TRANSFER OF RETAIL MANAGEMENT KNOW-HOW TO CHINA

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Transfer of Retail Management Know-how to China

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CERTIFICATE OF ORIGINALITY

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LIU Yaping (Name of student)

ABSTRACT

China has witnessed an increasing presence by international retailers since the 1990s, most of which face the lack of qualified management staff when they operate in China, particularly when expanding the scale of operations in the country. In order to acquire the managerial skills necessary for competitiveness, local managers need to learn needed knowledge from their foreign parent because in transition economies such as China, foreign parent is normally a vital source of useful knowledge. The primary aim of this research is to utilize knowledge transfer theory to explore retail management know-how transfer from international retailers to their subsidiaries in China. The research objectives are five-fold: (1) to investigate the elements of retail management know-how that are effectively transferred from international retailers to their subsidiaries in China; (2) to examine two key factors, absorptive capacity of the subsidiaries and commitment of the foreign parent, that affect knowledge transfer effectiveness; (3) to develop measures of the associated constructs; (4) to examine the effect of knowledge transfer on business performance; (5) to examine possible moderating effects of ownership type and retail format on the relationships proposed in the model. In order to empirically test the proposed model, two methods were used to collect data; one was face-to-face interview survey, and the other web-based survey. The informants in this study were store managers and senior managers of foreign-

owned retail establishments in China.

The scale development procedures for the proposed constructs, particularly for retail management know-how, began with items, derived initially from an extensive literature review. Additional items were identified via in-depth interviews with seven store/senior managers of foreign-owned retail establishments in China. Exploratory factor analysis (EFA) was conducted to identify the factor structure of the scale for the constructs in the proposed model. Retail management know-how at this stage was found to be composed of two dimensions: strategic management know-how versus tactical program management know-how. Confirmatory factor analysis (CFA) was then carried out to validate all the measurement models of concern here and acceptable model fit indices were achieved.

Causal studies were then conducted to examine the proposed structural model and related hypotheses. Due to the small sample size (N=89), it was decided to spilt the overall model into two submodels. One submodel describes the path relationships among absorptive capacity, knowledge transfer and performance, whereas the other incorporates the relationships among commitment, knowledge transfer and performance. The two submodels were assessed using structural equation model (SEM) technique. The statistical results support the conceptualization of absorptive

capacity as a second-order measurement model since it has a better model fit than the first-order one. This is perhaps the most important finding since it indicates that both management staff's ability to learn and organizational adaptability are necessary components of a firm's absorptive capacity to optimally facilitate the transfer of retail management know-how from international retailers to their subsidiaries in China. The predicted second-order structure of commitment was also validated by the findings of this research, with management involvement and communication as its components. Positive impacts of absorptive capacity and commitment on knowledge transfer effectiveness were also confirmed. Moreover, the results show that subsidiaries that have effectively acquired strategic management know-how from their foreign parent performed better in terms of several marketing metrics such as market share, sales volume and profit. However, the influence of tactical program management know-how on business performance was found to be statistically insignificant. Finally, analysis of variance (ANOVA) indicates that there are no significant differences in knowledge transfer effectiveness across either ownership types of retail establishment, while business performance does not vary by retail format either.

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CHAPTER 1 INTRODUCTION

This chapter presents an overview of the present research across four sections. The first section provides the research background. The next section explains the research scope for the study. Section three describes the research questions, objectives and significance of the study, while the final section explains the structure of this dissertation.

1.1 Research Background

Chinese consumers' consumption power has been improving due to the rapid growth in the national economy and a steady increase of the middle class over the past three decades, with an average annual GDP growth rate of 9.6% for the period of 1979-2006 (*the National Bureau of Statistics, NBS* hereafter). According to the NBS, China's retail sales grew at an annual rate of over 12% from 1992 to 2006, and national retail sales will reach US$2.4 trillion by the year 2020. Farrell et. al (2006) have reported in a recent study that China's middle class has been steadily growing which will comprise a large population of 520 million by 2025 - more than half of the expected urban population of China, with a total disposable income of 13.3 trillion renminbi. However, the retail sector has remained largely local and is substantially fragmented (Cui and Liu, 2000) in China, as the top six retailers in the country account for only one-fifth of national consumption (Samiee, Yip and Luk, 2004). Due to the rapid retail sales growth with the fragmented nature, as well

