joint ventures come from different backgrounds, such as foreign companies and state-owned enterprises. The newcomers bring new, useful ideas to the group to help build and develop the joint ventures. In contrast, personnel from state-owned enterprises come from a single base that is the same enterprise. Such staff is likely have conservative and rigid ways of thinking which reduces innovation effectiveness.

Innovation effectiveness is linked with a moderate amount of environmental uncertainty. At extremely high or low levels of uncertainty innovation effectiveness is reduced. Particularly under conditions of environmental change and uncertainty, the level of organisational innovation is higher in organic organisations than in mechanistic ones. Presently state-owned enterprises are still protected by the government from bankruptcy to some extent and thus tend to be destined to become mechanistic organisations with lower uncertainty. In contrast, joint ventures operate their businesses in accordance with market and competition rules. This necessarily brings about medium uncertainty and more organic features than state-owned enterprises.

Innovation effectiveness is positively related to the following aspects – a moderate amount of turnover, an ability to integrate creative personalities into the organisational mainstream, an open and creative climate for conflict resolution and mechanisms existing for focusing members' attention on changing conditions.

The salaries in joint ventures are usually much higher than those of state-owned enterprises. Being an employee of a joint venture has a strong appeal to aspiring young people as a sign of success and achievement. This lends to joint ventures finding it easier to attract outstanding qualified personnel. The personnel mobility from joint ventures is unimpeded, but the main trend is from one joint venture to another joint venture for seeking better pay rather than moving to state-owned enterprises. The result is that the whole industry of joint venture has stronger cohesive labour force giving them a greater ability to respond to emergency events. Furthermore, these enterprises are full of vitality and find it easier to implement advanced management techniques and methods. The above characteristics do not apply in state-owned enterprises. Arising from the legacy of the centrally planned economy, state-owned enterprises have to employ older staff. Also low wages and old-fashioned production and management make it difficult to attract excellent staff.

It can be concluded from the above analysis that the extent of organisational innovation and adoption of advanced management practices, including western orientated management accounting practices, should be much higher in joint ventures than in state-owned enterprises. The following comments would appear to be applicable regarding the adoption of western management accounting practice by joint ventures:

- The management accounting techniques employed by joint ventures are likely to be copied directly from their foreign partners.

- A long period may be required to integrate these copied management accounting techniques into the environment faced by joint ventures.

- Joint ventures can make decisions independently on choosing management accounting systems, techniques and methods.

- When introducing new management accounting techniques and methods, joint ventures can obtain proper operational guides directly from foreign partners.

- The directors and managers of joint ventures pay much more attention to the use of newer management accounting techniques because they operate in a more competitive market.

- New management accounting techniques and practices are easy to promote in joint ventures because they employ more qualified staff.

The next section examines the characteristics of management control systems in Chinese joint ventures.

5.3 Characteristics of management control in Chinese joint ventures

Most foreign multinational corporations rely on collaborative ventures when entering the market of developing countries. Many researchers have begun to pay increasing attention to the study of joint venture control. In recent years, a great deal of research has been undertaken on the factors and processes leading to the formation of joint ventures, on their stability over time and on determining the overall performance of joint ventures (Yan and Gray 1994; Yan 1998; Giacobbe and Booth 1999; Ding 1997; Daley *et al.* 1985; Luo 1995a; Hu and Chen 1996; Liu and Zhang 1996). More attention has also been given to the role of control structures in joint venture and how management control is related to joint venture performance. There is an extensive body of literature concerning joint ventures in China, one of countries where joint ventures are a regulatory condition of entry into domestic markets.

Most research suggests that modern international joint ventures are dynamic organisations, which are different from past similar organisations, and joint ventures also are different from fully owned subsidiaries. Thereby traditional management control systems, performance evaluation procedures and accounting information used to control and evaluate fully owned subsidiaries, may not be suitable for modern international joint ventures (Giacobbe and Booth 1999; Anderson 1990; Luo 1995a; Luo 1995b; Luo and Chen 1995; Mjoen and Tallman 1997).

Modern joint ventures in China exhibit more specific attributes and characteristics than their counterparts in western countries, and thus require new approaches to the design of control and evaluation systems. These differences include a greater degree of environmental uncertainty, different interests motivating the Chinese and foreign partner in joint ventures, contractual obligations to share management decisions and Chinese legislative requirements which often lead to local government formal control, etc.

There are at least three players involved in the control over Chinese joint ventures: the Chinese partner, the foreign partner and the joint venture itself. There are at least two management control systems associated with and interacting with the management control system of a joint venture: the management control system of the Chinese partner and the management control system of the foreign partner.

Management control refers to the process by which an organisation influences its sub-units and members to behave in ways that lead to the attainment of organisational objectives (Yan and Gray 1994). A simple and broad definition of management control was defined and developed by Simons (1987) as 'the formal and informal procedures and systems that use information to maintain or alter patterns in organisational activity'.

Many studies have explored the management control problems in Chinese joint ventures (Ding 1997; Yan 1998; Chen and Boggs 1998; Beamish 1992; Pearson 1991). Their findings have been contradictory. Moreover, no general and summary impression on the characteristics of management control system of Chinese joint ventures can be derived from these studies. Based on this research the following discussion provides a generalised summary of the distinguishing features of management control systems in Chinese joint ventures. These specific properties also provide strong evidence supporting the adoption of management accounting in Chinese joint ventures.

(1) Management control in Chinese joint ventures show diversity in different regions, different industries and different joint ventures

Killing's (1982, 1983) in-depth study of joint venture's management control in developing countries developed four typologies of control: (i) dominant parent control by one of the partners; (ii) shared control by both parents; (iii) indepentent joint ventures in which the joint venture's managers exercise full control; (iv) split control in which each parent plays a separate control role for distinct functional areas. Many researchers have investigated the relationships between management control and performance in Chinese joint ventures. For example, Beamish (1984, 1993) observes that shared/split controls have greater success in Chinese joint ventures, while dominant control by either partner increases the probability of poor performance. However, in their study of Chinese joint ventures, Gray and Yan (1992) discribe a rotating control in which dominant control is exercised by each partner on a rotating basis have greater success. Yan and Gray (1994) found no evidence of negative relationships between foreign dominant control and performance thus conflicting with Beamish's findings.

The inconsistent results may suggest that there are no simple and regular models of the management control systems in Chinese joint ventures. China is a very large country and joint ventures are distributed over different areas, including different industries, and are involved with foreign partners from different background countries and regions. It is therefore likely that diversity will exist.

As far as the areas where China attracts foreign investment there are developed eastern coastal cities, less developed midland and also poor western regions. There are also special economic zones, open cities and even small towns. Because of the unbalance of economic development among different areas, local governments draw up distinct policies for attracting foreign investment. This affects the local investment environment to a great extent.

With regard to the industries in which foreign capital is invested, they almost cover all industries, from hi-tech to basic industries. A foreign partner can be relatively weaker or stronger depending on certain characteristics of the industry of the joint ventures. In new, hi-tech industries or industries where technology changes rapidly, the foreign partner may be strengthened because it holds advanced technology. The industry advantage will influence the management control of the joint venture.

With respect to the country of the foreign partner, foreign investment in Chinese joint ventures is believed to originate from western developed countries (mainly the USA and European countries). Other foreign partners are from ethnic-related eastern countries and regions (like Japan, Korea, Taiwan, Hong Kong and Singapore, etc), and even the third world's developing countries (like Thailand, Middle Eastern countries). The country of the foreign partner may determine the nationality of the general manager- the holder of the top management position in the joint venture, which relates to the power and management control in the joint venture. Also, the country origin of the partner will influence the degree of cultural similarity. For example, Chen and Boggs (1998) suggest that a British company may be at an inherent disadvantage compared with a Taiwanese company in carrying out a joint venture in China. They claim that if the British company has a subsidiary in Singapore, it may have better prospects to form a joint venture by its Singapore subsidiary than through the British parent from a culturally dissimilar country.

In summary it would appear that there is not a unitary model of management control system in Chinese joint ventures. However, some common characteristics can be identified and summarised.

(2) Most foreign partners hold a minority equity position but exercise greater control than their equity levels

Most joint ventures in developed countries control over decision-making is directly associated with the ownership between partners. Minority equity has subordinate control, equal equity exercise shared/split control, and majority equity experience dominant control. In China, even though the foreign partner could hold from 25% to 99% of the equity by law, most foreign partners hold 50% (called the 'comfort of control' over management) or less of the ownership (Pearson 1991).

The investigation of 805 joint ventures in China by Beamish and Wang (1989) indicated that 60% of the foreign partners had minority equity and 31% had equal equity holding.

The reason for this, except for Chinese preference for majority equity, is mainly due to the fact that the major incentive for foreign investment is the chance to explore Chinese markets and maintain defensive positions against international competition. Most foreign partners like to take minority equity because this can often afford political advantages in the host country and tax advantages in the home country and host country. For example, in the home country, minority-owned joint ventures are treated as an investment, whereas majority-owned joint ventures are seen as wholly owned subsidiaries in terms of tax policy. In the host country, tax rates are often lower when local partners have majority equity (Beamish 1993).

Another coexisting appearance is that foreign partners normally carry out greater management control than their ownership equity. Beamish (1993) argues that this may be due to a more sophisticated knowledge of the control mechanisms available. This study suggests that the phenomenon arises from the foreign partners have advantage in the aspects of technology and management. This also provides circumstantial evidence that joint ventures in China adopt more advanced management accounting techniques than state-owned enterprises.

(3) Chinese partners and foreign partners are likely to respectively control those functional areas that they contribute the resources to the joint ventures

Researchers (Blodgett 1991; Hennart 1988) suggest that the specific types of resources contributed by a partner in a joint venture may significantly affect the particular domains in which this partner exercises control. As a result, the partner who contributes the dominant share of resources to a functional area of the joint venture can earn the right to manage this area (Yan 1998).

Beamish (1993) observed that share/split control in Chinese joint ventures have greater success. The unique economic structures, political and cultural environment in China are so far removed from the experience of most western countries. If foreign managers seek dominant control it would be extremely risky. Similarly, the lack of technology and management skills on the part of Chinese managers makes dominant control by them equally risky. Consequentially, Chinese managers take dominant control over personnel (the majority staff in joint venture are the Chinese), local supplies and sales. The Chinese society stresses 'guanxi'—a particularly significant concept in Chinese culture, which refers to the quality of a personal relationship outside an individual's immediate family. Within the context of business relations, the norm of reciprocity applies so that it is expected that one favour will at some future date be repaid with another (Child and Markoczy 1994; Blake and Wraith 1998). Chinese managers are familiar with 'guanxi'. Letting them manage the activities related to local market would benefit the joint venture while foreign managers could not move even a single step without 'guanxi'. As a result, split control by either partner increases the probability of higher performance in Chinese joint ventures. From a sample of UK joint ventures with other countries Glaister

(1994) found evidence to support the fact that the joint venture's parents seek to focus their influence of control over particular decisions and activities of the joint venture, rather than attempting to extend their control over the whole joint venture.

(4) The management advantages will shift gradually from foreign partners to the Chinese partners

A phenomenon of 'fading out', which occurs when the foreign partner's relative advantages gradually shifts to the local partner over investment's lifetime, was observed by Fagre *et al.* (1982). As a result, the foreign partner's participation in the joint venture in terms of its ownership share and/or management control, and/or contribution to the joint venture tends to reduce over time, at least from the local partner's perspective (Yan 1998). The phenomenon may be stronger in Chinese joint ventures.

A central purpose for China is to attract foreign investment to learn advanced technologies and management skills and improve the capability of Chinese managers but also to avoid domination by foreign managers. From the viewpoint of foreign partners, a central concern about entering Chinese joint ventures is the desire to maintain managerial influence and to avoid misuse of the technology they provided to the joint venture. Foreign partners generally believe that they could run joint venture operations more effectively if they could train Chinese managers. Most joint venture contracts provide training courses for Chinese managers and technicians by sending them to the foreign parent.

Both Chinese and foreign partners attempt to dominate joint venture management structures (Pearson 1991). Chinese efforts to learn foreign management skills and avoid foreign influence are in conflict with the typical desire of foreign partners to manage their overseas operations. These strongly contrasting objectives provide strong incentives for both partners to exercise control over joint venture management. Especially in the interest of learning, the Chinese partners expect that management skills will be shifted from the foreigners to themselves over time (Yan and Gray 1994). At first, most joint ventures employ several expatriate managers and technical advisors. This is viewed as the contribution of foreign partners to joint venture management and an important determinant of the joint venture's success. The Chinese managers will eventually internalise the foreigner's expertise.

The above process often occurs concurrently and there is then a significant shift in management advantage from foreign partner to Chinese partner. For example, in Pearson (1991)'s sample the most notable case of Chinese managerial innovation in the joint venture was a Chinese deputy general manager who made continuous efforts to support and act upon managerial techniques he learned from foreign partners. At the same time he participated fully in decision-making and used his knowledge of the Chinese market and bureaucracy to help the venture succeed. In order to maintain control, foreign partners will have to make continuing submissions of new techniques and management (Yan and Gray 1994). This circle allows Chinese joint ventures to become a receiver of advanced technology and management.

(5) Chinese joint ventures are inherently stable and have long-term cooperative prospects

Previous research suggests that international joint ventures are inherently unstable and problematic organisations due to greater uncertainty, different interests motivating each partner in a joint venture, host country legislation, etc (Giacobbe and Booth 1999; Blodgett 1992). Studies on Chinese joint ventures provide a further indication that China's unpredictable environment has an important impact on cooperative ventures. The uncertain environment in China makes it difficult for foreign partners to predict and control their joint ventures, which also makes it difficult for the cooperative foreign partners to be long term oriented (Pearson 1991; Chen and Boggs 1998). Moreover, Yan and Gray (1994) point out that changes in Chinese foreign investment policy affected the dependence of some foreign companies on their Chinese partners, which further affects their commitment to cooperation.

Yan (1998) argues that the above view has failed to explain why many international joint ventures have an extended longevity and stability. Even in China, where the political and business environments have been perceived from a western point of view as particularly uncertain, high stability and success rates of joint ventures have been reported (Newman 1992; Beamish 1993). China ranks as the second highest country attracting foreign investment in the world with nearly $200 million investment of joint ventures. If these cooperative ventures were so problematic and unstable it would have been very unlikely that astute western businessmen would continue to invest in China.

Beamish (1993) explains the factors affecting the low instability rate in Chinese joint ventures. They include:

- A stable raw material and labour supply for joint ventures, and therefore, fewer market pressures on foreign partners to consider reorganisation.

- Changing the contract is difficult in China (due to Chinese bureaucracy) so foreign partners are less likely to seek adjustments in the equity levels.

- Many foreign companies originally had what they considered to be a short-duration fade-out provision, e.g. ten years, so some of them did not deem it worthwhile to renegotiate.

Having identified the factors influencing the low instability rate of Chinese joint ventures, two points should be considered which foreign investors may pay more attention to. First, could the Chinese political fluctuation destroy the current investment environment and, second, can Chinese cultural differences hinder further long-term cooperation?

With regards to the first point, foreign investors' concern originates from the influence of Tiananmen incident in 1989. In a very short time after the incident, many foreign investors withdrew their investments. This led to a sudden decline of foreign capital in China. Most foreign investors are widely concerned and worried that similar incidents may happen again in China. This is most unlikely. It is almost impossible that in today's integrated global economy that China could go backwards to isolation. More importantly, the Chinese people have benefited from 20-years of modernisation. They simply could not tolerate any unstable circumstance that would reduce their present living standards. Therefore any short time of political disturbance would not break the process of internationalisation of China or influence the long-term prospects of foreign cooperation.

With respect to the second point, many foreign partners feel anxious that the cultural dissimilarity with Chinese partners will influence the perceived prospects of long-term cooperation, because the cultural differences may cause different perceptions of cooperative costs and misunderstandings (The Chinese Culture Connection 1987).

Undeniably, many foreign partners have encountered difficulties with Chinese partners owing to the cultural and managerial style differences. Take the negotiation process as an example from which indicates the cultural distance between the two sides in a joint venture. Blake and Wraith (1998) identified and quoted some negotiation features in China. For example, 'the negotiation process is delicate, intricate, laborious and lengthy', 'patience and perseverance are essential', 'western concepts of urgency and time management are not normally appreciated', 'developing trust and friendship is more important than legal contracts', 'the Chinese negotiating team do not have the final right to sign the contract, and may change during the discussions'.

The study suggests that undertaking business in China looks difficult on the surface but proves to be easier below the surface. Protracted nature and stability are two Chinese cultural distinguishing features. Successful foreign partners understand how to have dealings with their Chinese partners using the Chinese way. Many western businessmen enjoy doing business in China by becoming friends with Chinese people. In this process, mutual understanding and trust will increase; communication barriers and management conflicts will reduce gradually between joint venture partners. If conflicts ever arise, the relationship makes it easier for them to understand each other and to resolve the differences. This is why most foreign partners have maintained a long-term cooperative experience with the same Chinese partners.

5.4 Summary

As stated in chapter 1, one of the research objectives is to examine the influence of foreign joint ventures in disseminating western practices of management accounting. This chapter focused on reviewing the literature relating to organisational imitation and innovation and provided a theoretical basis for explaining the characteristics of foreign joint ventures in transferring western management thinking and techniques to China.

China has made a great progress in encouraging the development of joint venture companies where overseas investors link up with domestic state-owned enterprises. This leads to an enhanced amount of advanced technology and the transfer of management approaches from western firms to Chinese organisations.

The problems encountered by Sino-foreign joint ventures are quite different from those met by similar organisational forms traditionally used in developed countries, and also different from wholly owned subsidiaries. It is argued that the traditional management control systems, performance evaluation procedures and accounting information used to control and evaluate home joint ventures or wholly owned subsidiaries may not be applicable to Sino-foreign joint ventures.

The phenomenon could be explained by both organisational isomorphism and organisational innovation. According to DiMaggio and Powell (1983) organisational isomorphism is a constraining process that forces one unit in a population to resemble other units that face the same set of environmental condition. In contrast, organisational innovation is a joint function of members' personal attributes and the context for innovation in their organisation.

Joint ventures are a form of organisational innovation, which involves organising a new company mainly with Chinese state-owned enterprises. The direct involvement of Chinese organisations results in an extensive cross-societal organisational imitation and innovation. In the transfer of organisational forms across societies, joint ventures have to build or change their organisational behaviour and structure in direct responses to the Chinese government's directives and legal environment. They must draw on the surrounding environment for resources and respond to the external demand for their products or services. Therefore, no matter how much a joint venture wishes to copy an original model from its foreign parent company, it can never replicate it completely in a Chinese setting.

At the beginning of joint ventures there tends to be a total and uncritical acceptance of the organisational model introduced by foreign partners. In the later transfer of parent organisational patterns across societies, conscious and unconscious departures from the original model gradually arise. This is because the joint venture has been implemented in a different institutional environment, with different political and economic systems and a different societal ideology compared to western countries in which the original models are developed. The join venture incorporates new Chinese staff who are used to a Chinese thinking style in managing joint ventures and it also results in there is unconscious departure to some extent between new model and original model.

Joint ventures' departures from the original model should be thought of as a sub-category of organisational innovation, which involves the adjustment to be in harmony with the Chinese environment. Compared to that of state-owned enterprises, the organisational model of joint venture is closer to the western one. In other words, the extent of organisational imitation and innovation in joint ventures is higher than in state-owned enterprises. This determines that joint ventures are organic organisations that find it easier to accept change compared with state-owned enterprises.

The last section of this chapter further demonstrated the characteristics of management control systems in Chinese joint ventures and concluded that these characteristics will benefit the diffusion and adoption of advanced western technology and management methods including western practices of management accounting.

CHAPTER 6

RESEARCH METHODOLOGY

CHAPTER 6

RESEARCH METHODOLOGY

The most important aim of this chapter is to provide an insight into the research methodology adopted in the study. The term 'research methodology' refers to the overall approach applied to the research process. Therefore the chapter starts with a comprehensive description of the research methodology (section 6.1). This is followed by discussions relating to the methods used to collect the data (section 6.2), the design and content of the questionnaire (section 6.3), the sample selection and the respondents (section 6.4), the test for non-response bias (section 6.5), the validity and reliability of the questionnaire responses (section 6.6). Finally, the chapter concludes with a discussion relating to the justifications of the statistical techniques that are used to analyse the data (section 6.7). Section 6.8 provides a summary of this chapter.

6.1 Research methodology

The term 'research methodology' has many definitions, such as 'the systematic and logical study of the principles guiding scientific and philosophical investigation' (Gould and Kolb 1964), 'the study of the utility and validity of methods of investigation in a particular scientific discipline or area under consideration' (Roberts 1971), 'the overall approach of the research process that involves theoretical underpinning or formulation, data collection and analysis' (Hussey and Hussey 1997). However, according to the researcher's basic understanding, it should be a continuum including research theory, assumptions, strategies, design and methods.

There is a range of methodological approaches that can be chosen but the choice for social scientific researchers will be closely tied to their research objectives. This is because the research approaches 'are not simply neutral tools: they are linked with the ways in which social scientists envision the connection between different viewpoints about the nature of social reality and how it should be examined' (Bryman 2001).

Theory is commonly referred to as an explanation of observed regularities. Merton (1967) divides theories into grand theories and middle range theories. Grand theories operate at a more abstract and general level and are of limited use in connection with social science research because the level of abstractness is likely to be so great that the research would find it difficult to make necessary links with the real world. Middle range theories operate in a limited domain and are much more likely to be the focus of empirical inquiry. Therefore social scientists find it easier to link middle range theories with their research objectives.

In the accounting research field, similar arguments have been reported. In a report published by the American Accounting Association (Abdel-Khalik and Ajinkya 1979), the scientific method was described as beginning with a well-formulated theory, which is used to develop hypotheses, which identifies relationships between sets of dependent and independent variables. Data collected using a highly structured and predetermined set of procedures is analysed by mathematical and statistical techniques to validate the hypotheses and thus generalise the results. This approach is based on abstraction, reductionism and statistical methods. However, Tomkins and Groves (1983) argue that the above ideal methods should not be dominant. In many circumstances, other kinds of research methods may be preferred by researchers. For example, they argue that naturalistic methods using field research may be preferable for studying accounting in its natural settings to explore the interactions within its broader organisational and social context.

Moreover, Bryman (2001) states that 'social scientists are sometimes prone to being somewhat dismissive of research that has no obvious connection with theory. Such research is conditioned by and directed towards research questions that arise out of an interrogation of the literature. The data collection and analysis are subsequently geared to the illumination or resolution of the research issue or problem that has been identified at the outset. Such research is often dismissed as naïve empiricism'. With this research, in many instances theory is latent or implicit in the literature.

According to Bryman (2001), research assumptions are based on two considerations: epistemology and ontology, both of which are concerned with ways of acquiring new knowledge. Epistemology concerns the question of whether the social world can and should be studied as the same principles and procedures of the natural sciences. Take positivism as an example, it is an epistemological position that advocates the application of the methods of the natural sciences to the study of social reality and beyond. Ontology concerns the question of whether social entities can and should be considered objective entities that have reality external to social actors, or whether they can and should be considered constructions built up from the perceptions and actions of social actors. For example, objectivism is an ontological position that implies social phenomena confront us as external facts that are beyond our reach or influence. Ontological assumptions and commitments will feed into the ways in which research questions are formulated and the research is carried out, e.g. if a research question is formulated in such a way as to suggest that organisations and cultures are objective social entities that act on individuals, the research is likely to emphasise the formal properties of organisations or the beliefs and values of members of the cultures.

The choice of research strategies may involve quantitative or qualitative approaches. The fundamental differences between these approaches are distinguished mainly in terms of the role of theory, epistemological issues and ontological concerns as shown in table 6.1.

Table 6.1 Fundamental differences between quantitative and qualitative research strategies

	Quantitative	**Qualitative**
Principal orientation to the role of theory in relation to research	Deductive; testing of theory	Inductive; generation of theory
Epistemological orientation	Natural science model, in particular positivism	Interpretivism
Ontological orientation	Objectivism	Constructionism

Adapted from Bryman (2001)

A quantitative research strategy emphasises quantification in the collection and analysis of data. By contrast, a qualitative research strategy usually emphasises words in the generation of theories rather than the testing of theories. However, the distinction is not clear because the studies that have the broad characteristics of one research strategy may also have a characteristic of the other. Therefore, there has been a growing trend to use a multi-strategy research that combines quantitative and qualitative research, e.g. a qualitative research approach in a quantitative research or a quantitative research approach to qualitative research.

A research design provides a framework for the collection and analysis of data. There are five prominent research designs outlined by Bryman (2001). They are:

- Experimental and related design
- Cross-sectional design
- Longitudinal design
- Case study design
- Comparative design

True experiments are quite unusual in sociology. However laboratory experiments and field experiments are two common experimental designs. The laboratory experiment takes place in a laboratory or a contrived setting, whereas field experiments occur in real-life setting, such as in classrooms and organisations, or as a result of the implementation of reforms or new policies. The latter type is most likely to touch on areas of interest to social researchers (Bryman 2001).

A cross-sectional design entails the collection of data on more than one case (usually quite a lot more than one) and at a single point in time in order to collect a body of quantitative or quantifiable data in connection with two or more variables, which are then examined to detect patterns of association. The cross-sectional design is often called a social survey design. The research methods associated with social surveys are frequently employed within the context of cross-sectional research, such as structured observation, content analysis and official statistics (Bryman 2001).

Longitudinal design represents a distinct form of research design that observes events over a period of time. Because of the time and cost involved, it is relatively little-used in social research (Bryman 2001).

Case study research is concerned with the complexity and particular nature of the case in question. In other words, case study entails the detailed and intensive analysis of a single case, such as a single communication, a single school, a single family and a single organisation (Bryman 2001).

Comparative design entails the study using more or less identical methods of at least two contrasting cases (e.g. organisations, nations, communications, etc). It embodies the logic of comparison in that it implies that the research can understand social phenomena better when they are compared in relation to two or more meaningfully contrasting cases or situations (Bryman 2001).

Many authors use research methodology and research methods interchangeably (Hussey and Hussey 1997). However, a research method is a technique that is adopted in order to collect and analyse data, such as a self-completion questionnaire, a structured interview schedule, etc. In contrast research methodology refers to the overall approach of the research process that involves theoretical underpinning or formulation, data collection and analysis.