as the steady increase of the middle class together with an emergence of wealthy consumers (McKinsey, 2008), the China market represents good potential for international retailers. the China market represents good potential for international retailers. Many of them have entered the market since 1992 when the State Council introduced its "go-ahead" policy to foreign retailers. According to the law, foreign retailers can set up one or two pilot ventures respectively in Beijing, Shanghai, Tianjin, Guangzhou, Dalian, Qingdao and the Five Special Economic zones, namely Shenzhen, Zhuhai, Shantou, Xiamen, and Hainan, with the legal requirements that foreign-owned retailing ventures had to be equity joint ventures or contractual cooperative enterprises with the local partner holding over 51% of the shares. As a result, most international retailers had used joint venture as the entry strategy to enter China's retail market. Another reason for using joint venture as the entry strategy is to "borrow" a partner's already-in-place local infrastructure to learn about the Chinese market, government policies and the political systems (Si and Bruton, 1999). However, most international retailers have changed their businesses into wholly owned enterprises (WOEs) to ensure effective control since the end of 2004 when the PRC government completely opened its retail market as promised, based on the agreement with the World Trade Organization (WTO) that international retailers can set up retail ventures in any part of China without any limitation on ownership. According to *the Development Trends of the World Retail Industry and China's Retail Industry* published by the *China General Chamber of Commerce* in 2006, about 80% of the top 50 global retailers had already entered the China market. These international retailers had opened more than a thousand retail establishments in the country in the form of joint venture or wholly owned

enterprises, with a market share of about 3%-4% of total national retail sales, by the end of 2005, five years after China's accession to the WTO.

International retailers face the lack of qualified management staff when they operate in China, particularly when expanding the scale of operations in the country. In order to acquire the managerial skills necessary for competitiveness, local managers need to learn the needed knowledge from their foreign parent because "In transition economies such as Hungary and China, foreign parents normally bring in technology and management know-how, and are a vital source of useful knowledge" (Tsang, 2002b, p.835). In a similar study of knowledge transfer from multinational corporation (MNC) parent to its China subsidiary, Wang et al. (2004) have also contended that without effectively acquiring knowledge from their MNC parents, it would be difficult for the subsidiaries/IJVs to establish their knowledge base, improve their competences, and finally generate good returns for their parents (p168).

1.2 Research Gaps

Knowledge transfer in MNCs has been a popular research topic since early 90s.due to the emergence of knowledge-based view (KBV) (Barney, 1991; Drucker, 1993; Conner and Prahalad, 1996; Grant, 1996; Teece, 1998) and rapid increase of MNCs' overseas expansion. However, similar studies in the stream are limited to industrial concerns, whether the findings can be generalized to service sector has

never been addressed. (research gap 1) Due to the extensive differences between the industrial and retail sectors (Dawson and Mukoyama, 2003), it is necessary to test the models specifically in the international retailing area.

Another research gap is that most of the existing studies on knowledge transfer in international context have identified subsidiary's absorptive capacity (Cohen and Levinthal, 1990; Lyles and Salk, 1996; Tsang, 2002b; Berdrow and Lane, 2003; Minbaeva et al., 2003) and support from foreign parents as two important influencing factors which are associated with increased knowledge transfer. However, some researchers (e.g., Minbaeva et al., 2003) have commented that no systematic effort has been devoted to developing valid measures of the constructs. As such, there is a clear need for valid measure development of these learning-related constructs (absorptive capacity and commitment).

Therefore, an empirical investigation of how to transfer management know-how in service sector to emerging economies like China will have both academic and practical value. The present study is thus designed to investigate transfer of retail management know-how from international retailers to their subsidiaries in China to address the aforesaid knowledge gaps by developing a theory-based research model incorporating absorptive capacity, commitment, know-how transfer effectiveness and business performance, developing valid measures, and testing the hypothesized relationships among them. The research scope, research questions, research objectives and significance of the study will be discussed in the ensuing sections.

1.3 Research Scope

The study employs knowledge transfer theory to address retail management know-how transfer from international retailers to their subsidiaries in China to advance our knowledge of international transfer of retail management know-how in China's retail sector. Knowledge transfer in multinational corporations has been a popular research topic since the early nineties, stimulated by the emergence of the knowledge-based theory of the firm and the rapid increase of MNCs' overseas expansion (Crossan and Inkpen, 1995; Grant, 1996; Davenport and Prusak, 1998; Lane, Salk and Lyles, 2001). Knowledge-based theory of the firm considers knowledge, especially organizational tacit knowledge, a critical source of sustainable competitive advantage in the sense that it is difficult for competitors to imitate (Barney, 1991; Drucker, 1993; Conner and Prahalad, 1996; Grant, 1996; Teece, 1998). Following this theory, a firm can be looked at as a knowledge system creating, processing, transferring and managing knowledge (Grant, 1996), with knowledge embedded and carried through multiple entities such as organizational systems, routines, policies, documents, organizational culture and management staff (Inkpen and Dinur, 1998). Kogut and Zander (1993) contends that "a firm's ability to transfer knowledge is a reason for its very existence" (p.628), and goes a step further to interpret foreign direct investment (FDI) as "the transfer of an intermediate good, called knowledge, which embodies a firm's advantage, whether it be the knowledge underlying technology, production, marketing or other activities" (p.628).

Previous studies have reported that knowledge transfer from the foreign parent is crucial for international joint venture success in transition economies such as Hungary and China (Lyles and Salk, 1996; Steensma and Lyles, 2000; Lane, Salk and Lyles, 2001; Luo, 2002; Tsang, 2002b; Wang et al., 2004). For instance, Meyer and Estrin (2001) have pointed out that local firms in transition economies are normally weak in management and marketing capabilities and eager to improve through learning from foreign partners. Wang et al. (2004), in their study of an integrated model of knowledge transfer from multinational corporation parent to its China subsidiary, argues that without effectively acquiring knowledge from their MNC parents, it would be difficult for the subsidiaries/IJVs "to build up knowledge base, improve capabilities, accelerate management localization and survive intense competition to generate good returns for their parents" (p168). Miesing et al. (2007) have proposed a model to explain how foreign invested enterprises can transfer effectively and successfully both explicit and tacit management knowledge from the headquarter office to the subsidiaries in mainland China. Their findings reveal that the willingness and ability of the subsidiary and trust-based collaboration among the subsidiaries that are scattered in different geographic areas are the most important factors to the success of this kind of intra-knowledge transfer. Wang-Cowham (2008) has found some individual factors, in particular, language and communication ability, motivation and willingness of the Chinese managers to learn, could facilitate the transfer of human resource management knowledge from parent firms in Europe to China. Yang et al. (2008) have also identified that it is common for MNC parent to infuse management knowledge from home to supplant the subsidiary's existing

knowledge and investigated the impact of knowledge characteristics and organizational factors on the transfer of marketing and management know-how in transition economies.

Since most previous studies on knowledge transfer from MNCs to their subsidiaries have only used the manufacturing sector for investigation (Crossan and Inkpen, 1995; Lane, Salk and Lyles, 2001), the question remains whether these findings can be generalized to the service sector such as retail service. China is selected as the country for study based on the reason that though China has witnessed an increasing presence by international retailers since 2000, so far empirical research focusing on the distribution and retail sector in China has been scant (Samiee, Yip and Luk, 2004).

Prior studies have identified absorptive capacity of the subsidiary (Cohen and Levinthal, 1990; Lyles and Salk, 1996; Tsang, 2002b; Berdrow and Lane, 2003; Minbaeva et al., 2003) and knowledge source-related factor such as foreign parent's active management involvement (Lyles and Salk, 1996; Tsang, 2002b) and intensive communication with their subsidiaries (Berdrow and Lane, 2003) as important influencing factors in knowledge transfer which are associated with increased knowledge acquisition from foreign parent to their subsidiaries (Lyles and Salk, 1996; Wang et al., 2004). However, some researchers have commented that no systematic effort has been devoted to developing valid measures of these learning-related constructs (Tsang, 2002b).