Based on the above discussion the choice of the research methodology for this study is linked with the following research objectives that were described in chapter 1:

- To examine the adoption, future emphasis and benefits derived from traditional and recently developed management accounting practices in joint venture and the state-owned enterprise samples;

- To compare the differences between the joint venture and state-owned enterprise samples in the adoption, future emphasis and benefits derived from these management accounting practices;

- To determine and analyse the environmental factors (either internal or external) that influence the adoption of management accounting practices in the joint venture and state-owned enterprise samples;

- To evaluate the influence of foreign joint ventures in diffusing western orientated practices of management accounting.

In order to achieve the above objectives the research has the following characteristics:

1. Because most of the previous research relating to the adoption of management accounting practices in Chinese organisations has drawn heavily upon interpretative and anecdotal evidences rather than positivistic and empirical studies, an empirical survey has been adopted as the main structure of this study. It will investigate the current adoption, past benefit and future emphasis derived from traditional and some recently developed management accounting practices in Chinese state-owned enterprises and foreign joint ventures located in China using a self-administered questionnaire survey. It has been conducted under actual environmental conditions. This research can be therefore classified as a combination of a field, a cross-sectional and a comparative study. The aim is to provide new knowledge derived from a larger number of observations of social phenomena (epistemology).

2. In this research, state-owned enterprises and joint ventures are considered as objective social entities that either have been influenced by the external environment or by the individuals within the organisation. The cultures and sub-cultures held by the people within the organisations are viewed as stores of widely shared values and customs into which people are socialised. Therefore the interactions within their broader organisational and social context will be explored in this research (ontology).

3. The research will be conditioned by and directed towards research questions that do not have obvious connections with a well-formulated theory. Therefore no attempt has been made to develop formal hypotheses and the process of this

research entails a combination of quantitative and qualitative research as shown in the following diagram:

Figure 6.1 The process of this research.

General research questions

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Select research subjects/respondents

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Collection of relevant data

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Process and analyse data

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Findings/conclusions

4. According to Hussey and Hussey (1997) exploratory research is conducted into a research problem or issue when there are very few or no earlier studies to which we can refer for information about the issue or problem. Extensive preliminary work has to be done to gain familiarity with the phenomena relating to the situation and to understand what is happening before we can develop a model and set up a rigorous design for complete investigation. Exploratory studies are thus important for obtaining a good grasp of the phenomena of interest and for advancing knowledge and developing hypotheses or questions for further research. This research is considered as an exploratory study because little information is currently available relating to the adoption of management accounting practices in state-owned enterprises and joint ventures. For example, little information is available relating to whether there are differences relating to the usage, benefit and future emphasis of management accounting practices between the two types of organisations. In addition, the main factors which influence the adoption of management accounting practices in state-owned enterprises and joint ventures respectively and the role of joint ventures in the

diffusion of management accounting practices in China, are not clear. As a result, the main purpose of the research can be identified as a descriptive study rather than a causal study (see Cooper and Emory 1995). It will focus on examining the facts stated above. However, the purpose of this research also includes potential reasons for explaining why there are differences between state-owned enterprises and joint ventures. Thus, no attempt will be made to establish a definitive 'cause-effect' relationship.

5. This research is designed to be a comparative study between state-owned enterprise and joint venture respondents. Statistical techniques are used to capture a population's characteristics by making inferences from each sample's data and to identify whether or not statistically significant relationships exist between the two samples.

6.2 Data collection methods

The requirement of the selection of the appropriate data collection methods is to enable the objectives of the research to be achieved. Two methods, case studies for a small number of firms and a questionnaire survey for a relatively large number of firms, are available. The case study method is more suitable for the collection of 'in-depth' data from one or a small number of firms to achieve some particular purposes, such as generating ideas and structuring hypotheses. Bearing in mind the objectives of this study data was collected using a questionnaire survey. Cross-sectional data was derived from a large number of firms to provide the potential for making statistical generalisations relating to the adoption of management accounting practices in state-owned enterprises and joint ventures.

There are several methods for the collection of questionnaire data: face-to-face completion, telephone, fax, e-mail or mail. For the nature of the study which is long distance research, the mail questionnaire is considered as the most suitable data collection method and it is also a popular survey method in social sciences, particularly in management accounting research area.

Mail questionnaires are conducted by mailing questionnaires to predetermined respondents. Where respondents complete the questionnaire without the intervention of the researcher the term self-administered survey (Dane 1990) is used. As with other methods, it has some advantages and disadvantages. With respect to advantages, self-administered postal surveys are generally cheaper because they are often designed to be completed simply by ticking or putting a mark on the answer. Trained staff are not required thus saving both time and effort (Oppenheim 2001). Postal surveys are more suitable when the research is subject to financial resource constraints. They are also a speedy method of reaching the respondents when the population to be covered is widely and thinly spread. Mail questionnaires also avoid the problems associated with interviews, such as the manner in which questions are posed by the interviewer and perceived by the respondent (McClelland 1994). Mail questionnaires are also appropriate in situations requiring consultation with other people besides the respondent, or requiring the reference to company records. Moreover, they also provide respondents with greater confidence regarding their anonymity thus providing them with the freedom to release information and express their own views. Therefore, certain data involving personal opinions can be more easily captured by questionnaires than by face-to-face interviews (Kerlinger 1986; Mason and Bramble 1989). Sekaran (1992) concludes that a questionnaire is an efficient data collection mechanism when the researcher knows exactly what is required and how to measure the variables of interest.

The disadvantages of mail questionnaires also need to be taken into account and minimised during the stages of the design of the research questionnaire and the collection of the questionnaire data. First of all, mail questionnaire tend to be suitable only when the questions are sufficiently easy to understand with the help of the printed instructions (Moser and Kalton 1989). Researchers must therefore make the questions easily understood. Second, respondents can see all the questions before answering any of them, therefore different answers cannot be regarded as independent (Frankfort-Nachmias and Nachmias 1996; Moser and Kalton 1989). Researchers can reduce this limitation by repositioning and rephrasing questions. Third, the absence of direct contacts with respondents may result in misinterpretations of the questions, such as the questions being interpreted in a different way to that intended by the researcher. Fourth, if it is not covered in the questionnaire, something what the researchers seek will be missed unless the respondent wishes to supply additional information. Fifth, and probably the most important, it may be difficult to obtain an adequate response rate (de Vaus 1990; Moser and Kalton 1989; Newell 1999; Oppenheim 2001). If the response rate is low, non-response bias can occur because the returned questionnaires may not be a representative of the original sample drawn. In addition, it is possible that the number of returned questionnaires may not be sufficient to carry out statistical tests, which might restrict the achievement of the study's objectives.

Despite the limitation of a possible low response rate in mail questionnaires, their benefits are considered strong enough to compensate for the disadvantages (Moser and Kalton 1989). Given that the research population is widely spread in China, the nature of the study and other constraining factors, such as distance and financial resources, it was decided that the mail questionnaire would be the most suitable method of data collection for the research.

6.3 Design of the questionnaire

6.3.1 Pre-test and pilot survey

Pre-tests and pilot surveys are two important methods for avoiding or minimising the limitations of questionnaire surveys. They offer an opportunity to focus on the issues of the clarity of the questions, wording, validity, layout and instructions and the time taken to complete the questionnaire. The importance of pre-test and pilot survey have been discussed by many authors. For example, Sarantakos (1993) summarises the need for pre-tests and pilot surveys as 'to discover possible weaknesses, inadequacies, ambiguities and problems in all aspects of the research, so that they can be corrected before the actual data collection takes place.'

Considering the requirements of this research, a questionnaire was designed to collect research data for gathering empirical evidence to provide a comparative overview of the current adoption of management accounting practices in Chinese state-owned enterprises and foreign joint ventures located in China and to also highlight the problems and barriers in diffusing western management accounting techniques. The major source for determining the questionnaire content was the existing literature (see chapters 2, 3, 4 and 5).

The questionnaire was divided into three separate sections. Section A aimed to collect the general information about the adoption of management accounting practices in the two kinds companies. It consisted of 20 questions which all were self-designed. The design of section B was modeled on the survey of adoption and benefits of management accounting practices in Australia (Chenhall and Langfield-Smith 1998) in order to maximise the reliability and validity of the research instrument and to embed the research strongly within the existing literature. It included 40 items that aimed to identify the extent to which Chinese state-owned enterprises and foreign joint ventures have respectively adopted certain traditional and recently developed management accounting practices, the benefits received from those practices and the intentions to emphasise certain management accounting practices in the future. Section C was designed to collect the comments about the adoption and dissemination of management accounting practices in the respondents' own words.

In order to encourage respondents to answer the questionnaire and increase the response rate, the accompanying covering letter (see appendix 1) was designed to include the following elements which many authors (e.g. Sekaran 1992; Moser and Kalton 1989; Frankfort-Nachmias and Nachmias 1996) suggest:

- The use of an official letterhead (i.e. the university formal letterhead).

- An explanation of the purpose of the study; the reasons why it is important that the respondents should complete the questionnaire.

- A statement that assures the respondents that the responses will be treated as confidential.

- An explanation of the potential uses of the results and an offer making the results available to the respondents.

- A mention that the names of individual respondents will not be released under any circumstance, and the results would only be released in aggregate form.

In addition, because of the difficulty of collecting research data in China, two special inducements were provided to increase the response rate. First, the respondents were provided with a set of British stamps for returning the questionnaire. These items are highly valued by many Chinese people. Second, the respondents could choose to return the completed questionnaire directly to the researcher in the University of Huddersfield in the UK or to a named professor (the researcher's former supervisor) in a Chinese institution.

Three versions of the questionnaire were prepared. The first version was drafted and sent to my supervisors. Based on their valuable comments on the wording and presentation of the questions, an amended version was prepared. The second version of the questionnaire (both English and Chinese version) was sent to Professor Yu Xuying (one of the pioneers who introduced western practices of management accounting into China) for his insightful advice, in order to test the accuracy and relevance of the questions. Many important comments from Professor Yu were received, such as using more exact definitions and changing some items which may not be understood by the respondents.

In the pre-test stage, the second version of the questionnaire was also mailed to six colleagues of the researcher in Chinese universities and six former students of the researcher in Chinese organisations (four in state-owned enterprises and two in a joint venture) for a pilot study to examine the participants' reaction to the questionnaire guidance notes, wording, scales, instruction, layout and the length of the questionnaire. All of the pilot respondents were asked to give comments on any ambiguities, omissions and possible areas of improvement. Their comments focused on corrections to the wording to enable the respondents to understand the meaning of management accounting practices listed in the questionnaire. The pilot respondents also stated that the completion of the questionnaire required about 15-25 minutes. After taking their comments into account, the final version of the questionnaire (see appendix 1) was developed.

6.3.2 The content of the final version of the questionnaire

As mentioned earlier, three sections were included in the questionnaire. Section A consists of 20 questions relating to general information about the adoption of management accounting practices in Chinese firms. Section B aimed to collect data on the adoption, perceived benefits and future emphasis of detailed traditional and recently developed management accounting practices. Section C asked the respondents to provide their comments about the adoption and dissemination of management accounting practices in their own words.

All of questions in sections A and B were considered to be designed as objective and close-end types so that the respondents would be more willing to answer openly and honestly the questions (Mason and Bramble 1989). Section C allowed people to give their comments openly about the adoption of management accounting practices.

Demographic information of the respondents was collected in section A on their names (Question A1), ownership (Question A2), industries (Question A3), numbers of employees (Question A4), the number of years that their organisation has been established (Question A5), business scale (Question A6 and A7), and the advanced management techniques that their organisation has employed (Question A8). The aim of these factual questions was to test for the possibility of bias from specific backgrounds. The rest of the questions, which refer to subjective experiences, mainly adopted a 7-point scale to seek the attitude, feelings and opinions from the respondents.

All of questions in section A were self-designed. Question A1 was designed to ask for the name of the organisation but it also stated that the respondents could remain anonymous so that they may express their opinions more freely. Question A2 was designed to describe the ownership of the organisations. It was classified into group corporations, large and medium-sized state-owned enterprises, small-sized state-owned enterprises, sole foreign invested companies, foreign joint ventures and others (to be specified by the respondents). Such a classification took into account the fact that many large and medium-sized state-owned enterprises have been reconstructed into group corporations in recent years. It also provided the information to meet the requirement of the research that is to collect the information about the adoption of management accounting practices in state-owned enterprises and foreign joint ventures. The design of Question A3, which asks for the industry types of the organisations, took into consideration the Chinese industry classification methods. In order to measure the size of organisations, Question A4 was designed to indicate the number of employees. Question A5 takes into account the fact that the adoption of management accounting practices in China is divided into different stages by asking the respondents to specify the number of years that their organisations have been established. Both Question A6 and Question A7, which ask the respondents to specify the approximate total assets and annual sales turnover respectively, were designed to measure the business scales of organisations. Because there is likely to be a close link between advanced manufacturing and management techniques and recently developed management accounting practices Question A8 was designed to determine whether or not the respondents had applied some advanced manufacturing practices. The following practices were listed in the question: advanced manufacturing techniques (AMT), just-in-time (JIT) production systems, flexible manufacturing systems (FMS), computer numerically controlled (CNC) machines, total quality management (TQM), and computer-aided design and Computer-aided manufacturing (CAD/CAM).

Questions A10 and A11 were used to examine whether the state-owned enterprises have broadly experienced integrating traditional techniques and western practices of management accounting, and if these combination methods fit their business environment. In addition, the questions sought to ascertain whether joint ventures have employed management accounting practices by directly transferring them from their parent companies abroad, and if these transferred techniques were consistent with the new environment. Furthermore, Question A10 examined the above possibility by asking what kind of management accounting techniques were the most popular in the respondents' organisations. Question A11 also asked the respondents to evaluate the extent to which they have employed various management accounting practices.

Questions A12 and A13 were designed to examine if the respondents can make independent decisions when choosing management accounting practices. Question A12 asked the organisations to indicate the extent to which their management accounting systems are guided by different departments (e.g. the government, superior authority, foreign partner abroad, etc.), whilest Question A13 directly examined the extent to which the respondents can choose management accounting practices freely.

The design of Questions A15 and A16 were based on the assumption that in an organic organisation, the directors and managers of joint ventures pay more attention to the use of newer management accounting practices than their counterparts in state-owned enterprises who are inferred to be more mechanistic at the present stage. Questions A15 and A16 were combined to examine this assumption from different angles. Question A15 examined the extent to which managers pay attention to applying management accounting practices, and Question A16 asked the respondents to indicate the extent to which their managers have a sense of competition in the market.

The qualification of accountants is measured in Questions A17 and A18. Compared with state-owned enterprises, joint ventures have attracted more young and skilled accounting personnel who bring new and active ideas to benefit organisational innovation (see chapter 5). This leads to an assumption that the implementation of newer management accounting practices in joint ventures is easier than in state-owned enterprises. Question A17 was therefore used to examine the extent to which accounting personnel can understand some traditional and recently developed management accounting practices that were listed in the question. Question A18 asked the respondents to evaluate the extent to which management accounting practices are easy to implement in their organisations.

There is a divorce between accounting academics and practitioners in China (see chapter 4). When organisations, in particular state-owned enterprises, encounter difficulties in the implementation of new practices of management accounting, they have little hope of collaborating with academics. In contrast, joint ventures can get help from their partners abroad on operational guidance of management accounting practices. Question A9 was therefore used to ascertain the extent to which each of the items listed in the question (such as foreign partner abroad, other companies within China, government's recommendation, superior authority, and textbooks, etc.) have influenced the adoption of management accounting practices in the respondents' organisations. Question A14 asked the respondents to evaluate the extent to which each of the items listed in the question (e.g. government departments, superior authority, foreign partner abroad, universities and institutes, accounting firms or external auditors, etc.) have provided operational guidance when they implement new management accounting practices.

Questions A19 and A20 were jointly used to examine the performance evaluation and rewards in state-owned enterprises and joint ventures. In a traditional Chinese organisation, such as a state-owned enterprise strong reward equalitarianism exists. Incentive and bonuses in state-owned enterprises are linked with group performance, and performance measures and evaluation are normally based on some subjective rather than objective measurement (see chapters 2 and 4). Comparatively speaking, joint ventures emphasise equity, competition and efficiency because their foreign partners come from western individual societies. Incentive and bonuses in joint ventures are more likely to be based on individual performance and objective measures. Therefore Question A19 aimed to measure the extent to which some of the objective and subjective measures listed in the question (such as budget variance analysis, distinguishing between controllable and non-controllable profit or costs, divisional overall net profit, residual income, return on investment, cash flow return on investment, individual judgement from immediate superior and group decision from top management, etc.) are used for managerial performance evaluation and rewards. In Question 20, the respondents were asked to specify the extent to which the performance measure and evaluation of their organisations are carried out objectively.

As mentioned earlier, the design of section B was modeled on the survey of adoption and benefits of management accounting practices in Australia (Chenhall and Langfield-Smith 1998). The survey was adapted to consider the Chinese situation relating to the adoption of management accounting practices. For example, some recently developed and strategically-focused practices of management accounting, such as benchmarking, balanced scorecard, shareholder value analysis, which were included in the Australian study, have not been included in this survey. Also some practices, which the literature review suggested were common and popular in China, (e.g. responsibility accounting, detailed budgeting practices, performance evaluation and reward based on group decision from top management, etc.) were added to the survey.

Section B included 40-itemised management accounting practices, which were in turn divided into subgroups: product cost systems, budgeting systems, performance evaluation and reward, planning and decision support systems and responsibility accounting. It was structured into two sides: the left side asked the respondents to indicate the extent to which their organisations have received benefits from the practices over the last 5 years scored from 1 (no benefits) to 7 (very high benefits); the right side asked the respondents to predict the extent to which their organisations will place future emphasis on these practices over next 3 years scored from 1 (no emphasis) to 7 (very high emphasis).

Regarding the classifications of the content of the questions included in the questionnaire, A1 to A8 are factual questions, which are used to obtain objective information relating to respondents' background. These questions were designed to classify the respondents and to test for non-responses bias. Other questions were designed to collect subjective information relating to respondents' attitudes, feeling and opinion.

With regard to the types of the questions, the main kind of the questions in section A and section B was closed-ended questions. However, the respondents were allowed to add any further information in the space given for each question. In other words, these questions include an item titled 'others (please specify)' to encourage respondents to add any other items that are not listed in the specific question. Section C is an open-ended question. It asked the respondents to describe their opinion on the adoption of management accounting practices in their own words.

Concerning the scale of the questions, there is a dichotomy question answered by 'yes' or 'no' (e.g. Question A8) to obtain a direct answer from the respondents. There are multiple-choice answer questions (e.g. Questions A2, A3 and A10) to let the respondents choose from a set of possible answers. The most important scale, however, is a 7-point scale. It is used throughout the questionnaire in order to grant the respondents some degree of flexibility. Also, the middle-point (scored 4) was labeled by an adjective in order to represent a neutral or moderate opinion so that it is easy to categorise the responses into groups such as low, moderate and high.

6.4 Sampling and the respondents

In order to achieve the research objectives, the top 500 state-owned enterprises of 1999 (provided by the State Economic & Trade Commission—SETC, PRC) and the top 500 foreign companies of 1998 in China (provided by the Ministry of Foreign Trade and Economic Cooperation—MOFTEC, PRC) were initially selected as the research samples.[1] The reasons for selecting these sources as the sample were that they represented authorised company databases. Also the number of state-owned enterprises and foreign companies were the same. Therefore the databases are considered to be suitable for meeting the research objectives. Unfortunately, a database for foreign joint ventures could not be found. Therefore the foreign companies database was selected based on the assumption that they are likely to be engaged in joint ventures. In addition, no other better databases are available. The reasons for selecting such a large sample and large sized organisations were that if a low response rate was received, the number of responses would be sufficient to carry out the appropriate statistical tests. Also by inference, larger organisations should have applied advanced manufacturing techniques and management methods. Management accounting practices should be more widely used in these organisations than in smaller organisations.

To ensure that the questionnaires were answered by those respondents with a good knowledge of their organisation's adoption of management accounting practices, the final version of the questionnaire was mailed from Britain to the head of financial or accounting department of 1,093 companies chosen from the above samples at the end of 2000. As previously mentioned, there are no qualified management accountants in Chinese organisations. Therefore in the covering letter, the respondents were asked to identify the most appropriate person to complete the questionnaire in order to avoid some questionnaires being answered by persons not well informed about some

[1] The top 500 foreign companies of 1999 was not available at the time of request

aspects of the questionnaire and which would consequently influence the reliability of the results.

The first mailing resulted in only 88 usable questionnaires and 151 questionnaires were returned because the addresses were not specific enough or because the companies in question did not, or had ceased to exist. Possible reasons for the low response rate include:

- The addresses of the samples provided by Chinese government database are not specific. This was the reason for many questionnaires not reaching the destinations. There were also many non-returned questionnaires, many of which might have been lost in the post.

- The different postal systems between China and Britain, pre-paid envelopes could not be provided to the respondents.

- Responding to academic questionnaires is a new experience to the accounting staff in Chinese organisations, therefore they are likely to lack the required skill and enthusiasm to render a positive response.

- The information concerning foreign companies was not up to date. Therefore when the questionnaires were mailed some firms may have undergone changes. Furthermore, as pointed our earlier the foreign companies database did not necessarily mean that they were involved in joint ventures. These factors are likely to be the main reasons why the questionnaires returned by the joint ventures represented a smaller portion (see table 6.2) compared with SOE's.

Such a low response rate is insufficient to achieve statistical validity. Remedial measures had to be considered. In order to obtain more questionnaires and increase the response rate, a second batch of 95 questionnaires was distributed personally by the teachers, colleagues and friends of the researchers to some of the organisations, that were included in the sample but did not respond. The distribution was limited to Shanghai, Beijing, Xiamen, Wuhai, Chengdu and Kunming in 2001. This process was undertaken in accordance with the culture of 'Guangxi' which exists in Chinese society. The idea behind 'Guangxi' is that only people with an intimate acquaintance can approach each other and obtain favours (see chapter 2). The distribution of questionnaires resulted in 91 usable questionnaires and 4 uncompleted questionnaires. The reasons given for the returned uncompleted ones were that no appropriate person was available to complete them or the firm has limited management accounting practices. The two survey steps (mailing and distribution) resulted in a total of 179 usable responses.

There are a number of ways used to measure response rate. However, a common formula cited by de Vaus (1990) is used to compute the response rate as follows:

Response rate = Number of completed and returned / N in sample – (Ineligible + Unreachable)

Adopting this approach the response rate = 179 / [1093 – (4 + 151)] = 19.1%

The response rate is considered to be satisfactory taking into account the Chinese environment, the geographical location of the respondents being a considerable distance from the researcher, the expense and difficulty in using common communication devices (e.g. telephone and e-mail) and the fact that Chinese respondents are not used to questionnaire surveys. Although the response rate is lower than the 56% for the similar survey in Australia (Chenhall and Langfield-Smith 1998), it is considered to be satisfactory when compared with many other management accounting surveys which have achieved response rates varying from 11% to 26% (Ittner *et al.* 2002; Abdel-Kadar and Dugdale 1998; Innes and Mitchll 1991, 1995). Moreover, the marketing research literature states that a 5-10% response rate is realistic for a mail survey of companies (Feltham *et al.* 1999). Also Kervin (1992) argues that the response rate for a questionnaire survey can be as low as 10%. Table 6.2 summarises the ownership classification of the respondents.

Table 6.2 Ownership classification of respondents

	No. of responses	%
Group corporation	44	24.6
Large and medium-sized state-owned enterprises	67	37.4
Small-sized state-owned enterprises	14	7.8
Sole foreign invested companies	16	8.9
Foreign joint ventures	21	11.7
Private companies	5	2.8
Others	12	6.7
Total	179	100.0

Four in-depth interviews at two state-owned enterprises and two joint ventures were also carried out during the survey to collect attitudinal and factual data from the two types of organisations. For state-owned enterprises, one large-sized listed company in Beijing and one medium-sized non-listed company in Chengdu were chosen. Both selected state-owned enterprises were established before the 'Opening and Reform'. For joint ventures, one firm was located in a large and developed city (Shanghai) and the other was located in medium and developing city (Kunming) and both of them were founded in the beginning of 1990's. The selected companies and interviewees were contacted through local university networks.

The aim of the interviews was to provide insights into the selected enterprises' management accounting practices in their own right. The visit to each enterprise involved one-on-one interviews with their managers/controllers of financial or accounting departments. The comments collected from the interviews are merged with those from the questionnaire (see Respondents 2 and 9 for joint ventures and Respondents 10 and 24 for state-owned enterprises in appendix 2).

6.5 Test for non-response bias

Non-response is a reality for every survey and considering its impact in this study is important. Non-responses are defined as biased 'when cases with certain characteristics are more likely to be refusals or non-contacts' (Kervin 1992). Lessler and Kalsbeek (1992) also identify non-response bias as the 'distortion in survey estimates that occur due to the inability to get a usable response from some sample members. In other words, non-responses are not randomly distributed within the sample, resulting in certain types of cases being underrepresented'.

Non-response bias can affect the generalisation of the research results to the whole population. If there are no major differences in key variables between respondents and non-respondents, then it is plausible to conclude that the sample obtained is not significantly different from the original sample (Lessler and Kalsbeek 1992).

There are two alternative methods to compare respondents and non-respondents. First, comparing the variables of the sample obtained with the variables of the original target sample to ascertain if there are any significant differences (Zikmund 1988). If these differences are significant, then response bias is likely to exist. This approach assumes that a random sample was originally planned. Second, comparing the key variables of the earlier sample obtained with the same variables of the later samples obtained. This approach is based on the assumption that later respondents more closely resemble non-respondents. Furthermore, where non-response is likely to exist, steps should be taken to compensate for it, such as conducting sensitivity analysis, re-weighting the data and sampling a group of non-respondents (Lessler and Kalsbeek 1992).

It is not possible to test the non-response bias by comparing the sample obtained with the target population in this research because the original database did not include key features of the organisations, such as industry classification, firm size, and annual sales turnover. Therefore the second method was used to test the non-response bias in this study.

As mentioned earlier, the respondents in this study include the samples obtained by mailing and personal distribution. In the process of personal distribution, the questionnaires were distributed in different cities simultaneously therefore it is impossible and unreasonable to compare the early responses with the late responses from the distributing of questionnaires. Hence the comparison can only be carried out on the responses received from the mailing.

Five demographic variables (ownership classification, industry classification, number of employees, number of years that an organisation has been established and adoption of advanced production and management techniques) were used to test for non-response bias.

The Mann-Whitney and Chi-square non-parametric tests were used to test if there is any difference between the early and the late respondents in the mailing questionnaire. The first 30% of cases of mailing sample were compared with the last 30% of response in the same sample. The results (see table 6.3) show that all of the p-values exceed the 5% level of significant (P-values>0.05) between these two groups except the variable of number of employees which represents the size of firm (the limitation will be discussed in the conclusion chapter). It indicates that there are no significant differences in the mailing responses.

Table 6.3 Non-response bias test for the early (30%) and late (30%) responses in the mailing sample [a]

	Ownership	Industries	Number of employees	Number of years that a firm has been established	Advanced production and management techniques used
Non-parametric Tests	Pearson Chi-Square	Pearson Chi-Square	Mann-Whitney	Mann-Whitney	Pearson Chi-Square
Asymp. Sig. (2-tailed)	.281	.400	.048	.920	.677

a. Grouping variables: early (30%) and late(30%) responses in the mailing sample

6.6 Validity and reliability of the questionnaire

Research validity is the extent to which findings and conclusions accurately represent what is really happening in the situation (Kervin 1992). It can be measured by internal validity and external validity. Internal validity refers to the extent of drawing accurate and legitimate conclusions about the group or sample actually studied and external validity refers to the extent of making valid generalisations from a sample (Kervin 1992; Sekaran 1992).

Litwin (1995) groups four types of validity tests to be widely used to test the goodness of measures: face validity, content validity, criterion validity and construct validity.

Face validity is based on a cursory review of items by untrained persons. For example, showing the survey to some untrained individuals to see whether they think the items appear satisfactory to them. However, face validity is the least scientific measure of all the validity measures and therefore many researchers do not use face validity as a measure of validity.

Content validity is a function of how well the dimensions and elements of a concept have been delineated. Content validity can be approached by a careful definition of the topic and the items included in the measurement scale (Emory and Cooper 1991). The assessment of content validity involves a review of the questionnaire contents in order to ensure that it includes everything it should and does not include anything it should not (Litwin 1995).

Criterion validity is a measure of how well one instrument stacks up against another instrument or predictor. It consists of concurrent validity and predictive validity. The former requires that the survey instrument in question be judged against some other methods that is acknowledged as a 'gold standard' for assessing the same variable while the latter is the ability of a survey instrument to forecast future events, behaviours, attitudes, or outcomes. Criterion validity is normally assessed differently, depending on how much published literature is available in the area of study (Litwin 1995).

Construct validity is a measure of how meaningful the scale or survey instrument is when in practical use. Although it is the most valuable measure, it also is difficult to understand, to measure, and to report. It is usually assessed by tracking the performance of the instrument scale over years in different settings and populations (Litwin 1995).

Bearing in mind the above measures of validity, this study relied mainly on content validity. As mentioned earlier, in the pre-test stage, the first version of the questionnaire was distributed to six former colleagues and six students in China for a pilot test to examine their reaction to the content of covering letter, the wording, scales, and length of the questionnaire. They provided some useful suggestions relating to wording of questions and proved that approximately 15-25 minutes were needed to complete the questionnaire. In addition, in order to test the accuracy and relevance of the questions which were included in the questionnaire, the second version of the questionnaire was posted to Professor Yu Xuying, one of pioneers who introduced western practices of management accounting, for his comments. Based on their valuable advice, it was concluded that the questions were relevant and valid and the final version of the questionnaire was developed. Furthermore, most of the questions used in section B of the questionnaire were adapted from previous studies (Chenhall and Langfield-Smith 1998; Firth 1996) whereby the validity of the questions has previously been established. The above-mentioned approaches thus provide support for the validity of the questionnaire.

Reliability is a measure that indicates the stability and consistency with which the instrument is measuring the concept and helps to assess the 'goodness' of a measure (Sekaran 1992). It is commonly assessed in three forms: test-retest reliability, alternate-form reliability, and internal consistency reliability (Litwin 1995).

Test-retest reliability is the most commonly used indicator of survey instrument reliability. It is measured by having the same set of respondents complete a survey at two different points in time to see how stable the responses are (Litwin 1995). Correlation coefficients (i.e. r value) are used to compare the sets of responses. If the

r values equal or exceed 0.70 and then they are generally considered good because it represents the stability of the respondents over time (Shannon and Davenport 2001).

Alternate-form reliability (also called parallel forms reliability) refers to the use differently worded items to measure the same attribute or variable (Litwin 1995). In other words, the questions and responses are reworded or their order changed to produce two items that are similar but not identical, and then the items or scales are administered to the same population at different time points, and correlation coefficients are again calculated. The higher the correlation coefficients are, the better the alternate-form reliability is (Litwin 1995; Shannon and Davenport 2001).

Internal consistency reliability is another commonly used measure which indicates how well the different items measure the same issue or variable. It is applied not to single items but to groups of items that are thought to measure different aspects of the same concept or construct. It is important that multiple items that purport to measure one variable are clearly focused on that variable (Litwin 1995). It is widely recognised that internal consistency reliability is measured by calculating a statistic known as Cronbach's coefficient alpha, named for the 20th century psychometrician who first reported it in 1951 (see Cronbach 1951). Coefficient alpha is a reflection of how well the different items complement each other in their measurement of different aspects of the same variable (Litwin 1995). Theoretically alpha can be take on values between 0.0 and 1.0 and normally 0.7 or over are generally accepted as representing good reliability. However, Nunally (1978) suggests a value of 0.6 as a lower acceptable bound for alpha. DeVellis (1991) mentions the range of alpha as follows:

- Below 0.6, unacceptable.
- Between 0.6 and 0.65, undesirable.
- 0.65 to 0.7, minimally acceptable.
- 0.7 to 0.8, respectable.

- 0.8 to 0.9, very good.

With the differences between these values of alpha, one can say that is preferable for alpha's value to be high but it is not a condition.

From the above interpretations, it can be seen that in fact, it is very difficult to carry out test-retest reliability and alternate-form reliability. First, the respondents would seem unlikely to agree to complete the questionnaire twice, and second, it also is impossible to send two different forms of the same question to the respondents. Therefore the only possible way is to measure the internal consistency reliability by calculating the Cronbach alpha.

Cronbach alpha is a reliability coefficient to test the consistency of respondents' response to all the items that are independent measures of the same concept. Some researchers suggest that multiple measures that are used to measure the same concept have an advantage of capturing more of a construct's multi-dimensionality than individual questions (Sekaran 1992; Foster and Swenson 1997).

In section A of the questionnaire, some groups of the multiple items were used to measure the same concept/variable. For example, questions A9(a), A12(c) and A14(c) were used to examine the foreign partner's influence on the management accounting methods employed in the respondents. Similarly, questions A9(c), A12(a) and A14(a) aimed to measure the government's influence. In section B of the questionnaire, all of the items can be used to examine the variable: adoption of management accounting methods by the respondents. However it can also be divided into sub-variables: product cost systems, budgeting systems, detailed budgeting systems for, performance evaluation & reward based on, decision support systems, planning and control, and responsibility accounting. Tables 6.4 and 6.5 summarise the Cronbach alpha coefficient for the multiple item questions that were used to measure these variables.

Table 6.4 Cronbach alpha for the multiple item questions in section A

Variables	Questions	No. of items	Alpha
Foreign partner's influence	A9(a), A12(c), A14(c)	3	0.8426
Government's influence	A9(c), A12(a), A14(a)	3	0.8005
Superior's influence	A9(d), A12(b), A14(b)	3	0.7839
Manager's attention	A15, A16	2	0.7425
Understanding of the management accounting methods	A17(a to i)	9	0.9136
Objective performance evaluation methods	A19(a to f)	6	0.6985

Table 6.5 Cronbach alpha for the multiple item questions in section B

Variables	Questions	No. of items	Alpha	
			Benefits	emphasis
Product cost systems	B1 to B5	5	0.6840	0.7163
Budgeting system	B6 to B9	4	0.8326	0.8435
Detailed budgeting system for	B10 to B14	5	0.8551	0.8576
Performance evaluation & reward based on	B15 to B25	11	0.8950	0.8231
Decision support systems	B26 to B31	6	0.8515	0.8454
Planning and control	B32 to B37	6	0.8117	0.7348
Responsibility accounting	B38 to B40	3	0.8907	0.8993
Adoption of management accounting methods	B1 to B40	40	0.9774	0.9860

As shown in tables 6.4 and 6.5, all of the scores for alpha exceeded 0.6 and the majority of the scores are medium or high. It appears that in the questionnaire, there are consistent and reliable answers from the respondents for the multiple questions. Furthermore, the above tests indicate that the questions used for the research are reasonably valid and the multiple questions used to measure a same concept are reasonably reliable.

6.7 Justifications for statistical analysis used in analysing data

The process of analysing research data should link with the aims of the study and the nature of the data. There are generally two main categories of statistical procedures which can be used in analysing the data: parametric and non-parametric tests. There are many arguments concerning when parametric or non-parametric tests should be used and therefore this is an unresolved issue in data analysis. However, the parametric tests can be traditionally used only if the following assumptions are fulfilled (Zikmund 1988; Siegel and Castellan 1988; Puri 1996):

- The data are interval- or ratio-scaled.

- The sample size is large.

- The data in the study are drawn from populations with normal distribution are/or normal sampling distribution.

- The selection of any respondent is independent (i.e. the selection of any firm from the population to be included in the sample must not bias or affect the inclusion of any other firms).

- When differences or measures of statistical association are being analysed between two or more samples, the variances (or standard deviations) of these samples do not differ significantly.

It is obvious that parametric tests are based on the assumption that researchers know certain characteristics of the population from which the sample is drawn. Therefore parametric tests refer to a measure which describes the distribution of the population such as mean or variance. In contrast, non-parametric tests do not make specific assumptions about population distributions and are therefore often referred to as distribution-free tests.

In addition, there are many reasons supporting the use of non-parametric tests in analysing dada. First, non-parametric tests are the most appropriate tests when the data constitutes sets of ranks or are nominal data (Siegel and Castellian 1988). Second, non-parametric tests make relatively few assumptions about population distributions and thus it is always safe to use them (Kinnear and Gray 2000). Third, non-parametric tests are likely to be the only method which can be used where the sample size is very low unless the distribution of the population is known exactly (Siegel and Castellian 1988). Fourth, non-parametric tests are also much easier to learn, apply and interpret than parametric tests (Hollander and Wolfe 1973; Siegel and Castellian 1988). Fifth, non-parametric tests have considerable advantages in terms of efficiency and validity when the assumption of normality is not satisfied (Lehmann and D'brera 1975; Hollander and Wolfe 1973). Sixth, if the data are measurements at the ordinal level in the first place, as with sets of ranks, or nominal data, a non-parametric test is the only possibility (Kinnear and Gray 2000). Therefore, some authors strongly recommend the use of non-parametric tests (e.g. Siegel and Castellian 1988).

Bearing the above discussion in mind and given the facts that in this study, the number of respondents is not large, the population distribution is not preformed and the majority of the questions are measured on an ordinal scale, non-parametric tests have been chosen to analyse the research data. Furthermore, the Mann-Whitney test will be mainly used to test the two independent samples of measurements (i.e. state-owned enterprises and foreign joint ventures) for variables that are measured on an ordinal scale and the Chi-square test will be used to test the two independent samples for those variables that are measured on a nominal/categorical scale.

6.8 Summary

In order to achieve the objectives of the study this chapter has explained the choice of an appropriate research methodology. It refers to the overall approach involving research theory, research assumption, research strategy, and research design and research methods. A detailed discussion on the reasons for the methodology adopted in conducting the research was described.

A postal questionnaire was used to gather the research data. Efforts were taken in the stage of the questionnaire design and the process of pre-test and pilot survey, to reduce the inherent limitation and the low response rate and to increase the validity of the questionnaire. The reasons for selecting sample and the data collection methods were described. In particular, the difficulties relating to the collection of the data in China were explained. Tests for non-response bias were explained. This was followed by a discussion about the justification of the validity and the reliability of the questionnaire. Finally, the statistical tools that will be employed to analyse the data in the next chapter were explained.

CHAPTER 7

DESCRIPTION OF THE RESEARCH FINDINGS

CHAPTER 7

DESCRIPTION OF THE RESEARCH FINDINGS

The main purposes of this chapter are to provide a general description of the questionnaire responses and to present the findings relating to research objectives listed in section 1.3 of chapter 1 (and repeated in section 6.1 of chapter 6). The findings are presented by systematically working through the order of the questionnaire. Therefore it begins with the presentation of the important findings relating to section A of the questionnaire and continues with descriptions of the findings for sections B and C. Section 7.1 presents relevant information relating to the respondents and their organisations. Section 7.2 explores external influences between joint venture and state-owned enterprise respondents when they experience new management accounting practices. The differences in the preference for traditional methods or western practices between joint ventures and state-owned enterprises are discussed in section 7.3. Section 7.4 examines the differences in the quality of staff who influence the adoption of management accounting practices between joint ventures and state-owned enterprise. This is followed by a section that presents the differences relating to performance measurement and evaluation between joint venture and state-owned enterprise respondents (section 7.5). Sections 7.6-7.8 compare relative adoption/past benefit/future emphasis of management accounting practices between joint venture and state-owned enterprise respondents respectively. After systematically presenting the findings following the order of the questionnaire the remaining sections examine other aspects drawing off several different parts of the questionnaire (sections 7.9 and 7.10). The final section summarises the main additional written comments provided by the respondents and the findings from the interviews conducted by the researcher (section 7.11). Section 7.12 provides a summary of this chapter.

7.1 Differences of demographic data between joint venture and state-owned enterprise respondents

Demographic information relating to the respondents was collected in section A. Question A1 was designed to ask for the name of the organisation but it also stated that the respondents could remain anonymous so that they may express their opinions more freely. Question A2 was designed to describe the ownership of the organisations. It was classified into group corporation, large and medium-sized state-owned enterprises, small-sized state-owned enterprises, sole foreign invested companies, foreign joint ventures and others (to be specified by the respondents). Information relating to industry types of the organisations was obtained from Questions A3. Question A4 was designed to indicate the number of employees (one of the variables which can be used to measure the business size of the respondents). Question A5 takes into account the fact that the adoption of management accounting practices in China is divided into different stages by asking the respondents to specify the years that their organisations have been established. Both questions A6 and A7, which ask the respondents to specify the approximate total assets and annual sales turnover respectively, were designed to measure the business scale of organisations. By inference, there should be a link between advanced manufacturing and management techniques and recently developed management accounting practices. Question A8 was designed to determine whether or not the respondents had applied various advanced manufacturing practices, such as advanced manufacturing techniques (AMT), just-in-time (JIT) production system, flexible manufacturing system (FMS), computer numerically controlled (CNC) machines, total quality management (TQM), and computer-aided design and computer-aided manufacturing (CAD/CAM).

There are some points that require an explanation at this point. First, in terms of the ownership classification of respondents, group corporation is a new form of state-owned enterprise, which are normally reorganised by several state-owned enterprises, although very occasionally they can become a joint venture. Therefore group corporation, large and medium-sized state-owned enterprises, as well as small-sized state-owned enterprises were classified as representing a state-owned enterprise category. Secondly, the number of real foreign joint ventures involving Chinese partners and foreign partners abroad was too small (only 21) to carry out a statistical analysis. To create a larger sample respondents sole foreign invested companies that were owned solely by foreign companies abroad (which is 16) were merged into the joint venture sample. The justification for combining the two types of organisations is that both of them involve foreign companies that have the potential to transfer advanced production techniques and management practices, such as recently developed management accounting methods into China from western companies. The responses to question A6 and relating to total assets and annual sales turnover are not analysed and discussed because some respondents did not clearly specify the name and the amount of the currency.

The information relating to ownership classification of the respondents was shown in table 6.2 in the previous chapter. The information concerning industry classification, number of employees, number of years that the organisations have been established and advanced manufacturing and management methods used by the respondents are presented in tables 7.1 – 7.4.

Table 7.1 shows that most of the respondents in both samples are from the manufacturing sector with the same proportion of 73%. The remaining respondents are from a wide range of sectors. The table shows that there are no significant differences in the industry classifications between the two categories.

Table 7.1 Respondents' industries analysed by joint venture (JV's) and state-owned enterprise (SOE's)

Count (Column%)	JVs	SOEs	Row Total
Manufacturing	27 (73.0%)	91 (73.4%)	118 (73.3%)
Agriculture	2 (5.4%)	0	2 (1.2%)
Finance	1 (2.7%)	5 (4.0%)	6 (3.7%)
Transport	1 (2.7%)	6 (4.8%)	7 (4.3%)
Commercial	0	10 (8.1%)	10 (6.2%)
Building	4 (10.8%)	3 (2.4%)	7 (4.3%)
Information technology	2 (5.4%)	4 (3.2%)	6 (3.7%)
Services	0	2 (1.6%)	2 (1.2%)
Others	0	3 (2.6%)	3 (1.9%)
Column Total	**37 (100.0%)**	**124 (100.0%)**	**161 (100.0%)**

Table 7.2 indicates that the business size in state-owned enterprise sample is larger than that in the joint venture sample. Over half (50.4%) of state-owned enterprises have employed over 2,000 staff whereas 40.5% of joint ventures only employ less than 500 employees. This implies that state-owned enterprises tend to be large-sized companies while most of joint ventures respondents tend to be small and medium-

sized companies. Hence, there are significant size differences between the two types of organisation.

Table 7.2 Number of employees analysed by joint ventures and state-owned enterprises

Count (Column%)	**JVs**	**SOEs**	**Row Total**
Less than 500	15 (40.5%)	25 (20.3%)	40 (25.0%)
501-2,000	13 (35.1%)	36 (29.3%)	49 (30.6%)
More than 2,000	9 (24.4%)	62 (50.4%)	71 (44.4%)
Column Total	**37 (100.0%)**	**123 (100.0%)**	**160 (100.0%)**

Table 7.3 indicates that most of the respondents (65.6%) in state-owned enterprise sample are old enterprises established before 1978 (the starting year of Chinese economic reforms) whereas 62.2% of the joint ventures are mainly newer companies having been established less than 10 years. Also 94.6% of the joint venture respondents were established after 1978. Thus the table shows that there are significant differences in the number of established years between the two samples.

Table 7.3 Number of years established analysed by joint venture and state-owned enterprise samples

Count (Column%)	JVs	SOEs	Row Total
Less than 10 years	23 (62.2%)	24 (19.2%)	47 (29.0%)
11-22 years	12 (32.4%)	19 (15.2%)	31 (19.1%)
More than 23 years	2 (5.4%)	82 (65.6%)	84 (51.9%)
Column Total	**37 (100.0%)**	**125 (100.0%)**	**162 (100.0%)**

In theory, there should be a strong positive relationship between the use of advanced production and management techniques and the adoption of recently developed management accounting practices. Question A8 was a dichotomous (i.e. Yes or No) question designed to ascertain whether the respondents from the manufacturing sector used various advanced manufacturing and management techniques. The responses are summarised in table 7.4. It can be seen that both types of organisation extensively use TQM. The reason for this is that TQM is one of the successful management methods promoted in state-owned enterprises by the Chinese government during the past two decades (Yang 1999a). However, the only significant difference between the state-owned enterprises and joint ventures relate only to AMT usage (P value < 0.05 using the Chi-Square non-parametric test).

Considering the fact that most of the joint venture respondents are small and medium-sized firms while most of the state-owned enterprise respondents are large-sized companies (see table 7.2), which theoretically should employ more advanced manufacturing techniques, the differences between them are likely to be wider if size is held constant. The findings therefore provide some evidence to support the argument that joint ventures adopt more advanced manufacturing techniques (when examined in total) from western countries and from their foreign partners abroad. However, in terms of the specific advanced manufacturing techniques there are no significant differences.

Table 7.4 Descriptive statistics and p-values relating to the extent to which advanced manufacturing and management methods are used in JV and SOE samples

	N	% rating Yes	% rating No	P-value[a]
(a) *Advanced manufacturing techniques (AMT)*				
JV's sample	33	61	39	0.003
SOE's sample	90	31	69	
(b) *Just-in-time (JIT) production system*				
JV's sample	33	27	73	0.123
SOE's sample	90	18	82	
(c) *Flexible manufacturing system (FMS)*				
JV's sample	33	12	88	0.438
SOE's sample	90	11	89	
(d) *Computer numerically controlled (CNC) machines*				
JV's sample	33	26	74	0.056
SOE's sample	90	22	78	
(e) *Total quality management (TQM)*				
JV's sample	33	94	6	0.457
SOE's sample	90	94	6	
(f) *Computer-aided design and computer-aided manufacturing (CAD/CAM)*				
JV's sample	33	69	31	0.105
SOE's sample	90	52	48	

Notes
[a] P-values are based on the Chi-Square test for the dichotomous (i.e. Yes or No) questions. P-values are one-tailed for all items.

7.2 External influences relating to respondents' experience with new management accounting practices

Based on the analysis of cultural dimensions in chapter 2 and the history of management accounting developments in China in chapter 4, it is expected that state-owned enterprises would experience greater interference and restrictions by external bodies (such as the government and their superior authorities) when they choose and implement new management accounting systems. In contrast, it was suggested that joint ventures have greater independence in choosing and using management accounting practices (see chapter 5). Several questions were used to examine the external factors that influence management accounting practices in the respondents' organisations. The respondents were asked in question A9 to evaluate how foreign partners abroad, other companies within China, government's recommendations, superior authority and textbooks affect their implementation of management accounting practices. Question A12 asked the respondents to indicate the extent to which their management accounting systems were guided by different departments (e.g. the government, superior authority, foreign partners abroad, etc.) and question A13 required the respondents to indicate the extent to which they can choose management accounting practices independently. Finally, question A14 asked respondents to indicate the extent to which each of the items listed in the question, such as government department, superior authority, foreign partners abroad, universities and institutes, accounting firms or external auditors, etc., have provided operational guidance when they implement new management accounting practices. The responses relating to questions A9, A12, A13 and A14 are shown in tables 7.5 – 7.8 respectively. Unless otherwise stated the responses to all of these questions were derived from a 7-point scale (anchored 1 = 'not at all' to 7 = 'to a considerable extent' and the mid-point anchored 'to a small extent').

Table 7.5 shows the results derived from the response to question A9. The findings indicate that items (a), (b), (c) and (d) have significant differences ($P < 0.05$) in the two types of respondents. Furthermore, foreign partners abroad have the most impact on joint ventures (mean = 5.00) followed by the government's recommendation (mean = 3.35). In state-owned enterprises, the superior authorities have the highest interference power in their adoption of management accounting practices (mean =5.30) followed by the government's recommendation (mean = 5.09). The table also indicates that other companies within China have greater influence on the adoption of management accounting practices in state-owned enterprises (mean = 3.51) than in joint ventures (mean = 2.32). There is a positive relationship between items (b) and (c). This is because the influence which other companies within China has on joint ventures and state-owned enterprises is also effected by government recommendations in respect of these other companies. Textbooks have a similar impact on the two types of samples. Therefore there is no significant difference in statistics ($P > 0.05$).

It should be mentioned that tables 7.5 and 7.6 indicate that the foreign partner abroad has some influence on state-owned enterprises when they do not have a partner. Possible reasons for these responses include: (1) group corporations that were incorporated in state-owned enterprise sample, have subsidiaries which have foreign partners; (2) potential foreign partners have influenced state-owned enterprises to a certain extent, e.g. SOE's have copied and adopted recommendations relating to some management accounting practices of potential partners.

Table 7.5 Descriptive statistics and p-values relating to the extent to which the items below influence the management accounting methods employed in JV and SOE samples

	N	Mean	Standard Deviation	% rating[a] 1 or 2	% rating[a] 6 or 7	P-value[b]
(a) *Foreign partner abroad*						
JV's sample	35	5.00	1.663	8	34	0.000
SOE's sample	61	2.41	1.970	66	11	
(b) *Other companies within China*						
JV's sample	22	2.32	1.323	54	0	0.001
SOE's sample	90	3.51	1.684	28	13	
(c) *Government's recommendation*						
JV's sample	20	3.35	1.814	30	15	0.000
SOE's sample	102	5.09	1.966	13	51	
(d) *Superior authority*						
JV's sample	19	3.26	2.077	42	21	0.000
SOE's sample	99	5.30	1.860	10	55	
(e) *Textbooks*						
JV's sample	21	3.33	1.528	33	10	0.290
SOE's sample	80	3.55	1.630	26	11	

Notes
[a] The respondents were generally asked to indicate scale of 1 (Not at all) to 7 (To a considerable extent) the extent to which each of the variables applied in their organisation.
[b] P-values are based on the Mann-Whitney test for the ordinal scale and 1-tailed for all items.

Table 7.6 lists the responses to question A12. It shows that the extent to which the respondents are guided by the government, superior authorities and foreign partners abroad when they design and choose management accounting systems. The results are similar to the findings shown in table 7.5. The differences between joint ventures and state-owned enterprises for all of the items in the table are statistically significant (p values < 0.01). In particular, foreign partners abroad have the most impact on joint venture's sample (mean = 4.50) followed by the government (mean = 2.81). In contrast, superior authorities have the most impact on state-owned enterprise's sample (mean = 4.83) followed by the government (mean = 4.39).

The distinction between questions A9 and A12 is that question A9 was used to examine the extent in which various elements influenced the management accounting practices employed by respondents while question A12 was used to examine the extent in which administrative powers, in particular, interfered with respondents' design and choice of management accounting practices.

Table 7.6 Descriptive statistics and p-values relating to the extent to which JV and SOE samples design and choose management accounting systems guided by the items below

	N	Mean	Standard Deviation	% rating[a] 1 or 2	% rating[a] 6 or 7	P-value[b]
(a) Government						
JV's sample	26	2.81	1.524	50	7	0.000
SOE's sample	112	4.39	2.215	25	42	
(b) Superior authority						
JV's sample	21	2.24	1.670	71	10	0.000
SOE's sample	109	4.83	2.103	18	46	
(c) Foreign partner abroad						
JV's sample	24	4.50	1.865	29	29	0.000
SOE's sample	54	2.41	1.643	57	4	

Notes
[a] The respondents were generally asked to indicate scale of 1 (Not at all) to 7 (To a considerable extent) the extent to which each of the variables applied in their organisation.
[b] P-values are based on the Mann-Whitney test for the ordinal scale and 1-tailed for all items.