Accordingly, the present study is to develop a theory-based research model incorporating absorptive capacity, commitment, retail management know-how transfer and business performance, develop valid measures, and to test the hypothesized relationships among them. In addition to recipient and source-related factors, ownership type has also been reported to have certain effect on knowledge transfer activities (e.g. Lyles and Salk, 1996; Tsang, 2002a, 2002b; Wong et al., 2005). The possible moderating effects of ownership type on the proposed relationship in the model are thus investigated as well. For retail firms specifically, because different retail formats require the adoption of different management and operation systems and approaches, the type of retail management know-how being transferred from parent firm to its subsidiaries of different retail format should be different. As a result, retail format is also included in the study to see whether it moderates the relationship between knowledge transferred and business performance.

1.4 Research Questions, Objectives and Significance

As stated previously, the research model encompasses the hypothetical relationships among absorptive capacity, commitment, retail management know-how transfer and business performance, incorporating ownership type and retail format to see their possible moderating effects on the proposed relationships in the model. More specifically, the study attempts to address the following five research questions:

Question 1: To what extent, do absorptive capacity of the subsidiary and commitment of the foreign parent impact knowledge acquisition?

Question 2: To what extent, does knowledge acquisition affect business performance?

Question 3: What are the valid measures of the associated constructs?

Question 4: Will ownership type and retail format moderate the relationships between the influencing factors, knowledge acquisition, and business performance?

Question 5: What elements of knowledge are normally acquired by the subsidiaries?

Through answering the research questions, the research aims to accomplish the following objectives:

Objective 1: To understand the impact of absorptive capacity and commitment on the acquisition of retail management know-how;

Objective 2: To identify the effect of retail management know-how acquisition on business performance of the retail subsidiaries;

Objective 3: To explore the possible moderating effects of ownership type and retail format on the relationship between the influencing factors and knowledge acquisition;

Objective 4: To develop measures of the associated constructs;

Objective 5: To investigate the elements of retail management know-how which are normally transferred from international retailers to their subsidiaries in an emerging market like China.

The significance of the present research can be justified as follows: First, it explores the content of retail management know-how that is normally transferred from international retailers to their subsidiaries in China. Second, it investigates the impacting factors that might affect retail management know-how transfer effectiveness from international retailers to their subsidiaries in China, which offers understanding about how retail firms can increase the effectiveness of their knowledge transfer process through allocating management resources. Thirdly, the study attempts to investigate the effect of knowledge transfer on a retail firm's business performance. Fourthly, the present research also contributes to knowledge transfer theory by expanding and advancing applications and developments of this body of research to the retailing sector.

1.5 Structure of the Dissertation

This dissertation is organized into six chapters. **Chapter One**, the Introduction Chapter, outlines the research background, defines the research scope and describes the research questions, objectives and significance. **Chapter Two** reviews the extant literature on knowledge, retail management know-how, and knowledge transfer in MNCs to provide the conceptual background of the present study. It is divided into two subsections. First, a review of the knowledge and

knowledge transfer literature and theoretical concepts which are relevant for the study is presented. In particular, retail management know-how is defined and its components described. The second section identifies the factors which can influence the effectiveness of knowledge transfer. **Chapter Three** provides a conceptual model addressing the relationships between retail management know-how transfer and its impacting factors; and that between knowledge transfer and business performance. The factors which may facilitate and/or hinder the effectiveness of knowledge transfer are identified as absorptive capacity and commitment. Ownership type and retail format are identified to help explain the differences in knowledge transfer effectiveness and business performance respectively. Based on the research model, a set of hypotheses for empirical testing are developed. **Chapter Four** explains the research design and methodology which delineates the item generation process, field work process, pilot study, survey instrument refinement, sampling and data collection process. **Chapter Five** focuses on data analysis and discussion of the findings. **Chapter Six** is a conclusion section which summarizes the main findings of the thesis, discusses managerial implications and addresses limitations of the present study and avenues for future research.