Table 7.7 shows the response to question A13. The organisations surveyed were asked to evaluate the extent to which they can independently choose management accounting methods. The findings shown in this table indicate that the level of independence in the joint venture's sample is higher than that in state-owned enterprise's but the difference is not statistically significant ($p > 0.05$).

Table 7.7 Descriptive statistics and p-values relating to the extent to which JV and SOE samples can choose management accounting methods independently

	N	Mean	Standard Deviation	% rating[a] 1 or 2	% rating[a] 6 or 7	P-value[b]
JV's sample	36	4.58	0.996	3	11	0.097
SOE's sample	125	4.14	1.569	15	15	

Notes
[a] The respondents were generally asked to indicate scale of 1 (Not at all) to 7 (To a considerable extent) the extent to which each of the variables applied in their organisation.
[b] P-values are based on the Mann-Whitney test for the ordinal scale and 1-tailed.

The survey also sought to ascertain the extent to which state-owned enterprises and joint ventures can obtain operational guidance. The information was derived from question A14. The responses are summarised in table 7.8. Table 7.8 suggests that for joint ventures the operational guidance is obtained mainly from foreign partners abroad (mean = 5.10). In contrast, for state-owned enterprises direct operational guidance came from their superior authorities (mean = 4.19). The table also shows that the state-owned enterprise's respondents obtain more help from government departments than their joint venture counterparts. Items a, b and c in table 7.8 have significant differences ($p < 0.05$) in respect of the responses for the two categories of organisations. The table also indicates that universities and institutes have provided more help to state-owned enterprises (mean = 3.39) compared with joint ventures (mean = 3.00). Also accounting companies/external auditors have provided more aid to joint ventures (mean = 4.03) compared with state-owned enterprises (mean = 3.83). Furthermore accounting companies/external auditors play a more important role in helping the use of new management accounting practices in Chinese organisations than universities and institutes. However the differences for items (d) and (e) are not statistically significant ($p > 0.05$).

Table 7.8 Descriptive statistics and p-values relating to the extent to which the items below provide operational guidance on management accounting methods to JV and SOE samples

	N	Mean	Standard Deviation	% rating[a] 1 or 2	% rating[a] 6 or 7	P-value[b]
(a) Government's department						
JV's sample	23	2.65	1.668	52	9	0.023
SOE's sample	106	3.40	1.596	29	9	
(b) Superior authority						
JV's sample	23	3.09	2.130	52	22	0.010
SOE's sample	109	4.19	1.697	15	26	
(c) Foreign partner abroad						
JV's sample	30	5.10	1.213	3	37	0.000
SOE's sample	54	2.57	1.632	50	7	
(d) Universities and institutes						
JV's sample	24	3.00	1.865	46	12	0.099
SOE's sample	87	3.39	1.458	29	7	
(e) Accounting companies/external auditors						
JV's sample	31	4.03	1.581	16	19	0.234
SOE's sample	98	3.83	1.540	22	15	

Notes
[a] The respondents were generally asked to indicate scale of 1 (Not at all) to 7 (To a considerable extent) the extent to which each of the variables applied in their organisation.
[b] P-values are based on the Mann-Whitney test for the ordinal scale and 1-tailed for all items.

The following is a summary of the findings from tables 7.5 – 7.8:

- For joint venture's respondents foreign partners abroad have the most impact on the adoption of management accounting practices. However, the Chinese government also plays a role to an extent in influencing their implementation of management accounting practices (see tables 7.5 and 7.6). These influences relate to environmental factors surrounding joint ventures in China and will be discussed and evaluated later in this chapter.

- For state-owned enterprises their superiors and the government both influence the adoption of management accounting practices on a large scale. This implies that state-owned enterprises have less freedom in choosing management accounting systems and practices compared with joint ventures (see table 7.7).

7.3 Differences in the preference for traditional methods or western practices between joint venture and state-owned enterprise respondents

State-owned enterprises experienced traditional management methods during the long period of the centrally planned economy. They also have become widely experienced in some contemporary management accounting practices after the main western techniques were introduced into China in 1980s (see chapter 4). On the other hand, it is estimated that joint ventures originally copy management accounting practices from their foreign partners abroad (see chapter 5). This section examines whether or not these practices suit the Chinese environment and to what extent? Question A10 was designed to seek the respondents' attitudes relating to traditional methods and western practices of management accounting and evaluate what kind of practices are the most popular in the two types of organisations. Question A11 allowed the respondents to evaluate the extent to which the management accounting methods employed by their organisations suit their context using a 7-point scale (anchored 1 for 'not at all' and 7 for ' to a considerable extent' with a mid-point labeled 'to a small extent'). The findings relating to question A10 are reported in table 7.9 and A11 in table 7.10.

Table 7.9 Descriptive statistics and p-values relating to the popularity of various management accounting methods analysed by JV and SOE samples

	All respondents (N=174) %	State-owned enterprises (N=122) %	Foreign joint ventures (N=35) %	P-value[a]
(a) Traditional management methods from the centrally-planned economy	10.9	12.3	0	N/A[b]
(b) Western management accounting techniques from textbooks	14.5	11.2	13.5	N/A[b]
(c) Techniques integrating traditional methods and western practices	42.5	50.8	22.9	0.015
(d) Techniques based on other company's practices and recommended by the government	25.3	27.9	17.1	0.099
(e) Techniques copied from foreign parent company	26.4	19.7	54.3	0.000

Notes
[a] P-values are 1-tailed for all items based on Chi-Square test
[b] It is not possible to undertake a Chi-Square test because the data failed to meet the minimum cell constraint requirement

It is noted that the respondents were required to tick only one item in question A10 but the percentage in table 7.9 added up to more than 100%. This is due to the fact that some respondents ticked more than one item.

The findings in table 7.9 suggest that in state-owned enterprises, the techniques integrating traditional methods with western practices are the most popular (50.8%), followed by the techniques based on other company's practices and those recommended by the government (27.9%). As predicted, in joint ventures, the techniques copied from foreign partners are the most popular (54.3%). This implies that joint ventures are influenced by western practices but derived via their foreign partners. This is followed by the techniques integrating traditional methods and western practices (22.9%) and the techniques based on other company's practices and recommended by the government (17.1%). It is noted that western techniques of management accounting from textbooks are the most unpopular in both state-owned enterprise and joint venture respondents. The results provide some support for the view that Chinese state-owned organisations have rejected simply copying or imitating western techniques of management accounting and they are positively exploring the development of a Chinese version of management accounting which absorbs western practices of management accounting and modifies the traditional techniques practised by state-owned enterprises in the past. The findings also indicate the positive role that the Chinese government plays in spreading the practices experienced by some leading Chinese companies (in item (d), 27.9% of state-owned enterprise respondents and 17.1% of joint venture respondents have adopted other companies' practices which are recommended by the government.

Table 7.10 indicates that the management accounting methods employed by joint ventures are more suitable for their context than those adopted by state-owned enterprises. The mean in the joint venture's sample is 4.94 compared with a mean in state-owned enterprise's sample of 4.35. The table also shows that there is a statistically significant difference (p value < 0.05) between the two types of samples.

Table 7.10 Descriptive statistics and p-values relating to the extent to which management accounting methods employed by JV and SOE's suit their context

	N	Mean	Standard Deviation	% rating[a] 1 or 2	% rating[a] 6 or 7	P-value[b]
JV's sample	35	4.94	0.802	0	26	0.001
SOE's sample	117	4.35	1.302	5	18	

Notes
[a] The respondents were generally asked to indicate scale of 1 (Not at all) to 7 (To a considerable extent) the extent to which each of the variables applied in their organisation.
[b] P-values are based on the Mann-Whitney test for the ordinal scale and 1-tailed.

7.4 Differences relating to the quality of staff who influence the adoption of management accounting practices between joint venture and state-owned enterprise respondents

The determinant of the quality of staff in applying management accounting practices cannot be ignored and underestimated. High quality accounting personnel suggests that new management accounting practices are easier to implement and that more emphasis will be placed on the adoption of management accounting techniques arising from the leadership of the organisation providing assurance that the implementation of these practices can be operated throughout the organisation. Therefore the survey examined the quality of staff from two aspects. One focused on testing if the leadership of organisations gave more attention to applying management accounting practices and the other concentrated on examining if the accounting personnel in organisations can understand most management accounting practices.

Question A15 was designed to let respondents evaluate the extent that managers pay attention to applying management accounting techniques. A 7-point scale (anchored 1 for 'not at all' and 7 for ' to a considerable extent' with a mid-point labeled 'to a small extent') was used. The responses are summarised in table 7.11.

Table 7.11 Descriptive statistics and p-values relating to the extent to which the managers in JV and SOE samples emphasise the application of management accounting methods

	N	Mean	Standard Deviation	% rating[a] 1 or 2	% rating[a] 6 or 7	P-value[b]
JV's sample	37	4.95	1.177	0	27	0.003
SOE's sample	124	4.17	1.581	14	19	

Notes
[a] The respondents were generally asked to indicate scale of 1 (Not at all) to 7 (To a considerable extent) the extent to which each of the variables applied in their organisation.
[b] P-values are based on the Mann-Whitney test for the ordinal scale and 1-tailed.

The findings reported in table 7.11 suggest that the managers in joint ventures (mean = 4.95) pay more attention to applying management accounting practices than their counterparts in state-owned enterprises (mean = 4.17) the differences being significant at the 1% level (p value < 0.01).

Question A16 was designed to test the extent to which the managers in respondents' organisations have a competitive attitude towards their markets. A 7-point scale (anchored 1 for 'not at all' and 7 for ' to a considerable extent' with a mid-point labeled 'to a small extent') was used. The design of the question was based on the assumption that the more the managers in organisations have a competitive attitude towards their markets the more they will emphasise the adoption of management accounting techniques in their organisations. The findings are reported in table 7.12.

Table 7.12 Descriptive statistics and p-values relating to the extent to which the managers in JV and SOE samples have a sense of competition

	N	Mean	Standard Deviation	% rating[a] 1 or 2	% rating[a] 6 or 7	P-value[b]
JV's sample	37	5.78	0.947	0	62	0.000
SOE's sample	124	4.82	1.509	6	36	

Notes
[a] The respondents were generally asked to indicate scale of 1 (Not at all) to 7 (To a considerable extent) the extent to which each of the variables applied in their organisation.
[b] P-values are based on the Mann-Whitney test for the ordinal scale and 1-tailed.

The findings reported in table 7.12 show that the managers in joint venture's (mean = 5.78) have much stronger sense of competition than their counterparts in state-owned enterprise's (mean = 4.82). The differences are also significant at the 1% level (p value < 0.01).

Question A17 was designed to ascertain the understanding that accounting personnel staff have of various management accounting techniques using the same 7-point scale as questions A15 and A16. The responses are listed in table 7.13.

Table 7.13 Descriptive statistics and p-values relating to the extent to which the accounting personnel in JV and SOE samples understand the items below

	N	Mean	Standard Deviation	% rating[a] 1 or 2	% rating[a] 6 or 7	P-value[b]
(a) Activity-based-costing (ABC)						
JV's sample	26	4.31	1.463	12	15	0.115
SOE's sample	109	3.86	1.777	28	21	
(b) Standard costing/Variance analysis						
JV's sample	30	4.57	1.382	3	27	0.134
SOE's sample	115	4.22	1.616	16	27	
(c) Cost-volume-profit/Break-even analysis						
JV's sample	32	4.69	1.424	6	31	0.440
SOE's sample	110	4.75	1.639	7	35	
(d) Controllable and non-controllable profit						
JV's sample	28	4.29	1.357	7	21	0.112
SOE's sample	113	3.96	1.508	15	28	
(e) Profitability analysis						
JV's sample	24	4.79	1.503	8	42	0.046
SOE's sample	108	4.28	1.534	10	25	
(f) Return on investment (ROI)						
JV's sample	34	4.50	1.108	3	14	0.034
SOE's sample	114	4.04	1.557	18	17	
(g) Responsibility budgeting						
JV's sample	31	4.81	1.250	6	19	0.003
SOE's sample	114	4.00	1.646	19	20	
(h) Relevant and irrelevant costs						
JV's sample	27	4.37	1.149	4	15	0.042
SOE's sample	108	3.92	1.554	17	17	
(i) Investment appraisal discounting techniques						
JV's sample	21	4.05	1.322	5	14	0.002
SOE's sample	107	3.13	1.435	36	8	

Notes
[a] The respondents were generally asked to indicate scale of 1 (Not at all) to 7 (To a considerable extent) the extent to which each of the variables applied in their organisation.
[b] P-values are based on the Mann-Whitney test for the ordinal scale and 1-tailed for all items.

Table 7.13 indicates that generally respondents from both types of organisations claimed to understand each of the listed techniques to at least a small extent (the means are around 3.50 or over). However, apart from cost-volume-profit analysis the accounting personnel in joint ventures generally reported higher scores than their counterparts in state-owned enterprises, except cost-volume-profit. The reason for this arises from the fact that CVP analysis is one of the early management accounting methods used in state-owned enterprises in the middle of 1980's (see chapter 4). The statistical tests in this table also suggest that there are no significant differences statistically with items a, b, c and d (p values > 0.05) but there are statistically significant differences with items e, f, g, h and i (p values < 0.05). Within the 5 items which have statistically significant differences, there are three investment-related items (i.e. profitability analysis, return on investment and investment appraisal discounting techniques). All of the five items also relate to the use of cost information for decision-making. The findings may reflect that joint ventures have adopted more investment-related practices of management accounting than state-owned enterprises and also use to a greater extent cost information for decision-making. For the four items that are not significant one of them (item c) relates to cost-volume-profit analysis discussed earlier and two (items b and d) relate to responsibility accounting which has been traditionally widely used by state-owned enterprises (see chapter 4). Surprisingly there was no significant difference relating to the understanding of activity-based costing (item a). It should also be noted at this point that the findings reported in this table are generally consistent with the equivalent items reported later in table 7.20.

Based on the assumption that the more management accounting techniques are understood by accounting personnel, the more effectively these techniques will be implemented in their organisations, question A18 was used to examine the extent to which management accounting methods are easily implemented in respondents' organisations. The results are reported in table 7.14.

Table 7.14 Descriptive statistics and p-values relating to the extent to which management accounting methods are easily implemented in JV and SOE's

	N	Mean	Standard Deviation	% rating[a] 1 or 2	% rating[a] 6 or 7	P-value[b]
JV's sample	36	4.64	0.990	3	17	0.000
SOE's sample	123	3.60	1.253	20	6	

Notes
[a] The respondents were generally asked to indicate scale of 1 (Not at all) to 7 (To a considerable extent) the extent to which each of the variables applied in their organisation.
[b] P-values are based on the Mann-Whitney test for the ordinal scale and 1-tailed.

Table 7.14 suggests that management accounting practices are much easier to implement in joint ventures (mean = 4.64) than in state-owned enterprises (mean = 3.60). The differences are statistically significant at the 1% level.

7.5 Differences in performance measures and evaluation between joint venture and state-owned enterprise respondents

Owing to the long-term influences of collective culture and bureaucracy in Chinese society, it hypothesises that performance measures and evaluation in state-owned enterprises are more likely to be based on traditional techniques and subjective assessment on a group basis. In contrast, it is considered that joint ventures are more likely to use recently developed techniques and objective approaches to evaluate performance. Thus question A19 was designed to examine the extent to which respondents use various objective management accounting techniques and subjective methods to measure and evaluate their performance. Question A20 was also used to ascertain the respondents' opinions on the extent to which performance measurement and evaluation are carried out objectively in their organisations. Both questions used a 7-point scale (anchored 1 for 'not at all' and 7 for ' to a considerable extent' with a mid-point labeled 'to a small extent'). The results are reported in tables 7.15 and 7.16.

Table 7.15 Descriptive statistics and p-values relating to the extent to which the items below are used to measure and evaluate performances in JV and SOE samples

	N	Mean	Standard Deviation	% rating[a] 1 or 2	% rating[a] 6 or 7	P-value[b]
(a) Budget variance analysis						
JV's sample	21	5.08	1.164	0	35	0.054
SOE's sample	61	4.53	1.656	11	29	
(b) Distinguishing between controllable and non-controllable profit or costs						
JV's sample	20	4.58	1.238	4	19	0.423
SOE's sample	59	4.61	1.443	8	26	
(c) Divisional overall net profit						
JV's sample	16	4.19	2.316	25	31	0.490
SOE's sample	54	4.14	2.223	32	29	
(d) Residual income						
JV's sample	15	4.67	1.799	20	27	0.003
SOE's sample	52	2.96	2.099	47	14	
(e) Return on investment (ROI)						
JV's sample	25	4.96	0.790	0	12	0.042
SOE's sample	59	4.45	1.370	8	16	
(f) Cash flow return on investment						
JV's sample	17	4.76	1.437	0	29	0.003
SOE's sample	55	3.30	1.564	30	4	
(g) Individual judgement from immediate superior						
JV's sample	18	2.89	1.676	39	6	0.160
SOE's sample	56	3.48	2.007	37	22	
(h) Group decision from top management						
JV's sample	21	4.63	1.597	11	33	0.202
SOE's sample	56	5.05	1.450	5	38	

Notes
[a] The respondents were generally asked to indicate scale of 1 (Not at all) to 7 (To a considerable extent) the extent to which each of the variables applied in their organisation.
[b] P-values are based on the Mann-Whitney test for the ordinal scale and 1-tailed for all items.

It should be noted that in tables 7.15 and 7.16 the sample numbers N are much smaller than that in other tables displayed earlier. This resulted from a printing mistake. When the questionnaire was printed in China for distribution, questions A19 and A20 were omitted. This implies that the respondents in tables 7.15 and 7.16 are those only from the mailing responses (see section 6.3).

Items (a) to (f) in tables 7.15 relate to objective methods of performance measurement and evaluation while items (g) and (h) are subjective methods. The findings indicate that for the objective methods of performance measurement and evaluation the mean scores are higher in joint ventures for items (a), (c), (d), (e) and (f). However, item (b) is an exception but distinguishing between controllable and uncontrollable items represents a traditional method of evaluating performance that has been used extensively by Chinese organisations in the past. Moreover, those more refined techniques used (e.g. residual income, return on investment and cash flow return on investment) are used to a significantly greater extent by joint venture's respondents (the p values were < 0.05 for all of these items) whereas the less refined items (a), (b) and (c) were not statistically significant at the 5% level.

On the other hand, the mean scores for the subjective methods of performance measurement and evaluation (i.e. items (g) and (h)) are higher for SOE's. However, the differences are not statistically significant at the 5% level.

The findings relating to question A20 are summarised in table 7.16. The table shows that although the mean in joint venture's sample is slightly higher than that in state-owned enterprises the differences are not statistically significant. The results superficially seem to contradict the findings shown in table 7.15. However there does seem to be some evidence to suggest that in state-owned enterprises, subjective methods of performance measurement and evaluation are considered to be more suitable. This needs a further discussion and analysis.

Table 7.16 Descriptive statistics and p-values relating to the extent to which performance measures and evaluation are carried out objectively in JV and SOE's

	N	Mean	Standard Deviation	% rating[a] 1 or 2	% rating[a] 6 or 7	P-value[b]
JV's sample	21	4.90	0.772	0	21	0.396
SOE's sample	58	4.84	0.945	0	24	

Notes
[a] The respondents were generally asked to indicate scale of 1 (Not at all) to 7 (To a considerable extent) the extent to which each of the variables applied in their organisation.
[b] P-values are based on the Mann-Whitney test for the ordinal scale and 1-tailed.

In order to provide further evidence relating to the findings in tables 7.15 and 7.16, Table 7.17 lists 11 objective and subjective methods extracted from a sub-group titled

'Performance evaluation & reward' derived from the responses to questions B15 to B25 in section B of the questionnaire. Items (a) to (i) are assumed to represent objective methods of performance evaluation and rewards while items (j) and (k) relate to subjective methods.

Table 7.17 provides a comparison of the adoption, past benefits and future emphasis between joint venture's and state-owned enterprise's samples for the various objective and subjective performance evaluation and rewards methods. An explanation of how the adoption rate was derived is provided in the next section. The discussion at this stage will only relate to past benefits and future emphasis.

The findings in table 7.17 show that the mean scores of past benefits for objective methods of performance evaluation and reward used in joint venture's sample (i.e. items from (a) to (i)) are generally higher than those in state-owned enterprise's sample. In contrast, the mean scores for past benefits for subjective methods of performance evaluation and reward used in joint venture's sample (i.e. items (j) to (k)) are lower than that in state-owned enterprise's sample. These results are consistent with the findings in table 7.15. There are also another two interesting findings. Firstly, both mean scores and ranks of subjective methods, i.e. items (j) and (k) in state-owned enterprises, either for past benefit or for future emphasis, are higher than that in joint ventures. This supports the argument in table 7.16 that subjective methods of performance measurement and evaluation are considered to be more suitable by state-owned enterprises. Secondly, for most of the objective methods (6 out of 9) the mean scores or ranks for future emphasis is higher in the state-owned enterprise's sample. This suggests that state-owned enterprises expect to adopt more objective methods of performance measurement and evaluation in the future.

Table 7.17 Comparison of the items which were used as performance evaluation & reward methods in JV and SOE samples

		Adoption		Past benefit		Future emphasis	
		Rate(%)	Rank	Mean	Rank	Mean	Rank
Objective methods	*(a) QB17*						
	JV's sample	83	5	4.48	27	4.82	28
	SOE's sample	70	12	4.35	20	4.95	22
	(b) QB18						
	JV's sample	57	14	4.65	24	4.90	25
	SOE's sample	59	19	4.33	21	4.77	30
	(c) QB19						
	JV's sample	49	16	4.41	31	5.00	21
	SOE's sample	59	19	4.57	14	5.27	9
	(j) QB20						
	JV's sample	77	7	4.41	30	4.65	32
	SOE's sample	68	13	4.24	23	4.79	28
	(k) QB21						
	JV's sample	97	1	4.68	19	4.79	30
	SOE's sample	76	8	4.32	22	4.65	33
	(l) QB22						
	JV's sample	83	5	5.14	5	5.29	11
	SOE's sample	73	10	4.43	15	5.19	13
	(m) QB23						
	JV's sample	83	5	4.69	17	4.93	23
	SOE's sample	68	13	4.40	17	5.31	8
	(n) QB24						
	JV's sample	43	18	4.13	35	4.50	35
	SOE's sample	52	24	3.83	35	4.72	32
	(o) QB25						
	JV's sample	43	18	4.08	36	4.62	33
	SOE's sample	50	25	4.12	36	5.11	16
Subjective methods	*(p) QB15*						
	JV's sample	54	15	3.16	39	4.52	34
	SOE's sample	66	15	3.65	37	5.05	20
	(q) QB16						
	JV's sample	86	4	4.67	23	3.21	39
	SOE's sample	77	7	4.68	11	4.36	38

7.6 Comparison of relative adoption of various management accounting practices between joint venture and state-owned enterprise respondents

To fulfil the research objectives listed in chapter 1 and repeated in chapter 6, section B in the questionnaire (see appendix 1) was designed to collect relevant information relating to the extent to which respondents have obtained benefits from the listed management accounting practices over last 5 years (see left-hand side) and also the extent to which respondents will emphasise these practices in the future over next 3 years (see right-hand side). A 7-point scale was used (anchored 1 for 'no benefit/no emphasis' and 7 for ' very high benefit/very high emphasis' with a mid-point 4 labeled 'medium benefit/medium emphasis'). The section included 40-itemised management accounting practices. The design of this section was mainly modeled on the survey developed by Chenhall and Langfield-Smith (1998) in Australia. Given that Chinese organisations have experienced western practices of management accounting over a period of 20 years, it is appropriate to investigate the adoption, benefits and future emphasis of these practices.

Section B of the questionnaire was in turn divided into sub-groups: product cost systems, budgeting systems, performance evaluation and reward, planning and decision support systems and responsibility accounting. Such a structure was designed to be based on the following thinking:

- Product costing systems are traditional practices used in Chinese organisations, especially in state-owned enterprises (see chapter 4). To examine their current adoption by respondents, this group includes two traditional practices (full/absorption costing and variable costing) and two recently developed practices (activity-based costing and target costing).

- Budgeting systems -- As with other countries, budgeting techniques in China are the most important financial performance measures in business management. Managers prefer to compare annual budgets with actual sales, income and profit. In this survey, detailed budgeting items, like cash/working capital budgeting, sales budgeting, profit budgeting, production budgeting, budgeting system for profitability analysis are added to evaluate the position of budgetary practices in Chinese enterprises.

- Performance evaluation and rewards -- Performance measures play a crucial role in translating business strategy into results (Lingle and Schiemann 1996). In today's fierce competition, multi-dimensional approaches of performance measures including financial and non-financial measures have been increasingly adopted by many organizations (Hoque *et al.* 2001). Besides the traditional financial measures two non-financial measures (individual judgement from immediate superior and group decision from top management) were added. Some of the recently developed measures, such as balanced scorecard, ongoing supplier evaluation, that were incorporated within the Chenhall and Langfield-Smith study were not incorporated in this study since they represent techniques that were considered that would be rarely applied in Chinese organisations.

- Planning, control and decision support systems -- Planning (especially long-term planning), forecasting and decision-making are the most important key factors for organisations operating in today's intensive global competition and rapidly changing competitive environment. The management accounting techniques in relation to the above include many traditional practices (such as CVP analysis, product profitability analysis, relevant and irrelevant cost analysis, standard costing and variance analysis, sensitivity analysis, capital appraisal techniques, and long rang forecasting). Also included are some recently developed and strategically focused techniques (e.g. ABM, strategic planning, etc.). These were added to examine their relative adoption in Chinese organisations.

- Responsibility accounting -- Responsibility accounting is considered to be the most successful management accounting practice in the Chinese accounting literature (Qiao 1997; Feng and Huang 2002). Within this group, three commonly used techniques are included. They are responsibility budgeting, responsibility centre accounting and responsibility reporting distinguishing between controllable and non-controllable items.

The findings from section B of the questionnaire are discussed in this and the following two sections (sections 7.7 and 7.8). The current section compares the usage rates of the listed management accounting practices in joint venture's and state-owned enterprise's respondents. Section 7.7 will focus on a comparison of the relative benefits received from these practices by the two types of organisations in the past and section 7.8 will focus on the intentions to emphasise these practices in the future. Section B of the questionnaire was adapted from an Australian study undertaken by Chenhall and Langfield-Smith (1998). It therefore provides the potential to compare the findings from the current research with the Australian study.

The questionnaire did not enable the respondents to indicate whether or not their business had adopted the listed practices. However, in order to derive a percentage usage rate it was assumed that all of those entering a score in excess of 1 in terms of benefits received in section B actually used the listed practice. A problem arises in respect of those respondents who indicated that no benefit at all was received from a particular practice (i.e. a score of 1).[1] One interpretation is that the organisation has used a particular management accounting practice but found it not to be beneficial. An alternative interpretation is that the organisation has not adopted the management accounting practice and thus receives no benefit. The latter alternative was adopted in determining the number of respondents not using a particular practice. The results are shown in table 7.18.

[1] An average of three respondents (1.7%) assigned a score of 1 for no past benefits for each practice.

Table 7.18 Comparison of relative adoption of management accounting practices in JV and SOE samples

Management accounting practices	JVs		SOEs	
	Rank	% usage	Rank	% usage
Performance evaluation & reward: Based on employee attitudes	1	97%	8	76%
Budgeting for controlling costs	2	94%	3	84%
Budgeting for planning financial position	2	94%	2	86%
Cash/working capital budgeting	3	91%	7	77%
Sales budgeting	3	91%	4	83%
Profit budgeting	3	91%	1	91%
Budgeting for day-to-day operations	3	91%	5	81%
Production budgeting	4	86%	6	80%
Performance evaluation & reward: group decision from top management	4	86%	7	77%
Cost-volume-profit/break-even analysis	4	86%	13	68%
Performance evaluation & reward: budget variance analysis	5	83%	12	70%
Performance evaluation & reward: customer satisfaction surveys	5	83%	10	73%
Performance evaluation & reward: return on investment (ROI)	5	83%	13	68%
Activity based management (ABM)	6	80%	14	67%
Performance evaluation & reward: team performance	7	77%	13	68%
Responsibility budgeting	8	74%	19	59%
Investment appraisal non-discounting techniques (e.g. Payback, ROI)	9	71%	21	56%
Responsibility reporting distinguishing between controllable and non-controllable items	9	71%	20	57%
Target costing	10	69%	9	75%

Table 7.18 Comparison of relative adoption of management accounting practices in JV and SOE samples (continued)

Management accounting practices	JVs		SOEs	
	Rank	% usage	Rank	% usage
Relevant and irrelevant cost analysis	10	69%	22	54%
Responsibility centre accounting	11	66%	17	64%
Budgeting for co-ordinating activities across the business units	12	63%	11	72%
Standard costing and variance analysis	12	63%	16	65%
Strategic planning	13	60%	17	64%
Performance evaluation & reward: controllable profit	14	57%	19	59%
Budgeting for profitability analysis	15	54%	11	72%
Performance evaluation & reward: individual judgement from immediate superior	15	54%	15	66%
Investment appraisal discounting techniques (e.g. NPV, IRR)	15	54%	22	54%
Variable costing	16	49%	18	63%
Activity-based costing (ABC)	16	49%	24	52%
Product/service profitability analysis	16	49%	19	59%
Performance evaluation & reward: divisional profit	16	49%	19	59%
Product life-cycle analysis	17	46%	25	50%
Sensitivity analysis	17	46%	26	48%
Planning and control: personal business experience and intuitive managerial judgement	17	46%	19	59%
Full (absorption) costing	18	43%	14	67%
Performance evaluation & reward: residual income	18	43%	24	52%
Long range forecasting	18	43%	23	53%
Performance evaluation & reward: cash flow return on investment	19	37%	25	50%

The significant findings from table 7.18 are as follows:

- The percentage usage for joint ventures exceeded the usage in state-owned enterprises by more than 10% in respect of the following items:
    - Performance evaluation and rewards based on employee attitudes
    - Cash/working capital budgeting
    - Cost-volume-profit/break-even analysis
    - Performance evaluation & reward: return on investment
    - Activity based management
    - Responsibility budgeting
    - Investment appraisal non-discounting techniques
    - Responsibility reporting distinguishing between controllable and non-controllable items
    - Relevant and irrelevant cost analysis
- The percentage usage for state-owned enterprises exceeded the usage in joint ventures by more than 10% in respect of the following items:
    - Budgeting for profitability analysis
    - Performance evaluation & reward: individual judgement from immediate superior
    - Variable costing
    - Planning and control: personal business experience and intuitive managerial judgement
    - Full (absorption) costing

- Performance evaluation & reward: cash flow return on investment

- Performance evaluation and rewards based on employee attitudes attracted the highest percentage usage in joint ventures whereas profit budgeting had the highest percentage usage in state-owned enterprises.

- It was anticipated that all practices relating to responsibility accounting would have a higher ranking and usage rate in state-owned enterprises than in joint ventures because it is generally acknowledged that responsibility accounting is one of successful management accounting practices which has been promoted in state-owned enterprises by Chinese government. The results in table 7.18 are the opposite of this expectation. All three items in relation to responsibility accounting in the joint venture sample are higher than that in the state-owned enterprise sample. The detailed comparisons are:

  - responsibility budgeting (ranked 8 with a 74% adoption rate in joint ventures but ranked 19 with a 59% adoption rate in state-owned enterprises);

  - responsibility reporting distinguishing between controllable and non-controllable items (ranked 9 with an adoption rate of 71% in joint ventures compared with a ranking of 20 and an adoption rate of 57% in state-owned enterprises);

  - responsibility centre accounting (ranked 11 with an adoption rate of 66% in joint ventures compared with a ranking of 17 and an adoption rate of 64% in state-owned enterprises).

- Some of the subjective methods of management accounting appear to be of less widely adopted. For example, the relative usage rates were:

- performance evaluation & reward: individual judgement from immediate superior (54% adoption rate in the joint venture sample and 66% in the state-owned enterprise sample);

- planning and control: personnel business experience and intuitive managerial judgement (46% adoption rate in the joint venture sample and 59% in the state-owned enterprise sample).

In section B of the questionnaire, 23 items (over 50% of total items) were chosen from the survey undertaken in Australia by Chenhall and Langfield-Smith (1998). Table 7.19 compares the percentage usage rates for the current Chinese study with those reported by the Australian study. The significant findings from the table are as follows:

- Apart from target costing all of the practices have a higher percentage usage in the Australian study compared with state-owned organisations;

- The items marked with two asterisks in the parenthesis following a listed practice indicate that the percentage usage in the Australian study exceeds the usage in joint ventures by more than 10%. Alternatively, those items with a single asterisk have a percentage usage of more than 10% in joint ventures compared with the Australian organisations.

- For the strategically focused and market oriented techniques, such as strategic planning, long range forecasting, product lift cycle analysis and product/service profitability analysis, the usage rates in Australia are much higher than those in China, (either in joint ventures or in state-owned enterprises).

- Within the performance evaluation and reward practices all financial measures items (such as budget variance analysis, return on investment, cash flow return on investment, team performance, controllable profit, division profit and residual income) have higher usage rates in Australia than China (either in joint ventures or in state-owned enterprises).

- Concerning product costing methods, the usage rates for variable costing, full (absorption) costing and activity-based costing in Australia are all higher than that in joint ventures and state-owned enterprises in China. However, the usage rate for target costing in China, either in joint ventures or in state-owned enterprises, is much higher than that in Australia. The reason is that target costing is one of promoted management accounting practices by Chinese government (see chapter 4), although the interpretation of target costing in China may be different from that in the West (this will be addressed again in the conclusion chapter).

Table 7.19 Comparison of relative adoption of management accounting practices between China and Australia

Management accounting practices	JVs		SOEs		Australian study	
	Rank	% usage	Rank	% usage	Rank	% usage
Performance evaluation & reward: employee attitudes	1	97%	8	76%	11	88%
Budgeting for controlling costs	2	94%	3	84%	2	99%
Budgeting for planning financial position	2	94%	2	86%	1	100%
Budgeting for day-to-day operations	3	91%	5	81%	2	99%
Cost-volume-profit/break-even analysis	4	86%	13	68%	14	86%
Performance evaluation & reward: budget variance analysis (**)	5	83%	12	70%	4	95%
Performance evaluation & reward: customer satisfaction surveys	5	83%	10	73%	11	88%
Performance evaluation & reward: return on investment (**)	5	83%	13	68%	3	96%
Activity based management (*)	6	80%	14	67%	21	68%
Performance evaluation & reward: team performance	7	77%	13	68%	12	87%
Target costing (*)	10	69%	9	75%	27	38%
Budgeting for co-ordinating activities across the business units (**)	12	63%	11	72%	5	94%
Strategic planning (**)	13	60%	17	64%	8	91%
Performance evaluation & reward: controllable profit (**)	14	57%	19	59%	10	89%
Variable costing (**)	16	49%	18	63%	19	76%
Activity-based costing (ABC)	16	49%	24	52%	24	56%
Product/service profitability analysis (**)	16	49%	19	59%	10	89%
Performance evaluation & reward: divisional profit (**)	16	49%	19	59%	9	90%
Product life-cycle analysis (**)	17	46%	25	50%	20	70%
Full (absorption) costing (**)	18	43%	14	67%	16	80%
Performance evaluation & reward: residual income (**)	18	43%	24	52%	23	60%
Long range forecasting (**)	18	43%	23	53%	9	90%
Performance evaluation & reward: cash flow return on investment (**)	19	37%	25	50%	15	84%

7.7 Comparison of relative benefit of management accounting practices between joint venture and state-owned enterprise respondents

Table 7.20 lists the items of management accounting in order of the average benefits based on the value of mean scores derived from using each practice in the past 5 years in joint venture and state-owned enterprise respondents. Standard deviations are given to show the diversity of responses. As explained earlier, the information has been extracted from the left-hand side of section B of the questionnaire.

Table 7.20 Management accounting practices: past benefits in JV and SOE samples

Management accounting practices	JV's Relative benefits (past 5 years)			SOE's Relative benefits (past 5 years)			p-values[2]
	Mean	SD	Rank	Mean	SD	Rank	
Production budgeting	5.43[1]	(0.90)	1	4.83	(1.28)	6	0.006[3]***
Budgeting for co-ordinating activities across the business units	5.23	(1.15)	2	4.80	(1.44)	8	0.146
Responsibility centre accounting	5.17	(1.23)	3	4.03	(1.44)	28	0.001***
Budgeting for profitability analysis	5.16	(1.26)	4	4.91	(1.52)	5	0.390
Performance evaluation & reward: customer satisfaction surveys	5.14	(1.03)	5	4.43	(1.51)	15	0.047**
Sales budgeting	5.13	(0.98)	6	4.94	(1.26)	3	0.235
Product life-cycle analysis	5.13	(1.41)	7	3.59	(1.80)	39	0.002***
Budgeting for controlling costs	5.12	(1.08)	8	5.22	(1.32)	1	0.344
Cash/working capital budgeting	5.03	(1.18)	9	4.61	(1.46)	12	0.072*
Long range forecasting	4.93	(1.28)	10	3.96	(1.49)	32	0.014**
Budgeting for planning financial position	4.91	(1.04)	11	4.76	(1.44)	9	0.252
Profits budgeting	4.91	(1.15)	12	4.95	(1.24)	2	0.361
Target costing	4.88	(1.15)	13	4.91	(1.46)	4	0.438
Activity based management (ABM)	4.82	(1.33)	14	4.38	(1.56)	18	0.110
Cost-volume-profit/break-even analysis	4.77	(1.19)	15	4.59	(1.61)	13	0.338
Budgeting for day-to day operations	4.75	(1.05)	16	4.80	(1.30)	7	0.369
Performance evaluation & reward: return on investment (ROI)	4.69	(1.00)	17	4.40	(1.60)	17	0.202
Responsibility budgeting	4.69	(1.32)	18	4.08	(1.52)	27	0.052*
Performance evaluation & reward: employee attitudes	4.68	(1.22)	19	4.32	(1.35)	22	0.146
Investment appraisal non-discounting techniques (e.g. Payback, ROI)	4.68	(1.28)	20	4.02	(1.34)	30	0.019**
Standard costing and variance analysis	4.68	(1.32)	21	4.21	(1.46)	24	0.111
Investment appraisal discounting techniques (e.g. NPV, IRR)	4.68	(1.38)	22	3.80	(1.71)	36	0.024**
Performance evaluation & reward: group decision from top management	4.67	(1.27)	23	4.68	(1.41)	11	0.404
Performance evaluation & reward: controllable profit	4.65	(1.27)	24	4.33	(1.61)	21	0.223

1 It should be noted that a 7-point scale is used to collect data in the survey. Scored 1 indicates no benefits and scored 7 specifies very high benefits. Scored 4 is the middle point, which means medium benefits.
2 P-values are 1-tailed for all items based on Mann-Whitney test.
3 *** Significant at the 1% level; ** Significant at the 5% level; * Significant at the 10% level.

Table 7.20 Management accounting practices: past benefits in JV and SOE samples (continued)

Management accounting practices	JV's Relative benefits (past 5 years)			SOE's Relative benefits (past 5 years)			p-values
	Mean	SD	Rank	Mean	SD	Rank	
Responsibility reporting distinguishing between controllable and non- controllable items	4.60	(1.26)	25	4.03	(1.53)	29	0.053*
Product/service profitability analysis	4.53	(1.42)	26	4.36	(1.59)	19	0.371
Performance evaluation & reward: budget variance analysis	4.48	(1.35)	27	4.35	(1.49)	20	0.431
Strategic planning	4.48	(1.50)	28	4.20	(1.78)	25	0.145
Relevant and irrelevant cost analysis	4.46	(1.35)	29	3.84	(1.50)	33	0.040**
Performance evaluation & reward: team performance	4.41	(1.37)	30	4.24	(1.42)	23	0.318
Performance evaluation & reward: divisional profit	4.41	(1.70)	31	4.57	(1.63)	14	0.270
Full (absorption) costing	4.33	(0.98)	32	4.68	(1.34)	10	0.135
Sensitivity analysis	4.25	(1.48)	33	3.83	(1.72)	34	0.229
Variable costing	4.18	(1.63)	34	4.40	(1.52)	16	0.271
Performance evaluation & reward: residual income	4.13	(1.25)	35	3.83	(1.78)	35	0.333
Performance evaluation & reward: cash flow return on investment	4.08	(1.19)	36	4.12	(1.78)	26	0.433
Activity-based costing (ABC)	4.00	(1.22)	37	4.00	(1.81)	31	0.452
Planning and control: personal business experience and intuitive managerial judgement	3.50	(0.97)	38	3.62	(1.27)	38	0.364
Performance evaluation & reward: individual judgement from immediate superior	3.16	(1.64)	39	3.65	(1.31)	37	0.142

The findings reported in table 7.20 show that the following identified differences exist between joint venture and state-owned enterprises samples:

- Nine items (most of the items relating to budgeting) within the joint ventures sample attracted a benefits score in excess of 5 whereas only one item (budgeting for controlling costs) for state-owned enterprises attracted a score in excess of 5.

- The average benefits of most items in the joint venture sample are generally higher than those in the state-owned enterprise sample.

- Responsibility accounting is more popular in the joint venture sample than in the state-owned enterprise sample. All three items in the joint venture sample in relation to responsibility accounting have higher benefit scores, either in terms of their means or rankings. These results differ from those that were expected.

- Most of the recently developed strategically focused and market oriented practices (such as customer satisfaction surveys, product-cycle analysis, long range forecasting, product/service profitability analysis, activity-based management, strategic planning and sensitivity analysis) have higher benefits in the joint venture sample. However, activity-based costing is an exception.

- Investment appraisal methods, whether discounting or non-discounting methods, have higher benefits in the joint venture sample compared with state-owned enterprises.

- Within performance evaluation and rewards subgroup the two non-financial measures (i.e. customer satisfaction surveys and employee attitudes) have higher benefits in the joint venture sample. In contrast all of those financial measures which are based on a group basis (i.e. group decision from top management, divisional profit and individual judgement from immediate superior) have higher benefits in state-owned enterprise sample than that in joint venture sample. Also most of the remaining financial measures (i.e. return on investment, controllable profit, budget variance analysis and residual income) have higher benefits in joint venture sample.

- Within the planning and control group the subjective measure (personnel business experience and intuitive managerial judgement) has higher benefits in state-owned enterprise sample. In contrast the objective measures (i.e. standard costing and variance analysis, strategic planning, investment appraisal techniques and long range forecasting) have higher benefits in the joint venture sample.

- Within product cost systems (full costing, variable costing and target costing) the state-owned organisations have higher means.

To clarify the presentation those practices in table 7.20 that have statistically significant differences in terms of the reported relative past benefits for joint ventures and state-owned enterprises (p values < 0.05) are listed separately in table 7.21.

Table 7.21 Descriptive statistics relating to the management accounting practices that have statistically significant differences (p<0.05) for past benefits between JV and SOE's

	N	Mean	Standard Deviation	% rating[a] 1 or 2	% rating[a] 6 or 7	Rank	P-value[b]
(a) Production budgeting							
JV's sample	31	5.43	0.90	12	15	1	0.006
SOE's sample	82	4.83	1.28	28	21	6	
(b) Performance evaluation & reward: customer satisfaction surveys							
JV's sample	30	5.14	1.03	0	37	5	0.047
SOE's sample	75	4.43	1.51	12	25	15	
(C) *Product life-cycle analysis*							
JV's sample	16	5.13	1.41	0	44	7	0.002
SOE's sample	49	3.59	1.80	35	25	39	
(d) Relevant and irrelevant cost analysis							
JV's sample	25	4.46	1.35	4	21	29	0.040
SOE's sample	56	3.84	1.50	22	18	33	
(e) Investment appraisal discounting techniques (e.g. NPV, IRR)							
JV's sample	19	4.68	1.38	5	26	22	0.024
SOE's sample	56	3.80	1.71	25	16	36	
(f) Investment appraisal non-discounting techniques (e.g. Payback, ROI)							
JV's sample	26	4.68	1.28	4	19	20	0.019
SOE's sample	58	4.02	1.34	16	10	30	
(g) Long range forecasting							
JV's sample	15	4.93	1.28	0	27	10	0.014
SOE's sample	55	3.96	1.49	20	15	32	
(h) Responsibility centre accounting							
JV's sample	24	5.17	1.23	0	33	3	0.001
SOE's sample	66	4.03	1.44	15	12	28	

Notes
[a] The respondents were generally asked to indicate scale of 1 (Not at all) to 7 (To a considerable extent) the extent to which each of the variables applied in their organisation.
[b] P-values are based on the Mann-Whitney test for the ordinal scale and 1-tailed for all items.

From table 7.21 the following comments can be made:

- All of the items, either in terms of means or rankings, have higher benefits in joint venture sample than that in state-owned enterprise respondents. This suggests that joint ventures located in China have played an important role in the diffusion of western practices of management accounting.

- These practices are mainly customer-focused, market-oriented and have a long-term perspective.

As mentioned earlier there are 23 equivalent items of management accounting practices in the Australian study (Chenhall and Langfield-Smith 1998). Table 7.22 presents a comparison of these practices between China and Australia relating to the benefits received during the past 5 years.

Table 7.22 Comparison of management accounting practices: past benefits in China and Australia

Management accounting practices	JV's Relative benefits (past 5 years)		SOE's Relative benefits (past 5 years)		Australian Relative benefits (past 3 years)	
	Mean	Rank	Mean	Rank	Mean	Rank
Budgeting for co-ordinating activities across the business units	5.23	2	4.80	8	4.31	16
Performance evaluation & reward: customer satisfaction surveys	5.14	5	4.43	15	4.40	12
Product life-cycle analysis	5.13	7	3.59	39	3.16	41
Budgeting for controlling costs	5.12	8	5.22	1	5.26	1
Long range forecasting	4.93	10	3.96	32	4.04	26
Budgeting for planning financial position	4.91	11	4.76	9	4.83	7
Target costing	4.88	13	4.91	4	3.85	30
Activity based management (ABM)	4.82	14	4.38	18	3.02	42
Cost-volume-profit/break-even analysis	4.77	15	4.59	13	3.79	31
Budgeting for day-to day operations	4.75	16	4.80	7	4.21	19
Performance evaluation & reward: return on investment (ROI)	4.69	17	4.40	17	5.18	2
Performance evaluation & reward: employee attitudes	4.68	19	4.32	22	3.65	34
Performance evaluation & reward: controllable profit	4.65	24	4.33	21	4.75	8
Product/service profitability analysis	4.53	26	4.36	19	4.32	15
Performance evaluation & reward: budget variance analysis	4.48	27	4.35	20	5.11	3
Strategic planning	4.48	28	4.20	25	4.55	10
Performance evaluation & reward: team performance	4.41	30	4.24	23	3.99	28
Performance evaluation & reward: divisional profit	4.41	31	4.57	14	5.06	4
Full (absorption) costing	4.33	32	4.68	10	4.69	9
Variable costing	4.18	34	4.40	16	4.18	21
Performance evaluation & reward: residual income	4.13	35	3.83	35	4.21	20
Performance evaluation & reward: cash flow return on investment	4.08	36	4.12	26	4.31	17
Activity-based costing (ABC)	4.00	37	4.00	31	3.23	38

The following are the important observations that emerge from examining table 7.22:

- Budget-related items, whether in China or Australia, have relatively higher benefits.

- Financial measures of performance evaluation and rewards (such as return on investment, controllable profit, budget variance analysis, divisional profit, residual income and cash flow return on investment) have much higher benefits in Australia than that in China, either in the joint ventures or the state-owned enterprises. Only team performance is an exception. However non-financial measures, customer satisfaction surveys and employee attitudes, have lower benefits in Australia than that in China. This may have arisen because of the time differences taken by the two surveys because there has been a growth in the importance of non-financial measures in recent years.

- Within product costing systems, for full (absorption) costing and variable costing there are no significant differences between the two countries. However activity-based costing and target costing have lower benefits in Australia than that in China. This may be influenced by time and environmental factors. For example, activity-based costing only emerged in the early 1990's and the Australian study was undertaken several years prior to the Chinese study. The higher reported benefits for target costing in China may be attributed the reason that it is one of the practices promoted by the Chinese government.

7.8 Comparison of relative future emphasis of management accounting practices in joint venture and state-owned enterprise respondents

Table 7.23 shows the future emphasis on each management accounting practice over the next 3 years in joint venture and state-owned enterprise samples. The information has been extracted from section B (right-hand side) of the questionnaire.

Table 7.23 Management accounting practices: future emphasis in JV and SOE samples

Management accounting practices	JV's Relative future emphasis (next 3 years) Mean	SD	Rank	SOE's Relative future emphasis (next 3 years) Mean	SD	Rank	p-values[2]
Production budgeting	5.74[1]	(0.96)	1	5.39	(1.29)	5	0.144
Strategic planning	5.71	(1.06)	2	5.32	(1.41)	7	0.220
Budgeting for controlling costs	5.61	(1.12)	3	5.56	(1.30)	3	0.466
Product life-cycle analysis	5.60	(1.45)	4	4.46	(1.81)	37	0.025**[3]
Budgeting for profitability analysis	5.56	(1.20)	5	5.26	(5.51)	10	0.315
Responsibility centre accounting	5.52	(1.16)	6	4.84	(1.33)	25	0.026**
Cash/working capital budgeting	5.50	(1.14)	7	5.25	(1.39)	11	0.249
Long range forecasting	5.50	(1.41)	8	4.96	(1.28)	21	0.093*
Sales budgeting	5.33	(1.11)	9	5.64	(1.25)	1	0.075*
Target costing	5.33	(1.31)	10	5.42	(1.33)	4	0.215
Performance evaluation & reward: customer satisfaction surveys	5.29	(1.30)	11	5.19	(1.44)	13	0.359
Standard costing and variance analysis	5.27	(1.35)	12	4.79	(1.49)	29	0.112
Budgeting for co-ordinating activities across the business units	5.23	(1.27)	13	5.18	(1.42)	14	0.397
Profits budgeting	5.19	(1.28)	14	5.64	(1.25)	2	0.030**
Product/service profitability analysis	5.19	(1.52)	15	5.06	(1.60)	19	0.466
Responsibility reporting distinguishing between controllable and non- controllable items	5.13	(1.45)	16	4.90	(1.29)	24	0.293
Responsibility budgeting	5.12	(1.34)	17	5.08	(1.46)	17	0.462
Budgeting for planning financial position	5.09	(1.23)	18	5.37	(1.26)	6	0.105
Activity based management (ABM)	5.07	(1.33)	19	4.84	(1.39)	26	0.343
Variable costing	5.00	(1.37)	20	4.93	(1.43)	23	0.422
Performance evaluation & reward: divisional profit	5.00	(1.67)	21	5.27	(1.29)	9	0.253
Sensitivity analysis	5.00	(1.77)	22	4.83	(1.45)	27	0.490
Performance evaluation & reward: return on investment (ROI)	4.93	(0.98)	23	5.31	(1.46)	8	0.037**
Budgeting for day-to-day operations	4.93	(1.22)	24	5.17	(1.24)	15	0.121
Performance evaluation & reward: controllable profit	4.90	(1.02)	25	4.77	(1.43)	30	0.310
Relevant and irrelevant cost analysis	4.88	(1.23)	26	4.62	(1.21)	34	0.255

[1] It should be noted that a 7-point scale is used to collect data in the survey. Scored 1 indicates no emphasis and scored 7 specifies very high emphasis. Scored 4 is the middle point, which means medium emphasis.
[2] P-values are 1-tailed for all items based on Mann-Whitney test.
[3] *** Significant at the 1% level; ** Significant at the 5% level; * Significant at the 10% level.