CHAPTER 2 LITERATURE REVIEW

The main purpose of this chapter is to explore the relevant literature on knowledge and knowledge transfer to provide the theoretical background for hypotheses development and testing in the present study. First, the conceptualization and classification of knowledge and knowledge transfer are reviewed and discussed. Specifically, the concept of retail management know-how is elaborated in this section. The second section discusses the factors that would either facilitate, or instead, hinder knowledge transfer.

2.1 Definition and Classification of Knowledge

When investigating knowledge transfer in multinational corporations, Chini (2004) has argued that "An examination of the various perspectives on the definitions of knowledge and their implications for knowledge management forms a useful starting point, enabling researchers and practitioners alike to understand the directions of knowledge management research" (p.5). Scholarly research focused on the organizational dimensions of knowledge and knowledge transfer (e.g. Kogut and Zander, 1992) considered knowledge as a set of capabilities that enhance firm's competitiveness. In this stream of research, some researchers construe knowledge in a broadly defined way as resources that provide a sustainable advantage for the firm (e.g. Davenport and Prusak, 1998), whilst others paid more attention to various classes of more specialized organizational capabilities

(Simonin, 1999a, 1999b; Chini, 2004). According to previous studies, three major knowledge classification schemes have been suggested: explicit versus tacit, know-what versus know-how, and individual versus organizational.

2.1.1 Explicit versus tacit knowledge

A commonly adopted categorization of knowledge is explicit versus tacit knowledge (Polanyi, 1966; Nonaka and Takeuchi, 1995). Explicit knowledge is the knowledge that is highly codified and can be readily transmitted between individuals in formal, systematic language, such as manuals, computer programs, training tools and so on (Polanyi, 1966; Nonaka and Takeuchi, 1995). Tacit knowledge is, in contrast, a type of knowledge that is abstract, non-verbalized, intuitive and unarticulated, just as Polanyi (1966) put it, “we can know more than we can tell” (p.4). Nonaka (1994) indicates that tacit knowledge is deeply rooted in individuals’ actions and experience as well as in the ideals, values, or emotions one embraces, and personal quality may make it hard to formalize and communicate. Referring to knowledge within an organization, Nonaka and Takeuchi (1995) and Spender (1996b) suggest that, tacit knowledge is very often transformed into habit and made traditional in the sense that it becomes “the way things are done around here” (Spender, 1996b, p.46). Inkpen (1996) further indicates that tacit knowledge is more difficult to formalize and is therefore less easy to interpret and transfer from one organization to another, and that it can only be shared through interactions, personnel movement and strategic linkages, because tacit knowledge is closely tied to the company and cannot be sold on the market as uniform

standard solutions. Büchel et al., (1998) argues that one of the key characteristics of tacit knowledge is that it is not equally available to all competitors, and it can only be communicated through active involvement of the transferor. Cavusgil et al. (2003) indicates that at the individual level tacit knowledge can be found in particular skills as well as within forms of abstract knowledge, whilst collective tacit knowledge typically resides within top management, and that organizational tacit knowledge is deeply rooted in action, commitment and involvement in a specific context, which can only be passed on by close personal contact. Li Li (2004) has contended that the distinction between explicit and tacit knowledge is important "because it addresses two important dimensions of knowledge that are central to knowledge transfer research - the transferability and applicability of knowledge" (p.11). More specifically, Dhanaraj et al. (2004) have suggested as follows that different areas of knowledge can be categorized as relatively tacit or explicit:

> "Generally speaking, quantifiable technologies and processes are more explicit and more easily transferred (Von Glinow and Teagarden, 1988). In contrast, managerial and marketing expertise is more tacit than product development, production, and technology (Shenkar and Li, 1999; Lane et al., 2001). Management and marketing skills are embedded and are not easily codified in formulas or manuals; they also cannot be reverse-engineered easily (Zander and Kogut, 1995)" (p.430).