Table 7.23 Management accounting practices: future emphasis in JV and SOE samples (continued)

Management accounting practices	JV's Relative future emphasis (next 3 years)			SOE's Relative future emphasis (next 3 years)			p-values
	Mean	SD	Rank	Mean	SD	Rank	
Cost-volume-profit/break-even analysis	4.83	(1.39)	27	5.08	(1.48)	18	0.146
Performance evaluation & reward: budget variance analysis	4.82	(1.31)	28	4.95	(1.31)	22	0.328
Investment appraisal non-discounting techniques (e.g. Payback, ROI)	4.80	(1.26)	29	4.57	(1.20)	35	0.188
Performance evaluation & reward: employee attitudes	4.79	(1.39)	30	4.65	(1.18)	33	0.273
Investment appraisal discounting techniques (e.g. NPV, IRR)	4.78	(1.56)	31	4.77	(1.53)	31	0.483
Performance evaluation & reward: team performance	4.65	(1.32)	32	4.79	(1.24)	28	0.418
Performance evaluation & reward: cash flow return on investment	4.62	(1.26)	33	5.11	(1.59)	16	0.090*
Performance evaluation & reward: group decision from top management	4.52	(1.53)	34	5.05	(1.44)	20	0.051*
Performance evaluation & reward: residual income	4.50	(1.16)	35	4.72	(1.70)	32	0.191
Activity-based costing (ABC)	4.47	(1.59)	36	4.57	(1.66)	36	0.330
Full (absorption) costing	3.87	(1.77)	37	5.24	(1.39)	12	0.002***
Planning and control: personal business experience and intuitive managerial judgement	3.60	(1.24)	38	4.03	(1.38)	39	0.110
Performance evaluation & reward: individual judgement from immediate superior	3.21	(1.96)	39	4.36	(1.69)	38	0.009***

The findings reported in table 7.23 can be summarised as follows:

- The means for 22 out of 39 of the sample in the joint venture sample are higher than those in state-owned enterprises

- The items which have relatively higher future emphasis in joint venture respondents mainly include:

  - Strategically-focused, market-oriented, product-developed and profitability-related practices, such as strategic planning, product life-cycle analysis, long range forecasting, standard costing and variance analysis, product/service profitability analysis, sensitivity analysis, relevant and irrelevant cost analysis.

- Non-financial measures of performance evaluation & rewards, i.e. customer satisfaction surveys and employee attitudes.

- Investment appraisal techniques, either discounting or non-discounting.

- All responsibility accounting related practices, i.e. responsibility centre accounting, responsibility reporting distinguishing between controllable and non-controllable items and responsibility budgeting.

• The items which have relatively higher future emphasis in state-owned enterprises include:

  - Long-standing detailed budgeting related methods such as sales budgeting, profit budgeting, budgeting for planning financial position, budgeting for day-to-day operations.

  - Target costing.

  - Group based methods of performance evaluation and rewards, such as divisional profit, team performance and group decision from top management.

  - Subject methods, such as business experience and intuitive managerial judgement and individual judgement from immediate superior.

  - Full costing and activity-based costing.

Table 7.24 lists those items that have significant differences (p values < 0.05) based on a comparison of the responses from joint ventures and state-owned enterprises.

Table 7.24 Descriptive statistics relating to the management accounting methods which have significant differences ($p<0.05$) for future emphasis between JV and SOE's

	N	Mean	Standard Deviation	% rating[a] 1 or 2	% rating[a] 6 or 7	Rank	P-value[b]
(a) Full (absorption) costing							
JV's sample	16	3.87	1.77	19	19	37	0.002
SOE's sample	67	5.24	1.39	5	48	12	
(b) Profits budgeting							
JV's sample	33	5.19	1.28	3	15	14	0.030
SOE's sample	95	5.64	1.25	1	53	2	
(C) *Performance evaluation & reward: individual judgement from immediate superior*							
JV's sample	19	3.21	1.96	32	16	39	0.009
SOE's sample	70	4.36	1.69	15	26	38	
(d) Performance evaluation & reward: return on investment (ROI)							
JV's sample	29	4.93	0.98	0	21	23	0.037
SOE's sample	71	5.31	1.46	6	49	8	
(e) Product life-cycle analysis							
JV's sample	16	5.60	1.45	0	44	4	0.025
SOE's sample	50	4.46	1.81	20	28	37	
(f) Responsibility centre accounting							
JV's sample	24	5.52	1.16	0	42	6	0.026
SOE's sample	68	4.84	1.33	4	27	25	

Notes
[a] The respondents were generally asked to indicate scale of 1 (Not at all) to 7 (To a considerable extent) the extent to which each of the variables applied in their organisation.
[b] P-values are based on the Mann-Whitney test for the ordinal scale and 1-tailed for all items.

Table 7.24 shows that:

- Compared with joint ventures state-owned enterprises intend to place a higher relative emphasis on full costing, profit budgeting, performance evaluation and rewards based on individual judgement from immediate superior and return on investment for performance evaluation.

- Compared with state-owned enterprises joint ventures intend to place a higher relative emphasis on product-life cycle analysis and responsibility accounting.

It is not clear from the current survey why state-owned enterprises have increased in emphasis on full costing. However the emphasis on full costing is consistent with the findings in Europe (e.g. Brierley *et al.* 2001). Also a cost centre-based responsibility accounting system has been in place in most Chinese enterprises for many years because of the full support and encouragement by the government's administrative means in order to increase economic return of state-owned enterprises. However, it is surprising that all of three responsibility accounting related practices (i.e. responsibility centre accounting, distinguishing between controllable and non-controllable items and responsibility budgeting) have greater adoption rates, past benefits and future emphasis in joint ventures than in state-owned enterprises (also see tables 7.18, 7.20 and 7.23). There is a need for further investigation to explain the reason for this finding.

Table 7.25 provides a comparison of the future emphasis on management accounting practices based on a comparison with the current and the Australian survey.

Table 7.25 Comparison of management accounting practices: future emphasis in China and Australia

Management accounting practices	JV's Relative future emphasis (next 3 years)		SOE's Relative future emphasis (next 3 years)		Australian Relative future emphasis (next 3 years)	
	Mean	Rank	Mean	Rank	Mean	Rank
Strategic planning	5.71	2	5.32	7	5.73	2
Budgeting for controlling costs	5.61	3	5.56	3	5.85	1
Product life-cycle analysis	5.60	4	4.46	37	3.67	38
Long range forecasting	5.50	8	4.96	21	5.21	11
Target costing	5.33	10	5.42	4	3.48	40
Performance evaluation & reward: customer satisfaction surveys	5.29	11	5.19	13	5.17	12
Budgeting for co-ordinating activities across the business units	5.23	13	5.18	14	5.08	16
Product/service profitability analysis	5.19	15	5.06	19	5.61	3
Budgeting for planning financial position	5.09	18	5.37	6	5.41	8
Activity based management (ABM)	5.07	19	4.84	26	4.33	36
Variable costing	5.00	20	4.93	23	4.47	32
Performance evaluation & reward: divisional profit	5.00	21	5.27	9	5.51	5
Performance evaluation & reward: return on investment (ROI)	4.93	23	5.31	8	5.60	4
Budgeting for day-to day operations	4.93	24	5.17	15	5.05	17
Performance evaluation & reward: controllable profit	4.90	25	4.77	30	5.09	15
Cost-volume-profit/break-even analysis	4.83	27	5.08	18	4.37	35
Performance evaluation & reward: budget variance analysis	4.82	28	4.95	22	5.49	6
Performance evaluation & reward: employee attitudes	4.79	30	4.65	33	4.63	31
Performance evaluation & reward: team performance	4.65	32	4.79	28	4.89	21
Performance evaluation & reward: cash flow return on investment	4.62	33	5.11	16	4.88	22
Performance evaluation & reward: residual income	4.50	35	4.72	32	3.66	39
Activity-based costing (ABC)	4.47	36	4.57	36	4.68	29
Full (absorption) costing	3.87	37	5.24	12	4.80	25

Table 7.25 shows that:

- Target costing has the lowest future emphasis in Australia whereas it has a higher future emphasis in China.

- Most of budgeted-related items such as budgeting for controlling costs, budgeting for co-ordinating activities across the business units, budgeting for planning financial position and budgeting for day-to-day operation, have higher future emphasis (i.e. scores in excess of 5) in both in China and in Australia.

- There are no significant differences relating to non-financial measures of performance evaluation and rewards between the two countries. However, most of the financial measures, such as return on investment, controllable profit, budget variance analysis and team performance, have higher future emphasis in Australia than in China.

- Both Chinese and Australian organisations place relatively greater emphasis on strategically focused methods such as strategic planning.

Table 7.26 lists those management accounting practices that had at least a eight-point difference in ranking between past benefits and future emphasis in joint venture's and state-owned enterprise's respondents. This table was extracted from tables 7.20 and 7.23. The significant tests (P-values) were based on Mann-Whitney test.

Table 7.26 Comparison of rankings of past benefit and future emphasis in JV and SOE samples

	JV's relative rankings		SOE's relative rankings	
	Past benefit	Future emphasis	Past benefit	Future emphasis
Increased ranking				
Long range forecasting			32	21**[a]
Performance evaluation & reward: return on investment (ROI)			17	8
Standard costing and variance analysis	21	12*		
Responsibility reporting distinguishing between controllable and non-controllable items	25	16**		
Product/service profitability analysis	26	15		
Strategic planning	28	2**	25	7**
Performance evaluation & reward: divisional profit	31	21		
Variable costing	34	20		
Performance evaluation & reward: cash flow return on investment			26	16
Decreased ranking				
Budgeting for co-ordinating activities across the business units	2	13*		
Activity based management (ABM)			18	26**
Cost-volume-profit/break-even analysis	15	27*		
Budgeting for day-to-day operations	16	24	7	15
Responsibility budgeting			17	27*
Performance evaluation & reward: employee attitudes	19	30***	22	33*
Investment appraisal non-discounting techniques (e.g. Payback, ROI)	20	29***		
Investment appraisal discounting techniques (e.g. NPV, IRR)	22	31*		
Performance evaluation & reward: team performance	23	34	11	20
Performance evaluation & reward: controllable profit			21	30**

[a] *** Significant (P-Values were based on Mann-Whitney test) at the 1% level; ** significant at the 5% level; * significant at the 10% level.

From table 7.26, the item that both joint venture and state-owned enterprise respondents indicated they would place relatively greater future emphasis was strategic planning whereas the areas where they would place relatively lower future emphasis were budgeting for day-to-day operations, employee attitudes and team performance in performance evaluation & reward.

Joint ventures intend to place a higher relative emphasis on standard costing and variance analysis, responsibility reporting distinguishing between controllable and non-controllable items, product/service profitability analysis, performance evaluation & reward: divisional profit and variable costing. State-owned enterprises intend to place a higher relative emphasis on long range forecasting, return on investment and cash flow return on investment in performance evaluation & reward. A common feature of these items is that the most of them are strategically focused and refined management accounting practices. In contrast, the most of items that were to be given decreased emphasis in the future in joint ventures and state-owned enterprises mainly included traditional techniques of management accounting. However activity-based management in state-owned enterprises is an exception. These findings are consistent with the findings from Australian study (Chenhall and Langfield-Smith 1998), although individual items are different.

7.9 Impact of the government, superior authorities and foreign partners on the adoption of management accounting practices in the respondents from

In section 7.2 external factors that influence the adoption of management accounting practices were examined. The findings indicated that the government and superior authorities have the most impact on the state-owned enterprises while foreign partners abroad have the most impact on joint ventures. The aim of this section is to support the findings in section 7.2 by providing further evidence.

Table 7.27 combines the responses of relevant items which can be used to examine the influence and intervention of the government and superior authorities in QA9, QA12 and QA14. The reason for this is that superior authorities are thought as administrative representatives of the government. Therefore their impact on organisations will be similar to that of the government. The difference relates to the fact that the government influences organisations through means such as policies and regulations while superior authorities influence organisations through administration and management.

Table 7.27 A comparison relating to the extent to which the adoption of management accounting methods in JV and SOE samples was influenced by the government and superior authorities

	Mean	% rating[a] 1 or 2	% rating[a] 6 or 7	P-value[b]
(a) QA9(C)				
JV's sample	3.35	30	15	0.000
SOE's sample	5.09	13	51	
(b) QA9(d)				
JV's sample	3.26	42	21	0.000
SOE's sample	5.30	10	55	
(c) QA12(a)				
JV's sample	2.81	50	7	0.000
SOE's sample	4.39	25	42	
(d) QA12(b)				
JV's sample	2.24	71	10	0.000
SOE's sample	4.83	18	46	
(e) QA14(a)				
JV's sample	2.65	52	9	0.023
SOE's sample	3.40	29	9	
(f) QA14(b)				
JV's sample	3.09	52	22	0.010
SOE's sample	4.19	15	26	
Cronbach Alpha for the above items	**0.8663**			

Notes
[a] The respondents were generally asked to indicate scale of 1 (Not at all) to 7 (To a considerable extent) the extent to which each of the variables applied in their organisation.
[b] P-values are based on the Mann-Whitney test for the ordinal scale and 1-tailed for all items.

In table 7.27, items (a), (c) and (e) refer to government's influence and items (b), (d) and (f) reflect the impact from superior authorities. Table 7.27 indicates that the means for all of items in state-owned enterprise respondents are much higher than those in joint venture's sample. The results lead to statistically significant differences for all of items (p values < 0.05). The information presented in table 7.27 confirms that the government and superior authorities have the most impact on state-owned enterprises in relation to their adoption of management accounting practices. Table 7.27 also provides Cronbach Alpha for the listed items to test the consistency in the responses. A value of 0.8663 implies a high level of consistency in the responses to each of the questions (see chapter 6).

In addition, table 7.28 lists some items that include long-standing methods of management accounting particularly used in state-owned enterprises. Examples include budgeting for controlling costs (QB10), budgeting for day-to-day operation (QB13), profit budgeting (QB8), production budgeting (QB9) and performance evaluation based on divisional profit (QB19) and techniques promoted by the government and superior authorities (e.g. variable costing (QB1) and target costing (QB4)) relating to their adoption, past benefit and future emphasis. These items were extracted from section B of the questionnaire and used to further examine whether or not the government and superior authorities have greater influence on state-owned enterprises rather than joint ventures.

It should be mentioned that although three responsibility accounting related items are long-standing management accounting practices employed in state-owned enterprises they were not included in table 7.28. This is because the three items surprisingly have greater adoption rates, past benefits and future emphasis in joint ventures rather than state-owned enterprise respondents without exception (see tables 7.18, 7.20 and 7.23). This issue will be addressed in the next chapter.

Table 7.28 Comparison of those items which may be influenced by the government and/or superior authority analysed by JV and SOE samples

	Adoption		Past benefit		Future emphasis	
	Rate (%)	Rank	Mean	Rank	Mean	Rank
(a) QB1						
JV's sample	49	16	4.18	34	5.00	20
SOE's sample	63	18	4.40	16	4.93	23
(b) QB4						
JV's sample	69	10	4.88	13	5.33	10
SOE's sample	75	9	4.91	4	5.42	4
(c) QB10						
JV's sample	94	2	5.12	8	5.61	3
SOE's sample	84	3	5.22	1	5.56	3
(d) QB13						
JV's sample	91	3	4.75	16	4.93	24
SOE's sample	81	5	4.80	7	5.17	15
(e) QB8						
JV's sample	91	3	4.91	12	5.19	14
SOE's sample	91	1	4.95	2	5.64	2
(f) QB9						
JV's sample	86	4	5.43	1	5.74	1
SOE's sample	80	6	4.83	6	5.39	5
(g) QB19						
JV's sample	49	16	4.41	31	5.00	21
SOE's sample	59	19	4.57	14	5.27	9

It can be concluded that from table 7.28 that generally speaking, in terms of adoption or past benefit or future emphasis, the state-owned enterprise sample has higher scores than the joint venture respondents. The results provide a further insight into the role of the government and superior authorities on the two types of respondents.

Table 7.29 adopts a similar approach to that adopted by table 7.27, which combined the responses of relevant items to examine the influence and intervention of the government and superior authorities in QA9, QA12 and QA14. Table 7.29, however focuses on the influence of foreign partners for QA9, QA12 and QA14.

Table 7.29 A comparison relating to the extent to which the adoption of management accounting methods in JV and SOE samples was influenced by the foreign partner abroad

	Mean	% rating[a] 1 or 2	% rating[a] 6 or 7	P-value[b]
(a) QA9(a)				
JV's sample	5.00	8	34	0.000
SOE's sample	2.41	66	11	
(b) QA12(c)				
JV's sample	4.50	29	29	0.000
SOE's sample	2.41	57	4	
(c) QA14(c)				
JV's sample	5.10	3	37	0.000
SOE's sample	2.57	50	7	
Cronbach Alpha for the above items	**0.8426**			

Notes
[a] The respondents were generally asked to indicate scale of 1 (Not at all) to 7 (To a considerable extent) the extent to which each of the variables applied in their organisation.
[b] P-values are based on the Mann-Whitney test for the ordinal scale and 1-tailed for all items.

The results presented in table 7.29 are as expected with foreign partners abroad having a dominant impact on joint venture respondents relating to the adoption of management accounting practices. All of the differences between the two types of organisations are statistically significant ($p < 0.01$). Table 7.29 also indicates that the items have a high alpha score thus indicating a high level of consistency in the responses to each of the questions.

7.10 Further evidence which indicates that Chinese environment has influenced the adoption of management accounting practices in joint venture respondents

Foreign joint ventures located in China will be influenced by Chinese external factors such as political, economic and cultural factors (see chapter 5). Generally speaking, two aspects influence the adoption of management accounting practices in joint ventures. Government's policies, regulations and administrative directives may have an impact on the choice of management accounting practices. Joint ventures may choose some methods because of the influence of the Chinese environment. Thus they may adopt many practices similar to state-owned enterprises. The survey findings indicate that the adoption of management accounting practices in joint ventures appears to be influenced by the Chinese environment.

In this section further evidence is provided by listing some traditional Chinese management accounting practices that are usually used in state-owned enterprises. These are listed in table 7.30. They include target costing (QB4), responsibility budgeting (QB38), responsibility centre accounting (QB39), planning and control based on personal business experience and intuitive managerial judgement (QB32), performance evaluation based on individual judgement from immediate superior (QB15) and performance evaluation based on group decision from management (QB16). Table 7.30 presents information for these items relating to their adoption, past benefit and future emphasis in joint venture and state-owned enterprise samples.

Table 7.30 Comparison of those items which may indicate that JVs are influenced by the Chinese environment concerning their adoption of some traditional Chinese management accounting methods

	Adoption		Past benefit		Future emphasis	
	Rate(%)	Rank	Mean	Rank	Mean	Rank
(a) QB4						
JV's sample	69	10	4.88	13	5.33	10
SOE's sample	75	9	4.91	4	5.42	4
(b) QB38						
JV's sample	74	8	4.69	18	5.12	17
SOE's sample	59	19	4.08	27	5.08	17
(c) QB39						
JV's sample	66	11	5.17	3	5.52	6
SOE's sample	64	17	4.03	28	4.84	25
(d) QB32						
JV's sample	46	17	3.50	38	3.60	38
SOE's sample	59	19	3.62	38	4.03	39
(e) QB15						
JV's sample	54	15	3.16	39	3.21	39
SOE's sample	66	15	3.65	37	4.36	38
(f) QB16						
JV's sample	86	4	4.67	23	4.52	34
SOE's sample	77	7	4.68	11	5.05	20

Assuming that joint ventures are more likely to adopt management accounting practices then each practice should have a significantly higher score for usage and benefit than the state-owned enterprise sample. However, the results shown in table 7.30 show that the responses for the joint ventures are fairly similar to those for state-enterprise sample. For some items, e.g. items (b) and (c), the joint venture sample has higher scores than state-owned enterprise respondents. Therefore, the findings provide some evidence to suggest that the adoption of management accounting practices in joint ventures have been influenced by the Chinese context.

7.11 Main comments from the questionnaire and interviews in joint venture and state-owned enterprise respondents

At the end of the questionnaire, a section was reserved to allow respondents to express their own opinions on the adoption and dissemination of western management accounting in Chinese organisations. Many comments were collected. Four interviews (two from state-owned enterprises and another two from joint ventures) were also undertaken with the intention of providing additional insights. The main comments from questionnaires and interviews are summarised below. The full texts from individual respondents are presented in appendix 2.[2]

The main responses from the joint venture respondents were:

- Many methods of western management accounting are not fully suited to Chinese organisations for the reason that these methods are based on a fully developed market economy. However no such a condition currently exists in China.

- A close co-ordination between the two management teams in foreign partner and joint venture is compulsory for the adoption of western practices of management accounting in joint ventures. Joint ventures have a strong hope that their foreign partner will introduce successful cases from famous international companies.

- It seems that management accounting methods employed by joint ventures have become increasingly unsuited to their business environment which is more and more complicated and changes from day to day. There is an urgent need to use new management accounting methods to ensure sound development of the joint ventures.

- Owing to different economic, social and cultural backgrounds, the understanding and adoption of management accounting in China have to follow slowly and advance step by step.

- Chinese government sometimes intervenes in the process in adopting management accounting practices in joint ventures. Hence, it is vital to reduce the government's interventions in order to increase the effects of adopting management accounting practices.

The main responses from the state-owned enterprise respondents were:

[2] Where similar comments were made these are not repeated in Appendix 2.

- Spreading and experimenting western techniques of management accounting requires a consideration of the Chinese situation and the actual management level in Chinese state-owned enterprises. Mutual conflicts between new techniques and old methods are inevitable. Ignoring this would reduce the effect of adopting western practices of management accounting.

- It is very important to incorporate advanced and effective western practice of management accounting in Chinese organisations, especially in large-sized firms. However, the accounting personnel in state-owned enterprises have very little understanding of these techniques.

- Western theory and techniques of management accounting are devoid of content and far away from state-owned enterprise practices. Therefore western practice of management accounting cannot be simply copied into the practices in Chinese organisations.

- State-owned enterprises do not receive sufficient help from accounting academics. If a set of operational guidelines that is closer to the environment faced by the organisation is not available, management accounting methods are difficult to carry out. Thus there is an urgent need to summarise many rich experiences and cases experienced by Chinese enterprises.

- There are few organisations that are really concerned about the incorporation of western practice of management accounting into their practices.

- Due to heavy influences left by the old planned economic system, most state-owned enterprises do not appreciate the value of the management of accounting information. This situation must be improved by increasing the sense of market economy held by the staff and the quality of leadership in state-owned enterprises. Management accounting techniques have been fully understood by well-trained accountants, but the proportions of these are extremely small in all accounting personnel of state-owned enterprises. In other words, the development process of market economy in China is the dominant factor in the prevention of the adoption of western techniques of management accounting.

- The adoption of scientific management methods and approaches such as management accounting largely depends on the quality, the attitude, the views and the sense of responsibility of the leadership in the organisation. Traditional ideas of management will delay and hinder the extension of these advanced methods. If this problem cannot be resolved, then progress is unlikely to be made in Chinese state-owned enterprises.

- China is a developing country and its environment and institutions are totally different from those in developed countries. This determines that it is not appropriate to copy indiscriminately the development of western management accounting. In order to get satisfactory effects of using management accounting techniques, western techniques of management accounting should be incorporated into Chinese practices.

- Western practices of management accounting are very useful in assisting the decision-making process, but state-owned enterprises are still at the stage of applying financial accounting. The superior authorities above state-owned enterprises often extend some financial accounting techniques rather than management accounting practices within their subsidiary of enterprises.

7.12 Summary

The major findings of this study have been reported in this chapter. A more detailed discussion of their implications is presented in the next chapter. The following is a summary of the major findings reported in this chapter:

- The average adoption rate, benefits and future emphasis for most of items surveyed in joint ventures are generally higher than those in state-owned enterprises. In particular, most of the recently developed, strategically focused and market oriented practices have been used more extensively, and are considered to have greater benefits, in joint ventures. Therefore joint ventures have played an active role in the diffusion of western management accounting practices in China.

- Managers in joint ventures have a more positive attitude towards applying management accounting practices and market competition than their counterparts in state-owned enterprises. Also the accounting personnel in joint ventures have greater understanding of management accounting practices than their counterparts in state-owned enterprises.

- The management accounting methods employed by joint ventures are considered to be more suitable for their context and easier to implement in comparison with state-owned enterprises.

- Foreign partners abroad have the most impact on joint ventures. However the adoption of management accounting practices in joint ventures has been greatly influenced by the Chinese context, such as responsibility accounting related practices.

- State-owned enterprises have rejected simply copying or imitating western techniques of management accounting and they welcome the techniques integrating traditional Chinese methods with western practices.

- State-owned enterprises have been greatly influenced by their superior authorities and the government. They hope to reduce the interventions in order to increase the effects of adopting management accounting practices. However, the evidence indicates that the Chinese government has played a certain positive role in recommending successful practices of management accounting.

- Long-standing, early-spread, group based and subjective methods of management accounting have relatively higher adoption, benefit and future emphasis in state-owned enterprise.

- Both joint ventures and state-owned enterprise hope to receive more help from academics and professional bodies in order to summarise their rich management experiences and to provide more detailed operational guidance of management accounting practices.

- The lack of well trained accounting personnel and the reluctance of managers to adapt to change has contributed to the failure to adopt western management accounting practices in state owned organisations.

CHAPTER 8

CONCLUSIONS

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CONCLUSIONS

This chapter aims to provide an overall view of the study. It starts with a discussion of the major research findings relating to the research objectives identified in chapter 1 (section 8.1). This is followed by a section that describes the distinguishing features and contribution of the research (section 8.2). The potential limitations of the study are discussed in section 8.3. The chapter concludes with a discussion of possible areas for future research (section 8.4).

8.1 Discussion of the major research findings

The research objectives, which were formulated based on the research background identified in chapter 1, had four aspects:

1. To examine the adoption, future emphasis and benefits derived from traditional and recently developed management accounting practices in joint venture and the state-owned enterprise samples.

2. To compare the differences between the joint venture and state-owned enterprise samples in the adoption, future emphasis and benefits derived from these management accounting practices.

3. To determine and analyse the environmental factors (either external or internal) that influence the adoption of management accounting practices in the joint venture and state-owned enterprise samples.

4. To evaluate the influence of foreign joint ventures in diffusing western orientated practices of management accounting.

The research findings in relation to each of the above objectives are summarised and discussed in the following sub-sections.