2.1.2 Know-what versus know-how

Another commonly adopted categorization of knowledge has been drawn between know-what/information and know-how (Kogut and Zander, 1992). Know-what is also referred as declarative knowledge. According to Chi (1981), declarative knowledge is knowledge about facts and concepts, dealing with information about a situation. This kind of knowledge usually represents a more articulable dimension of knowledge (Kogut and Zander, 1992). Know-how refers to procedural knowledge (Zack, 1999). Kogut and Zander (1992) define know-how as the knowledge of how something occurs, or a certain task, or activity is performed. This type of knowledge represents embedded experience and successful solutions to complex tasks, as well as coordination of solutions among various tasks in the organization(Chi, 1981). According to Kogut and Zander (1992), know-how is based on distinct systems and is the accumulated practical skill, or expertise, that allows one to do something smoothly and efficiently. Von Krogh et al. (2000) indicates that know-how is also directing communication, defining planning steps and setting performance measures. Chini (2003) has contended that shared understanding of know-how or procedural knowledge lays a foundation to efficiently coordinate action in organizations.

2.1.3 Individual and organizational knowledge

According to the level of the knowledge bearer, Hedlund (1994) distinguished knowledge among the levels of individual, group, organization and inter-

organizational domains. Scholarly research devoted to organizational knowledge creation and transfer in the firm construes knowledge as a set of capabilities that enhance the chances for growth and survival (Kogut and Zander, 1992). Teece (1998) suggested that the firm's knowledge base includes its technological competences as well as knowledge about customer needs and supplier capabilities, and these competences are reflected in both individual skills and the collective knowledge of organizational communities. Organizational knowledge is embedded knowledge and comprises belief systems, collective memories, references and values. It 'resides in the relations between individuals, and is therefore more than the sum of individual knowledge bases' (Kriwet, 1997, p.83). Tsang (1999) noted that the lessons learned by a member of an organization have to be shared by other members and be institutionalized before the lessons can become part of the organizational knowledge base. Grant (1996) and Simonin (1999a) reported that organizational tacit knowledge is resistant to clear communication due to its idiosyncrasy, context embeddedness and ambiguity, and hence is difficult for competitors to imitate, making it a crucial source of sustainable competitive advantage (Teece,1998).

For the purpose of this research, a specific type of organizational tacit knowledge, i.e. retail management know-how, is examined in the context of knowledge transfer from international retailers to their subsidiaries in China.

2.2 Retail management know-how

The concept of retail "know-how" has not been well defined in the literature (Au-Yeung, 2003). When examining transatlantic retail know-how which flowed from the United States to the European market, Kacker (1988) has suggested that retail know-how be grouped into two categories: managerial versus technical. While the technical dimension deals with the techniques pertaining to site selection, store layout, buying, and merchandise planning, the managerial retail know-how refers to business concepts, policies, and systems (Kacker, 1988, p.43). Goldman (2001), while addressing transfer of retail formats into developing economics taking China's case as an example, elaborated on the term retail know-how as follows:

> "A distinction is often drawn between the *offering* and the *know-how* parts of the format. The first includes the *external* elements (e.g. assortment, shopping-environment, service, location and price) delivering the functional, social, psychological, esthetic and entertainment benefits attracting consumers to stores. The second, the *internal* part, determines a retailer's operational strength and strategic direction. It consists of the *retail technology* dimension containing the systems, methods, procedures and techniques that retail company uses and of the *retail culture*, that includes the repertoire of concepts, norms, rules, practices and experiences" (p.223).