8.1.1 The adoption, future emphasis and benefits derived from traditional and recently developed management accounting practices in joint ventures and state-owned enterprises

Research objectives 1 and 2 were achieved by examining the 40 items listed in section B of the questionnaire. The following is a summary of the major finding:

- For most of the listed traditional and recently developed management accounting practices, their adoption rates and average benefits in joint ventures are higher than in state-owned enterprises.

- Recently developed, strategically focused, market oriented and investment appraisal techniques have in general higher adoption rates and benefits in joint ventures than in state-owned enterprises.

- Recently developed non-financial measures of performance evaluation and reward have higher adoption rates and benefits in joint ventures than in state-owned enterprises. In contrast, group based financial measures have higher adoption rates and benefits in state-owned enterprises whereas non-group based financial measures have higher adoption rates and benefits in joint ventures.

- All of the objective methods within 'performance evaluation and rewards' and 'planning and control' subgroups, have higher adoption rates and benefits in joint ventures whereas the subjective methods within the same subgroups have higher adoption rates and benefits in state-owned enterprises.

- All of the responsibility accounting related practices have higher adoption rates and benefits in joint ventures. These results were the opposite of those expected.

- All of the cost accounting (i.e. product costing) techniques, either traditional or new practices, have higher adoption rates and benefits in state-owned enterprises. Furthermore, state-owned enterprises indicated that they intended to pay more attention to full/absorption costing and activity based costing in the future.

- Joint ventures intend to attach more importance in the future to those practices which are strategically focused (e.g. market oriented, profitability related, investment appraisal and non-financial measures of performance evaluation). In contrast, state-owned enterprises intend to place emphasis in the future mainly on those long-standing practices that are budgeting related, group based measures of performance evaluation and rewards, as well as subjective management practices.

Product cost systems include traditional techniques such as full/absorption costing and variable costing. In theory, full costing is not appropriate for decision-making purpose because it cannot provide incremental costs that are relevant for making short-term decision (Drury 1998). However, western evidence has indicated that full costing rather than variable costing was widely used in organisations surveyed. For example, in the UK, 84% of the UK respondents used full/absorption costing to value stocks and 58% of them often or always used full costs in decision making (Drury *et al.* 1993; Drury and Tayles 1994), and 38% of respondents used target cost planning (Bright *et al.* 1992). In the current survey, the adoption rates for full costing and variable costing in state-owned enterprise were 67% and 63% respectively and in joint ventures 43%and 49%. Compared to the above western studies the adoption of absorption costing systems in Chinese organisations (especially in state-owned enterprises) is not low. This is because cost accounting and management in state-owned enterprises are long-standing traditions.

Budgeting is a key activity in many western organisations. In a UK study, Dugdale (1994) reported that high benefits were received from budgeting. In a US study, McKinnon and Bruns (1992) found that managers viewed budgeted comparisons with actual sales, profit and income as the most important performance measure.

As in many western countries, budget related practices are the most important management accounting practices in Chinese organisations. For example, the comparison of budget related items between China and the equivalent Australian study (Chenhall and Langfield-Smith 1998) indicated they were extensively used and yielded high past and present benefits in both countries.

Performance measures play a crucial role in translating business strategy into results (Lingle and Schiemann 1996). As far as the main approaches of performance evaluation and reward, previous research in western countries confirms that most companies have a tendency to base their performance evaluation and reward systems primarily on financial indicators. For instance in Australia, budget variance analysis was used by 93% of respondents for evaluating performance (Joye and Blayney 1990) and return on investment was used by 68% of respondents (Dean *et al.* 1991). In recent years, however, more emphasis has been given to non-financial performance measures such as customer satisfaction and employee attitudes. For example, 85% of surveyed CIMA members expected to use a combination of financial and non-financial information in their performance reporting system (Banerjee and Kane 1996). In Dugdale's (1994) survey, non-financial measures ranked fourth out of 30 in order of importance.

A comparison between the Chinese and Australian studies in respect of the relevant financial measures (e.g. budget variance analysis, return on investment, etc.) indicated that the adoption rate was higher in the Australian study (see table 7.19). However, the adoption of non-financial measures was higher in China.

In terms of planning and decision support systems CVP analysis was found to be high or middle ranked in relation to benefits and adoption in both joint ventures and state-owned enterprises. Activity-based management and strategic planning were found to be moderately rated (in the Australian study, ABM had relatively low usage, past benefits and future emphasis whereas formal strategic planning had high usage, past benefits and future emphasis). Standard costing and variance analysis had relatively moderate benefits and adoption rates whereas product life-cycle analysis and sensitivity analysis had relatively low benefits (low usage, past benefits and future emphasis regarding to product life-cycle analysis were also found in the Australian study). Within investment appraisal techniques, the rank of benefit and adoption for non-discounting methods such as payback was higher than discounting methods such as NPV and IRR, although both had relatively low benefits. In common with a UK study (Drury and Tayles 1996), the findings also confirmed that a combination of investment appraisal techniques was used in

Chinese organisations and intuitive managerial judgement was lowly ranked in importance.

In conclusion, the findings from this survey (see tables 7.19, 7.20 and 7.23) suggest that the adoption of management accounting practices in China is not low (the range of adoption rates is between 37% and 97% in joint ventures and 50% and 91% in state-owned enterprises). However the level of adoption of management accounting practices is slightly lower than in the similar survey undertaken in Australia (the range of adoption rate was between 38% and 100%). Also, as with the survey results from many western countries, traditional budgeting and financial performance measures are the most popular and widely used methods of management accounting in China. Of the so-called recently developed practices of management accounting, target costing is widespread and considered to yield high benefits. Some forms of ABC and ABM are being adopted but they are considered to yield a low or medium benefit and will be subject to a decreased emphasis in terms of the rankings of future benefits. Non-financial performance measures, such as employee attitudes and customer satisfaction surveys, have been accepted and have been widely adopted in joint ventures but other measures such as benchmarking and balanced scorecard have not been investigated.

A growing awareness of future emphasis is given to those strategically and market focused practices in joint ventures, such as strategic planning, long range forecasting, sensitivity analysis, and product life-cycle analysis. Advanced and refined management accounting practices, such as discounting capital investment appraisal techniques, residual income and responsibility reporting (distinguishing between controllable and non-controllable items) are expected to yield greater future benefits. The findings suggest that they are likely gradually to replace those traditional and subjective methods, (e.g., non-discounting appraisal techniques, and performance evaluation and rewards based on individual judgement from the immediate superior).

8.1.2 The environmental factors that influence the adoption of management accounting practices in the joint ventures and state-owned enterprises

The effectiveness of the adoption of management accounting practices in Chinese organisations is influenced by a combination of environmental factors such as political, economic and social and technological. The main aim of section A of the research questionnaire was to ascertain these environmental factors and to evaluate the extent to which they influence the adoption of management accounting practices in joint ventures and state-owned enterprises. Thus, information was derived to achieve the third research objective.

The following factors, which influence the adoption of management accounting practices in joint ventures and state-owned enterprises, were examined:

External authorities

External authorities such as the Chinese government, superior authorities and foreign partners abroad were identified as having the potential to interfere with and restrict the adoption of management accounting practices in joint ventures and state-owned enterprises through mechanisms such as their administrative power, specific recommendations or operational guidance, etc. This influence and interference has the potential to play either a positive or negative role in the diffusion of management accounting practices in organisations.

The findings from the relevant tables in section 7.2 (tables 7.5-7.8) indicated that for joint ventures their foreign partners abroad have the most impact on their adoption of management accounting practices (mainly by providing operational guidance), followed by Chinese government (mainly by recommending other companies' practices). With state-owned enterprises, their superiors and the government both influence the adoption of management accounting practices on a large scale (by direct interference, operational guidance and recommendation of other companies' practices, etc).

The findings also identified that joint ventures have enjoyed more freedom in choosing management accounting systems and practices than their state-owned enterprise counterparts.

Social services

Social services that aim to help the implementation of management accounting practices in joint ventures and state-owned enterprises are provided by some academic and professional agents, such as universities/institutes and accounting firms/external auditors. Their services include operational guidance and advice, etc.

The findings in section 7.2 (see table 7.8) indicated that universities and institutes have a closer link with state-owned enterprises and provided more help to them while joint ventures have received more aids from accounting firms/external auditors than state-owned enterprises.

Advanced production and management techniques

In theory, the greater the use of advanced production and management techniques the more likely it is that recently developed advanced management accounting practices would be employed. The findings from section 7.1 (see table 7.4) indicated that advanced production and management techniques were more generally used in joint ventures than in state-owned enterprises. Considering the fact that most of the joint venture respondents are small and medium-sized firms while most of the state-owned enterprise respondents are large-sized companies, which theoretically should have employed more advanced manufacturing and management methods, the difference between them may be wider. The findings provide a support for the argument that joint ventures adopt more advanced production and management techniques from western countries than state-owned enterprises.

Long-standing traditional practices

The use of traditional management accounting practices experienced by state-owned enterprises during the long period of the centrally planned economy was expected to limit the adoption of western and market-oriented management accounting practices, especially recently developed management accounting techniques. However, this limitation could be expected to be minimised in joint ventures because most of them were established during the period of reforms.

The findings in section 7.3 indicated that although traditional methods are still used by state-owned enterprises they favour those management accounting techniques integrating traditional methods with western practices (see table 7.9). However, the findings also identified that traditional methods may provide a good base to use some new management accounting techniques. For example, as mentioned earlier, long-standing cost accounting and management in state-owned enterprises would help the implementation of target costing and activity based costing.

The attitude of the leadership

If the leadership of an organisation has positive attitude towards market competition and advanced production and management techniques, they will encourage adopting recently developed management accounting practices. Their commitments should enhance the coordination and the implementation of these management accounting practices throughout the organisation.

The findings in section 7.4 indicated that the managers in joint ventures have much a stronger sense of competition and pay more attention to applying management accounting practices than their counterparts in state-owned enterprises (see tables 7.11 and 7.12). The findings also provided a supplementary explanation for the reason why joint ventures place greater emphasis on those strategically focused and market oriented management accounting practices (reference to section 8.1.3).

The quality of the accounting personnel

The quality of the accounting personnel in an organisation is a key factor for the diffusion and adoption of management accounting practices especially new techniques. High quality of the accounting personnel suggests that new management accounting practices are easier to implement.

The findings in section 7.4 indicate that the accounting personnel in joint ventures have a greater understanding of management accounting practices surveyed than their counterparts in state-owned enterprises (see table 7.13). This provides further evidence to support the finding identified in table 7.14, that management accounting practices are much easier to implement in joint ventures than in state-owned enterprises.

Apart from the above factors identified from the questionnaire survey, the research has also explored and discussed other environmental factors in a wider background such as national culture, organisational culture, management norms, political and legal systems (see chapters 2, 4 and 5). They all can influence the adoption of management accounting practices in joint ventures and state-owned enterprises and cause the difference between them.

In addition, it should be mentioned that the respondents' comments collected from the questionnaire and interviews (see section 7.11 and appendix 2) have confirmed many of the above factors.

In a recent study titled "The adoption of 'Western' management accounting/controls in China's state-owned enterprises during economic transition" (O'Connor *et al.*, forthcoming), the authors identified the following aspects as influencing on the level of usage of 'Western' management accounting/controls:

1. Limited-term employment contracts
2. Market competition
3. Joint venture experience
4. Stock exchange listing

5. Government influence
6. Enterprise size
7. Chinese management norms
8. Enterprise age
9. Availability of training

In another academic paper titled "Discussion on the Environmental Restraint of China's Management Accounting" (Xu 2000), the author suggested that the development of China's management accounting was influenced by economic, legal, management and cultural environments faced by Chinese organisation.

Apart from 'Stock exchange listing', aspects relating to all of the above factors were covered by the current research. Moreover, the current study also examines the influence of other factors such as social services and advanced manufacturing environment. Therefore the findings and discussion relating to the contextual factors in the study are supported by other relevant studies.

8.1.3 The influence of foreign joint ventures in diffusing western oriented practices of management accounting

Participating in a joint venture with a foreign partner is an important avenue for the dissemination of western oriented practices of management accounting in Chinese organisations, especially state-owned enterprises. Therefore it is necessary to evaluate the influence of joint ventures in diffusing management accounting practices in China (i.e. research objective 4).

The encouragement of joint ventures with foreign investors is a long-term strategy carried out by the Chinese government. It is believed that this will lead to an enhanced amount of technology transfer and also possible transfer of foreign management ideas, skills and practices to state-owned enterprises because most of Chinese partners in joint ventures are state-owned enterprises.

In the past, a number of frameworks for understanding the diffusion of financial accounting concepts have been developed (Firth 1996). Although there has been a recent growth in empirical studies examining the adoption of management accounting practices (see section 8.1.1), much of this literature has examined the process of diffusion of these concepts/techniques within a domestic economy rather than across national borders. It has also not been concerned with international acceptance (Firth 1996).

There are very few studies about the dissemination of management ideas, skills and techniques in Chinese organisations via participating in a joint venture. However, Firth's (1996) study has expanded the empirical literature on the transfer of management techniques and ideas in China by foreign joint ventures with special reference to management accounting systems.

Firth reported that those Chinese enterprises who participated in foreign partnered joint ventures have made more changes to their management accounting systems and incorporated newer management accounting techniques compared with similar enterprises that had no collaborative venture operations with foreign companies. Therefore the findings from this study support Firth's conclusion that 'joint ventures represent an important avenue for the dissemination of free enterprise management ideas to business entities in a socialist economy'.

Compared with Firth, the current research has carried out a more detailed comparison between management accounting in joint ventures and those state-owned enterprises that have not participated in a joint venture. In addition, the environmental factors that may influence the adoption of these practices have been incorporated in the current survey. Because the main findings were summarised earlier (see relevant sections in chapters 7 and 8) the following sections discuss only the major issues relating to role of joint ventures in the diffusion of management accounting practices.

Joint ventures have adopted more advanced management accounting systems and practices exported by foreign partners

By engaging in joint ventures with foreign investors state-owned enterprises have increased the opportunity to model themselves on the foreign partners. The management accounting systems in joint ventures are invariably designed by the foreign partners based on their domestic systems. This is because foreign partners wish the management accounting systems in joint ventures to be consistent with their own to enable comparison and coordination between them. Generally joint ventures' management accounting systems are less detailed than those of the foreign partner's home base systems.

The above comments are supported by the survey findings. Joint venture respondents indicated in tables 7.5, 7.6 and 7.8 that the foreign partners have the most impact on their design and choice of management accounting systems and operational guidance of management accounting practices. Such a managerial skill transfer involves not only the introduction of specific management accounting systems and practices in joint ventures but also the invariable diffusion of western ideas and philosophy in China. Therefore the involvement in a joint venture may introduce elements of coerced institutional isomorphism, with the foreign partner imposing perceived best practices on a joint venturing state-owned enterprise as part of an export value chain (O'Connor *et al*, forthcoming). This may have a profound influence on the development of management accounting in China.

Joint ventures have higher quality accounting personnel

As the accounting personnel of joint ventures are normally drawn from both partners, the Chinese personnel will thus learn first hand knowledge of management accounting techniques from the foreign partners who formulate the joint ventures' management information systems. Additionally the foreign partners often assist the change process by providing on-the-job learning and formal in-house training, support of outside training in local schools and trips overseas for Chinese personnel (O'Connor *et al.*, forthcoming). Joint ventures also find it easier to recruit qualified staff from the labour market (see chapter 4). This will improve the quality of accounting personnel in joint ventures and is expected to provide the impetus to develop management accounting practices. After completion of the venturing operation and the transfer of accounting personnel between the joint venture and the Chinese partner, these practices are likely to be relayed back to the Chinese partners' domestic operations. Thus advanced knowledge transfer has enhanced in Chinese organisations and induced the mimetic institutional isomorphism. Furthermore the accounting personnel in joint ventures are pioneers experiencing western systems and practices of management accounting.

The above comments are supported by the evidence from the survey. Tables 7.13 and 7.14 indicated that the accounting personnel in joint ventures have a better understanding of the surveyed management accounting practices resulting in the practices being much easier to implement in joint ventures.

The pressure of market competition and significant management discretion stimulate joint ventures to adopt more detailed accounting systems and recently developed management accounting techniques

Joint ventures operate in a relatively strong competitive environment where they do not get any protection from the government. The rapid economic liberalisation and the requirement for financial discipline imposed by competitive markets have created the need for joint ventures to make significant changes to their management accounting systems. The responses indicated that joint venture staff had a much strong sense of market competition (see table 7.12 for supporting evidence).

The above comments are supported by the survey findings relating to both the types of management accounting practices used and the depth of detail. For example, because of facing fierce market competition, they have to place emphasis on strategically focused and market oriented practices, such as strategic planning, product life-cycle analysis and long range forecasting (see table 7.20). With free decision-making responsibilities, the growth in usage of those techniques associated with their decision-making contexts, such as control evaluation and profitability analysis, have been more dramatic (see table 7.20 in relation to ABM, standard costing/ variance analysis, controllable profit, product/service profitability analysis, budget variance analysis, etc). Having the discretion to make investment decisions has resulted in an increased need for the various types of capital expenditure appraisal methods (see table 7.20 for the investment appraisal methods and the first 10 items relating to the benefits of detailed budgeting methods).

Joint ventures have adjusted the management accounting systems and practices to suit Chinese management context

Due to the different environmental conditions between China and western countries, wholly copying the management accounting systems and practices from foreign partners which operate in free enterprise economies to joint ventures is problematic. It will lead to economic inefficiencies (Scapens & Yan 1993). However, the findings in the study identified that joint venture respondents have a positive attitude towards adjusting their management accounting systems and practices to suit their environment. For example, joint ventures have very similar usage rates, past benefits and future emphasis compared with state-owned enterprises on those management accounting practices associated with Chinese collective culture and management norms (see table 7.30).

It should be noted that the above explanations in relation to the evaluation of joint ventures' influences in China are consistent with theoretical frameworks developed in the institutional isomorphism and diffusion of innovation literatures (see chapter 5). Therefore the findings in the study have provided further evidence supporting the findings of Firth's research that joint ventures represent one medium by which specific western style systems and practices of management accounting can be transferred to Chinese organisations.

8.2 Distinguishing features and contribution of the research

As explained in chapter 1, the following motives that prompted the researcher to undertake this study represent some of the distinctive features of the research.

A number of studies in the past have focused on broad managerial styles and socio-economic theory rather than undertaking empirical studies of specific techniques, such as management accounting procedures and practices. Although there has been increased interest and emphasis given to empirical studies of management accounting practices in recent years, there is a scarcity of empirical evidence on the adoption of western practices of management accounting in China even though these practices have been operated for over two decades. Moreover, no previous surveys have been undertaken in China relating to a systematic investigation of the adoption, future emphasis and benefits derived from traditional and contemporary practices of management accounting. Although some observations have indicated that management accounting practices developed in one firm or one setting have been transferred to other companies or settings (e.g. via establishing a joint venture) there is comparatively little literature describing these occurrences and influences. Therefore the most significant contribution of this research has been to provide new knowledge relating to the adoption of western practices of management accounting in China and the influence of foreign joint ventures in the diffusion of these practices. This study also incorporates an empirical investigation relating to the adoption, future emphasis and benefits derived from traditional and contemporary practices of management accounting and also exploratory evidence on the influence of foreign joint venture in the diffusion of these practices.

Previous studies in relation to the investigation of the adoption, future emphasis and benefits derived from traditional and contemporary practices of management accounting have been undertaken mainly in western capitalist developed countries such as Australia, rather than in developing countries, especially ex-socialist countries. Therefore this research can provide a comparative example with similar structured information collected from a socialist developing country which is moving towards market economy. As indicated earlier, the research has reinforced some support for the findings from the similar Australian study and also has identified the differences between them.

This study is a first attempt to examine the extent to which Chinese firms have adopted both traditional and recently developed management accounting practices, the benefits received from and the emphasis given to these practices in the future. By comparison with previous Chinese studies (He 1997; Lin and Wu 1998; Qiao 1997), the research indicated that management accounting practices in Chinese firms have made considerable progress in recent years.

Previous studies that have examined the influence of foreign joint ventures in the diffusion of new management accounting practices within China (e.g. Firth) have not broadly explored and explained the reasons behind the differences of the adoption of management accounting practices between joint ventures and state-owned enterprises. Also 'no judgement is made on whether the changes are optimum or even represent an improvement' (Firth 1996). Therefore another important distinguishing feature of this research is that it has involved a broad environmental/contingency factor analysis, based on the frameworks established in cultural, economic, institutional, organisational and innovation theories. It also provides many explanations as to whether the changes are appropriate.

Besides addressing issues that have been examined in previous surveys, the research also addressed issues that have not been examined by previous research. For example, a recent study (O'Connor *et al.* forthcoming) has explored nine environmental factors that influence the adoption of management accounting practices in Chinese organisations. However, the research reported in this thesis has broadly examined other factors that have not been included in the previous studies, such as social services and advanced manufacturing environment (see 8.1.2). The research has also uncovered some inconsistent findings reported in previous studies. For example, Firth (1996) indicated that 'the Chinese partners were widespread in the acceptance of variable costing as the major methods of product costing pre joint ventures' but this was not supported by the current study. In fact, implementing variable accounting in Chinese enterprises had occurred from 1st July 1993 (see chapters 4 and 7) while Firth's findings are based on data from 1990 to 1993. Therefore it is unlikely that Chinese partners had widely adopted variable costing during this period. According to Firth, 'changes involved a move towards the accounting techniques employed by the joint ventures.' However, the trend is not clear from the findings in the survey because the items for future emphasis in state-owned enterprise respondents are not consistent with those for past benefit in joint venture sample (see chapter 7).

Finally the research approach may be applicable to other ex-socialist countries such as Vietnam which is following China's steps towards economic reform and is attracting more and more foreign investment.

8.3 Limitation of the research

As with other researches, this research is subject to a number of limitations. However, every attempt was made to minimise the limitations so as to be able to generalise the findings (see chapter 6).

The major limitations relate to those applying to postal questionnaire surveys (Sekaran 1992). Firstly, the low response rate inhibits the representativeness of the sample. Secondly, the researcher and the respondents cannot communicate with each other to ensure a common understanding. For example, the researcher is not able to explain the meaning of the questions to the respondents and conversely the respondents are not able to explain their responses to the researcher. Ideally, the problem can be minimised by undertaking a number of post questionnaire interviews (although this research has undertaken some interviews the process was limited and it was difficult to collect more detailed information). Only a few interviews were undertaken because of the constraints of time, distance, finance, interview accessibility and the availability of interviewees. The results from the few interviews could be viewed as providing only anecdotal evidence. Thirdly, despite providing new insights, the research may only 'scratch the surface' of complex phenomenon. Ideally the research should be extended to incorporate other data collection techniques, such as case studies so that a more in-depth study of management accounting practices can be undertaken. For example, it has not been possible to access enterprises' procedures and policy manuals or internal documents. Such an approach is likely to prove very difficult in a Chinese context.

An important limitation of this study is the absence of any clear theories that could be derived from the literature that may explain Chinese management accounting practices. Thus, it has not been possible to develop several formal hypotheses for testing theories. Instead, emphasis has had to be placed on descriptive research and exploring the general hypothesis that joint ventures will rely more extensively on management accounting practices than state-owned enterprises. To test the statistical significance of the differences in responses between state-owned enterprises and joint ventures it has been necessarily to rely on non-parametric statistics. This was because much of the data did not meet the requirements that are necessary for parametric statistics. Significance tests using non-parametric techniques do not enable spurious relationships to be controlled. No test is available that is the counterpart of regression analysis that can be used for non-parametric statistics. Therefore when examining the statistical differences between the responses for the two categories of organisations the differences may be influenced or explained by other factors that have not been controlled. For example, firm size differed between the two samples so it is possible that size influenced the statistical tests. Thus, the reported statistics may have been contaminated by firm size.

It should also be noted there was a significant difference between firm size (measured by the number of employees) for the joint venture and state-owned categories. Also the small sample of joint ventures produced an unbalanced representation between the two types of samples, in terms of the number of organisations included in each sub-sample. Therefore the small sample size for the joint venture category prevented matched sample comparisons (in terms of size) to be undertaken between the responses for the two types of organisations.

Another limitation is that there is lack of a question relating to the background information of the respondent (person) such as his/her position, title, qualification and educational/training level. Although the mailing and distribution questionnaires were sent to the financial/accounting department of the organisation, it cannot be assumed that the person who completed the questionnaire has knowledge and understanding of all or most of the questions. Ideally future research should target only the person who is in charge to implementing management accounting but this may not be possible in Chinese organisations because they are unlikely to have established separate management and financial accounting functions or personnel with the title of 'management accountants'.

Other limitations refer to the terminology and layout of the questionnaire. It is possible that respondents may have misunderstood some items. For example, the large array of items (a number of 40) in section B of the questionnaire might have been confusing to the respondents. And the terminology in the questionnaire may have been confusing, particularly when meanings can differ after translation into Chinese. Thus, the respondents may have been unable to understand some of the variables and relied on some guesswork. There is also the possibility that the responses may have been subject to prejudices by the respondents.

Finally, limitations apply to the sample selection process and the ability to generalise the findings to other joint venture and state-owned organisations. In China, reliable and accurately updated databases, similar to those available in the UK (e.g. Datastream, FAME etc.), are not available. Therefore it is virtually impossible to establish a representative sample for Chinese organisations. Also potential respondents are not used to completing questionnaires and, in a society where there has been greater secrecy, respondents may be concerned that by completing questionnaires they may be providing confidential information. Thus it is likely that any survey will be subject to much lower response rates than those undertaken in western countries. These factors partly explain the low response rate for this survey. Further problems applied because it was necessary to rely on colleagues of the researcher to assist in the questionnaire distribution process. This resulted in some printing errors as described in chapter 6. To test for non-response bias early and late responses are frequently compared, based on the assumption that late responses can be viewed as being typical of non-respondents. The non-response bias tests (see table 6.3) indicated that there were significant differences between the early and late respondents in term of size.

Because of the above comments it is unlikely that the responses represent a sample that is truly representative of Chinese state-owned and foreign joint venture enterprises. Therefore it is unlikely that the reported findings can be generalised to apply to the wider Chinese population of organisations. Instead, the findings should be viewed as representing the practices in a large sample of Chinese organisations. The statistical tests and the comments providing explanations of the differences in responses (particularly those relating to foreign joint ventures and state-owned organisations) should be viewed as explaining the differences only between the organisations included in this study. They should not be generalised as being representative throughout China.

Nevertheless, despite the limitations described in this section considerable efforts have been taken to obtain meaningful research findings.

8.4 Future research directions

Future research directions should seek to address the limitations that have been examined in the previous section. A number of issues that require further research are discussed in the following paragraphs.

Undoubtedly, a much larger sample size would result in findings that have greater credence and ability for generalisations. Therefore future research should seek an expanded sample size and increased response rate in order to obtain more meaningful findings. A number of measures should be carefully considered, such as obtaining a sample database, sample selection, question design and the methods of distributing and collecting the questionnaires. It would be preferable if the researcher had of been located in China for a considerable time period to ensure that a more representative sample could have been selected and avoid the problems entailed in administering the survey from the UK. For example, non-responses and incorrect addresses could have been more rigorously followed up if the researcher had been located in China.

As compared to the case study approach, a questionnaire survey is less effective at producing in-depth findings when focusing on specific issues. Therefore future studies should begin to concentrate on more in-depth case study research that examines those issues that cannot easily be explored by questionnaire surveys. For example, it is very important to gain insights into such question as:

- Why the surveyed Chinese respondents indicated a decreased future emphasis for ABC and ABM?

- What is the difference between Chinese target cost practice and western target cost techniques?

- Why responsibility accounting related practices were given more emphasis in joint ventures rather than state-owned enterprises?

- How do those environmental factors affect the extent of changes relating to the adoption of management accounting in joint ventures and state-owned enterprises respectively?

Ideally, a multi-method research approach should be given a high priority for undertaking research in this area, although such refinements may be costly and time-consuming.

There is also a need to further explain the observed differences in the research in relation to the adoption of western practices of management accounting between the two types of organisations within a broader organisational, culture, institutional and technological contexts and to further evaluate the affect of external forces in diffusing management accounting practices.

Another important aspect for future study is how to combine Chinese practices with western techniques of management accounting, as well as traditional methods with new and recently developed techniques. In particular, how to effectively implement the combination of techniques in Chinese organisations, especially in state-owned enterprises. This is very urgent requirement for Chinese practitioners of management accounting and is best suited to case study research of successful adaptation.

Based on my experience of undertaking the research the following areas are also considered worthy of future research:

- There is a need to investigate the extent to which a two way learning process occurs. This refers to the process of Chinese organisations examining and analysing western management techniques whilst the same western organisations learn from Chinese approaches. Every culture has its advantages which are strongly linked with the conditions on which the culture relies for its existence. Western businesses must learn from Chinese organisations if they wish to succeed in China. It has been predicted that the Chinese culture will become one of the dominant cultures in the world in the 21st century and the Chinese economy may predominate. Therefore western organisations should draw ideas from China (In fact, this process is already happening, for example, one British company that the researcher is familiar with has recently recruited its financial controller from their Chinese partner). As in the last century, the economic success of Japan has resulted in many western companies benchmarking Japanese organisational practices. Similar possibilities should also be considered regarding Chinese organisations.

- The age of joint ventures may be a possible factor which determines the adoption and extent of adoption of western management accounting practices. Therefore there is a need for future research to incorporate the age of the venture as an explanatory variable to examine its impact on the adoption of western practices.

- Joint ventures tend to model themselves on their foreign partners. This can be viewed as a phenomenon of institutional mimetic isomorphism because it is more likely to occur when a new joint venture's environment creates symbolic uncertainty and foreign techniques are poorly understood. One issue which arises is whether the isomorphism has intensified the joint venture's economic success and organisational suitableness. After a period of time of the venture experience, the uncertainty condition may move towards certainty. In which case, there is a need to investigate whether the mimetic process continues and the ensuing circumstances also need to be given consideration. These issues are areas of interest suitable for future research.

- Another future research area regarding the transfer of western management accounting practices in China is whether joint ventures benchmark practices from the best foreign firms. Some foreign firms may have failed in the domestic market but may have sought to develop a new market in China.

Therefore the possibilities of Chinese firms importing unsophisticated techniques from failing foreign partners and their impact is worthy of future investigation.

Despite the limitations identified in last section and the failure to incorporate some of the above suggestions, the research has provided many additional insights into areas in relation to the adoption of western oriented management accounting practices and the influence of foreign joint ventures in the diffusion of these practices in China. Generally speaking, all research, even if performed well, will be subject to limitations and extend the scope for future research. Considerable efforts have been taken to minimise the limitations and remedy some of the deficiencies of previous research. It is also hoped that this research will motivate other researches to undertake future research in the above discussed areas.

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APPENDIX 1: QUESTIONNAIRE (English version)

University of
HUDDERSFIELD

ON THE ADOPTION OF WESTERN PRACTICES OF MANAGEMENT ACCOUNTING IN CHINESE STATE-OWNED ENTERPRISES AND FOREIGN JOINT VENTURES LOCATED IN CHINA

This survey seeks to investigate the current adoption of western practices of management accounting in Chinese organisations and to evaluate the role which foreign joint ventures located in China diffuse these techniques. It is necessary and important to examine the influences of western techniques of management accounting in after Chinese organisations have experienced these practices for over two decades. Particularly, the questionnaire is designed to collect the data relating to the extent to which Chinese state-owned enterprises adopt western practices of management accounting and foreign joint venture spread these techniques. Therefore your response is extremely important to the success of the study. The aim of this study is to provide useful information relating to the adoption of management accounting practices for Chinese state-owned enterprises and joint ventures and to help them improve their financial performance.

Please provide information of your enterprise or express your opinions as indicated in the following questions by ticking or circling, or crossing the appropriate items. Please answer those questions that are relevant to your business. If you think you are not suitable person answering these questions please pass it to someone else. The responses you give will be treated as strictly confidential and only used for the research. It will not be disclosed to third parties under any circumstances. Thank you for your co-operation.

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SECTION A - QUESTIONS RELATING TO GENERAL INFORMATION OF YOUR ENTERPRISE AND ITS MANAGEMENT ACCOUNTING ADOPTION

(A1) Please give the name of your enterprise (this can be left blank):

____

(A2) Your enterprise belongs to:

(a) Group corporation

(b) Large and medium-sized state-owned enterprises

(c) Small-sized state-owned enterprises

(d) Sole foreign invested company (country:)

(e) Foreign joint venture (foreign country:)

(f) Others (please specify) ______________________

(A3) Your enterprise belongs to:

(a) Industry sector (including manufacturing & mining)

(b) Agriculture sector (including forestry & fishery)

(c) Finance sector (including banking & insurance)

(d) Transport sector (including road, sea, rail and air transport)

(e) Commerce sector (including retail, wholesale and import & export trading)

(f) Construction & Property sector

(g) Information Technology sector (including telecommunication, telephone and internet)

(h) Other service sectors (including hotel, restaurant, travel, entertainment and professional service)

(i) Others (please specify) ______________________

(A4) Approximately how many employees does your enterprise employ?

____

(A5) Approximately how many years has your enterprise been established?

____

(A6) What is the approximate amount of total assets (fixed assets plus current assets) as shown in your enterprise's last Balance Sheet? (please specify Currency)

(A7) What is the approximate annual amount of total sales as shown in your enterprise's last Income Statement? (please specify Currency)

(A8) Please indicate which the following methods are used in your enterprise (please ignore for non-manufacturing industries):

	YES	NO
(a) Advanced manufacturing techniques (AMT)		
(b) Just-in-time (JIT) production system		
(c) Flexible manufacturing systems (FMS)		
(d) Computer numerically controlled (CNC) machines		
(e) Total quality management (TQM)		
(f) Computer-aided design and computer-aided manufacturing (CAD/CAM)		

(A9) On a scale of 1 (Not at all) to 7 (To a considerable extent) for each of the items listed below please indicate the extent to which they have influenced the management accounting methods employed by your enterprise:

	Not at All			To a small extent			To a considerable extent
(a) Foreign partner abroad	1	2	3	4	5	6	7
(b) Other companies within China	1	2	3	4	5	6	7
(c) Government's recommendation	1	2	3	4	5	6	7
(d) Superior authority	1	2	3	4	5	6	7
(e) Textbooks	1	2	3	4	5	6	7
(f) Other (please specify)________________	1	2	3	4	5	6	7

(A10) Please tick one item below to indicate what kind of management accounting technique is most popular in your enterprise?

(a) Traditional methods adopted and used for the centrally-planned economy

(b) Western techniques from textbooks

(c) Self-designed methods based on (a) and (b)

(d) The techniques based on other enterprise's practice and recommended by the government

(e) The techniques copied from foreign partner abroad

(f) Other (please specify) ______________________________

(A11) To what extent do management accounting techniques employed by your enterprise suit your business conditions:

Not at all			To a small extent			To a considerable extent
1	2	3	4	5	6	7

(A12) On a scale of 1 (Not at all) to 7 (To a considerable extent) for each of the items listed below please indicate the extent to which they guide your enterprise designs and choice of management accounting methods:

	Not at All			To a small extent			To a considerable extent
(a) The government	1	2	3	4	5	6	7
(b) Superior authority	1	2	3	4	5	6	7
(c) Parent partner abroad	1	2	3	4	5	6	7
(d) Other (please specify)______	1	2	3	4	5	6	7

(A13) To what extent was the freedom of choice for management accounting methods in your enterprise?

Not at all			To a small extent			To a considerable extent
1	2	3	4	5	6	7

(A14) When your enterprise wants to implement new management accounting systems or methods, to what extent do each of the following items provide operational guidance:

	Not at All			To a small extent			To a considerable extent
(a) Government's department	1	2	3	4	5	6	7
(b) Superior authority	1	2	3	4	5	6	7
(c) Parent partner abroad	1	2	3	4	5	6	7
(d) Universities and institutes	1	2	3	4	5	6	7
(e) Accounting company/external auditors	1	2	3	4	5	6	7
(f) Other (please specify)________________	1	2	3	4	5	6	7

(A15) To what extent do managers in your enterprise emphasise on applying management accounting techniques?

Not at all			To a small extent			To a considerable extent
1	2	3	4	5	6	7

(A16) To what extent do managers in your enterprise have a sense of competition?

Not at all			To a small extent			To a considerable extent
1	2	3	4	5	6	7

(A17) To what extent do your accounting staffs understand the following techniques?

	Not at All			To a small extent			To a considerable extent
(a) Activity-based-costing (ABC)	1	2	3	4	5	6	7
(b) Standard Costing/variance analysis	1	2	3	4	5	6	7
(c) Cost-volume-profit/break-even analysis	1	2	3	4	5	6	7
(d) Controllable and non-controllable profit	1	2	3	4	5	6	7
(e) Profitability analysis	1	2	3	4	5	6	7
(f) Return on investment (ROI)	1	2	3	4	5	6	7
(g) Responsibility budgeting	1	2	3	4	5	6	7
(h) Relevant and irrelevant costs	1	2	3	4	5	6	7
(i) Investment appraisal discounting techniques	1	2	3	4	5	6	7

(A18) To what extent are management accounting techniques easy to implement in your enterprise?

Not at all			To a small extent			To a considerable extent
1	2	3	4	5	6	7

(A19) When your enterprise measures and evaluates performance, to what extent are each of the following methods used:

	Not at All			To a small extent			To a considerable extent
(a) Budget variance analysis	1	2	3	4	5	6	7
(b) Distinguishing between controllable and non-controllable profit or costs	1	2	3	4	5	6	7
(c) Divisional overall net profit	1	2	3	4	5	6	7
(d) Residual income (e.g. profit after an imputed interest charge)	1	2	3	4	5	6	7
(e) Return (profit) on investment (ROI)	1	2	3	4	5	6	7
(f) Cash flow return on investment	1	2	3	4	5	6	7
(g) Individual judgement from immediate superior	1	2	3	4	5	6	7
(h) Group decision from top management	1	2	3	4	5	6	7
(i) Other (please specify) ________________	1	2	3	4	5	6	7

(A20) To what extent are your performance measure and evaluation carried out objectively?

Not at all			To a small extent			To a considerable extent
1	2	3	4	5	6	7

SECTION B - QUESTIONS RELATING TO THE EXTENT OF BENEFITS AND FUTURE EMPHASIS OF MANAGEMENT ACCOUNTING TECHNIQUE

Please indicate in the left-hand column below the extent of benefits which your enterprise gained from the following technique over the last 5 years [from no benefit (scored 1) to very high benefit (scored 7)], and in the right-hand column the future emphasis over the next 3 years [from no emphasis (scored 1) to very high emphasis (scored 7)]:

	Benefits received over last 5 years							Future emphasis over next 3 years						
	No benefit			Medium benefit			Very high benefit	No emphasis			Medium emphasis			Very high emphasis
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Product cost systems:														
(1) Variable costing														
(2) Full (absorption) costing														
(3) Activity-based costing (ABC)														
(4) Target costing														
(5) Other (please specify)														
Budgeting systems:														
(6) Cash/working capital budgeting														
(7) Sales budgeting														
(8) Profits budgeting														
(9) Production budgeting														
Detailed budgeting systems for:														
(10) Controlling costs														
(11) Coordinating activities across the business units														
(12) Planning financial position														
(13) Day-to-day operations														
(14) Profitability analysis														
Performance evaluation & reward based on:														
(15) Individual judgement from immediate superior														
(16) Group decision from top management														
(17) Budget variance analysis														
(18) Controllable profit														
(19) Divisional Profit														
(20) Team performance														
(21) Employee attitudes														

(22) Customer satisfaction surveys	
(23) Return on investment (ROI)	
(24) Residual income	
(25) Cash flow return on investment	
Decision support systems:	
(26) Cost-volume-profit/break-even analysis	
(27) Product life-cycle analysis	
(28) Activity based management	
(29) Product/service profitability analysis	
(30) Sensitivity analysis	
(31) Relevant and irrelevant cost analysis	
Planning and control:	
(32) Personal business experience and intuitive managerial judgement	
(33) Standard costing and variance analysis	
(34) Strategic planning	
(35) Investment appraisal discounting techniques (e.g. NPV, IRR)	
(36) Investment appraisal non-discounting techniques (e.g. Payback, ROI/Accounting rate of return)	
(37) Long range forecasting	
Responsibility accounting:	
(38) Responsibility budgeting	
(39) Responsibility centre accounting	
(40) Responsibility reporting distinguishing between controllable and non-controllable items	

SECTION C – Thank you for taking time to complete this questionnaire. If you have any comments about the adoption and dissemination of western management accounting practices in your enterprise, please give detail in the space provided below:

APPENDIX 2

COMMENTS FROM THE QUESTIONNAIRE AND INTERVIEWS

The contents of the comments from questionnaires and interviews in joint venture respondents

Respondent 1 (An electronic share Ltd, A Sino-Belgium joint venture) (2)[1]
Many methods and angles of analysing western management accounting are not fully suited to the management of Chinese organisations for the reason that these methods are based on an assembly and share of information, management methods and financial data, however no such a condition currently exists in Chinese organisations.

Respondent 2 (A electrical appliance Ltd, A Sino-Hong Kong joint venture) (4)
A close coordination between the two management teams in foreign partner and joint venture is compulsory for the adoption of western practices of management accounting in joint ventures. Joint ventures have strong hope that their foreign partner will introduce successful cases of famous international companies.

Respondent 3 (A textile Ltd, A Sino-Hong Kong joint venture)
Western accounting has more advantages than that of the Chinese in the aspects of cost management and management accounting.

Respondent 4 (A photocopy machine Ltd, A Sino-American joint venture) (2)
We should let advanced western practices of management accounting contribute more towards Chinese organisations and put an end once and for all to the backwardness of management in Chinese organisations.

Respondent 5 (A Sino-Hong Kong joint venture)
We have used some methods of management accounting to measure and evaluate departments' performance and control their activities. But it seems that these methods have become increasingly unsuited to our business environment which is more and

[1] Indicated number of times the comment has been made

more complicated and changes from day to day. There is an urgent need to use new management accounting methods in practices to ensure sound development of the joint ventures.

Respondent 6 (A steel Ltd, A Sino-Hong Kong joint venture)
With the growth of the market economy in China, the leadership of companies have increased their understanding of the importance of accounting information and have imposed high requirements for accountancy. The adoption of management accounting is valued. We have adopted most techniques of management accounting and provided useful information for managers' decision making.

Respondent 7 (A electronic equipment Ltd, A Sino-Hong Kong joint venture) (5)
Owing to the different environment between China and the West in macro economic, social and cultural backgrounds, the understanding and adoption of management accounting in China have to follow in order and advance step by step.

Respondent 8 (A television company, A Sino-Taiwan joint venture)
We hope there is suitable computer software available for the use of management accounting practices.

Respondent 9 (A Sino-American joint venture) (3)
In the process of transforming from a state-owned enterprise to a joint venture, we have experienced some techniques of western management accounting and achieved good results. But generally speaking, owing to the fact that state-owned enterprises lack qualified staffs and foreign partners have not given us sufficient training, the adoption of management accounting did not achieve the required standard and therefore did not achieve its target. On the other hand, the government sometimes intervenes in the process. Hence, in order to get good results in the adoption of management accounting, training of accountants, the increase of personnel quality and the reduction of government's interventions are vital factors.

Respondent 10 (A car Ltd, A Sino-Malaysia joint venture)
There is so little operational guidance available that we do not know how to operate detailed techniques of management accounting. For example, we seem to fully

understand the theory of target cost management but have no idea how to carry it out in practice.

The contents of the comments from questionnaires and interviews in state-owned enterprise respondents

Respondent 1 (A tobacco group Ltd) (6)

Implementing any techniques of management accounting with good effect in an organisation must require a sound management system, like having an effective internal control system, an efficient decision making process and a lot of qualified staff with a strong sense of management. In short, management accounting techniques cannot live without management essence.

The problem is that western practices of management accounting originated from the western economic environment. Spreading and experimenting these techniques in Chinese organisations requires a consideration of the Chinese situation and the actual management level in Chinese firms. Mutual conflict between new techniques and old methods is inevitable. Ignoring this would reduce the effect of adopting western practice of management accounting.

Respondent 2 (A sugar factory) (3)

It is necessary for Chinese firms to adopt the advantages of western practice of management accounting and discard its advantages.

Respondent 3 (A mining company) (4)

It is very useful that advanced and effective western practices of management accounting are used in Chinese organisations, especially in large-sized firms. However, the staff in state-owned enterprises has very little understanding in these techniques. In my opinion, these techniques should be extended in many possible ways, such as training provided by accounting companies, guidance material produced from high education, doing case study in selected state-owned enterprises and spreading successful experiences. The extension would be much better than that only by textbooks.

Respondent 4 (A coal mine group Ltd)

The development of the market economy requires advanced western theory and practices of management and therefore the adoption and diffusion of western practice of management accounting are one of important ways of increasing the quality of Chinese management.

Respondent 5 (A chemical group Ltd)

Management accounting, as a scientific and effective internal management technique, is more objective than those that are subjective judgement methods. Although it is not widely used in Chinese organisations, it will be predictably more popular along with the globalisation.

Respondent 6 (A national electricity corporation)

We have invented and experienced a new accounting system entitled FMIS, which combines financial accounting and management accounting. We have known from experience that the scientific accountancy should integrate a modernisation in financial thinking, financial management, financial personnel and financial methods. Making a break through in adopting western practice of management accounting in an all-round way also must have the aid of advanced technology like computer and internet technology.

Respondent 7 (A large-sized chemical share plc) (12)

There is a very urgent need to summarise many rich experiences and cases in Chinese enterprises in order to develop accounting theory. Accountants in firms, however, are always busy at daily accounting and no time and qualification to evaluate these plentiful experiences. We therefore do need help from accounting researchers. We need them to visit firms and guide our practices and develop special theory and methods based on our experiences. We feel that western theory and techniques are devoid of content and far away from us because we do not know how to use them in our practices.

Respondent 8 (A steel group corporation)

'Being excited when studied but no action when returned' is a true description for the study of western practice of management accounting in the beginning of 1980s. It may prove that western practice of management accounting cannot be simply copied into the practices in Chinese firms. If a set of operational guidance that is closer to the environment faced by the organisation is not available, management accounting methods are difficult to carry out. Another problem in China is that there are very few organisations that are really concerned about the adoption of western practice of management accounting.

Respondent 9 (A radio equipment factory) (3)
It seemed that we understood the knowledge of western management accounting at the time when we were teaching them in1984, but when we begun the attempts to put them into practice we were clueless. We have thereafter tried some techniques of management accounting in daily management, for example, using variable costing and CVP to analyse and predict technology-reforming products, using target cost management in two catalogue products, and distinguishing costs between controllable and non-controllable items for responsibility centres, etc. All of these practices have achieved effect to some extent. But western practice of management accounting should be systematic while these self-designed methods are not systematic and informal, and the effect is not obvious. We feel the need of external help strongly.

Respondent 10 (A phone card share Ltd) (5)
Due to heavy influences left by the old planned economic system, most do not appreciate the values of the management of accounting information. This caused loss of genuineness of accounting data and further, considerably limited the adoption of western techniques of management accounting in state-owned enterprises. This situation must be resolved by increasing the sense of market economy hold by the staff and the quality of leadership in state-owned enterprises. Management accounting techniques have been fully understood by well-trained accountants, but the proportions of these are extremely small in all accounting personnel of state-owned enterprises. In other words, the development process of market economy in China is the dominant factor in the prevention of the adoption of western techniques of management accounting. The practices of western management accounting in state-owned enterprises are most popular amongst items relating to cost and responsibility accounting.

Respondent 11 (A industry general corporation) (4)

Having been influenced by the planned economy of pre-Soviet for a long period of time, there is a great distance between Chinese accounting management and that of many developed countries. The Chinese accounting reforms which started from 1993 have reduced this distance. As to management accounting, although some state-owned enterprises have to some extent applied certain techniques of management accounting, there still is a large gap between the current extent of adopting management accounting techniques and the requirement of a developing market economy.

Respondent 12 (An aluminum group Ltd)

Accounting academics have a thorough understanding of western techniques of management accounting while accounting practitioners in firms have less understanding of these techniques. Therefore, the adoption of western techniques of management accounting has to be combined with traditional Chinese contexts, especially relating to the enterprises' conditions.

Respondent 13 (A gold group corporation) (2)

During the past 20 years of Chinese reform and opening, the comparatively mature practices of western management accounting have gradually influenced aspects of enterprise management in China. As China joins the WTO, China and the West will learn from each other's strong points to offset its own weaknesses. The adoption and diffusion of the essence of western management accounting will definitely improve the management in Chinese organisations.

Respondent 14 (A mine group Ltd) (7)

The adoption of scientific management methods and approaches such as management accounting largely depends on the quality, the attitude, the views and the sense of responsibility of the leadership in the organisation. Traditional ideas of management will delay and hinder the extension of these advanced methods. If this problem cannot be resolved, then the way out for Chinese state-owned enterprises could not be found.

Respondent 15 (A pharmaceutical share group corporation) (5)

Because the development of Chinese market economy is far from perfect, Chinese state-owned enterprises have faced many problems, such as the external legal environment, the relationship between enterprises and the government, the internal management system and the backwardness of organisational culture, etc. So when the adoption of western practices of management accounting in China was carried out the context faced by state-owned enterprises has to be considered.

Respondent 16 (A refined coal group Ltd) (4)
It is essential but not easy to build a set of theories and practices of management accounting that is suitable for the Chinese context.

Respondent 17 (A vehicle group corporation) (5)
Although western practices of management accounting can play an important role in a firm's production and management, China is a developing country and its specific characteristics, such as enterprise ownership, business environment, accountant quality and operational process of production and management, are totally different from those in developed countries. This determines that it is not appropriate to indiscriminately copy the development of western management accounting. In order to get satisfactory effects of using management accounting techniques, western techniques of management accounting should be incorporated into Chinese practices.

Respondent 18 (An oil and natural gas share plc) (4)
Existing textbooks of western management accounting lay stress on theory and explanation while lacking case analysis for large-sized companies in complex business environments. As a result, enterprises have very little knowledge in operating these techniques in practice.

Respondent 19 (A water and electricity Ltd) (2)
State-owned enterprises must become legally independent units and principal players in market competition; otherwise the western practices of management accounting could not be fully adopted.

Respondent 20 (An insurance group corporation) (6)
The most important barrier for adopting western practices of management accounting is the low management consciousness of top management teams in state-owned

enterprises. If this problem cannot be resolved the adoption and diffusion of any advanced management thoughts and techniques are just an empty talk.

Respondent 21 (A machinery manufacturer)

Western practices of management accounting are very useful in helping the decision making process, but state-owned enterprises are still at the stage of applying financial accounting. The superior authorities above state-owned enterprises often extend some financial accounting techniques rather than management accounting practices within their subsidiary of enterprises.

Respondent 22 (A transport and logistics group corporation)

The adoption and absorption of the experiences of western management accounting in state-owned enterprises is vital for the growth of globalisation. However in China, the link of accounting academics and practitioners does deal with the requirement of effectively using western practices of management accounting in state-owned enterprises.

Respondent 23 (An agriculture group corporation) (4)

Although western practices of management accounting originating from the market economy are very important for Chinese state-owned enterprises, the adoption of these techniques in China still cannot penetrate the learning stage. The barriers for using western practices of management accounting include over complicated structure of ownership, conflicting interests of bodies such as the government, superior authority and the enterprise itself. All of these have resulted in the insufficient role of western practices of management accounting in the control and decision making process.

Respondent 24 (A water conservancy project general corporation)

Chinese organisations, especially state-owned enterprises, have gradually adopted western practices of management accounting. However, the difference in the extent of utility of western practices of management accounting exists in different organisations are influenced by different policies and environments.

Management accounting pays more attention to forecasting and controlling. Its detailed practices and level of application are closely linked with many factors, such as the internal management structure, the objectives of organisations, the managerial views of chief executive officer (CEO), the management ability of chief financial officer (CFO) and the pressure faced by enterprises from competition.

Chinese organisations, especially large-sized state-owned enterprises not only lack farsighted CEOs but also lack able CFOs, or the CFO has not been given essential power, or the power of CFO is separately distributed into different departments such as finance, planning, production and operation, and administration. This condition has caused internal conflicts or inconsistency within the organisation and reduced the effect of using western practices of management accounting. Therefore the most important factor is for the managers at different levels to comprehend the concepts and techniques of management accounting.