Au-Yeung (2003), however, has claimed that these conceptualizations of retail

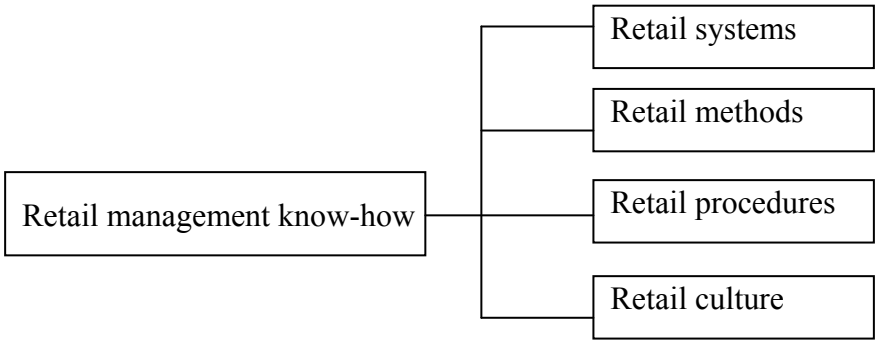
know-how are "vague and inconsistent" (p.138). Building from the existing literature, the author gave a more comprehensive concept of "retail know-how" which suggests that "retail know-how identifies the main elements that define a retailer's strategy, which in turn determines the retailer's competitive position in a market" (Au-Yeung 2003, p.138). The author further identified three components of retail know-how as *retail technology*, *retail culture*, and *retail format*, and suggested that retail technology contains the systems, methods, procedures and techniques that a retail firm employs, which determines the firm's operational strength and strategic direction. This is consistent with what Kacker suggested as managerial retail know-how and what Goldman (2001) claims as internal part of the term retail know-how. Au-Yeung (2003) goes a step further and suggests that retail technology comprises four areas:

> "First, there is information technology, which a retailer uses to manage the flow of information, physical materials and finance throughout the whole supply chain. Second, there is supply chain relationship management, which is about selecting and negotiating with suppliers, and establishing and maintaining relationship management. Site selection and store development is the third area. The fourth area is cash flow management, which is mainly about retail financial for different formats" (p.138).

As for retail culture, Au-Yeung (2003) agrees with Goldman (2001) that it consists of concepts, norms, rules, practices and experiences, and that it determines a retailer's ability to evaluate situations, identify trends and opportunities, and deal

with problems (p.223). Au-Yeung (2003) defines the third component of retail know-how, i.e. retail format as "the physical elements of a retail outlet that are visible to consumers, such as assortment, store atmosphere, service inside the store, physical location and price, and each retail format comes with a specific cash flow and Return on Investment (ROI) management philosophy. and contends that retail format has implications for the physical appearance of the retail outlet, store layout, merchandising strategy and cash flow management" (p.128).

Figure 2.1 The definition of retail management know-how



Building from the extant literature, a comprehensive concept of retail management know-how, which is the focus of the present study, could be defined as the internal attributes of retail know-how of a retail organization, embracing retail systems, methods, procedures and retail culture (Figure 2.1). Based on this, retail management know-how could be further specified as retailing philosophy, corporate culture, management mechanisms, strategic planning, business controls, marketing planning, advertising planning, promotion planning, human resource planning, customer relationship management, credit management, information

technology, supply chain relationship management, cash flow management and so on. These elements enhance retailer's ability to evaluate situations, identify trends and opportunities, and deal with problems, which eventually determines a retailer's operational strength and strategic directions (Goldman, 2001; Au-Yeung, 2003). Due to its socially complex nature, these elements are generally regarded as tacit, and thus is rather difficult to imitate/transfer (Inkpen and Dinur, 1998; Nonaka, 1994).

2.3 Conceptualization of Knowledge Transfer

Szulanski (1996) was the first to introduce the communication model to conceptualize knowledge transfer between a source and a recipient unit. According to the author, knowledge transfer is "dyadic exchanges of knowledge between a source and a recipient in which the identity of the recipient matters" (p.28), and "the movement of knowledge within the organization is a distinct experience, not a gradual process of dissemination" (p.28). Szulanski (1996) further contends that the process of knowledge transfer covers four stages, namely initiation, implementation, ramp-up and integration, and that while the first two stages consist of all events that lead to the decision to transfer and the actual flow of knowledge from the source to the recipient, the latter two stages start when the recipient begins utilizing the transferred knowledge. Along this line, Davenport and Prusak (1998) have suggested that the knowledge transfer involves two actions: transmission of knowledge to a potential recipient and absorption of the knowledge

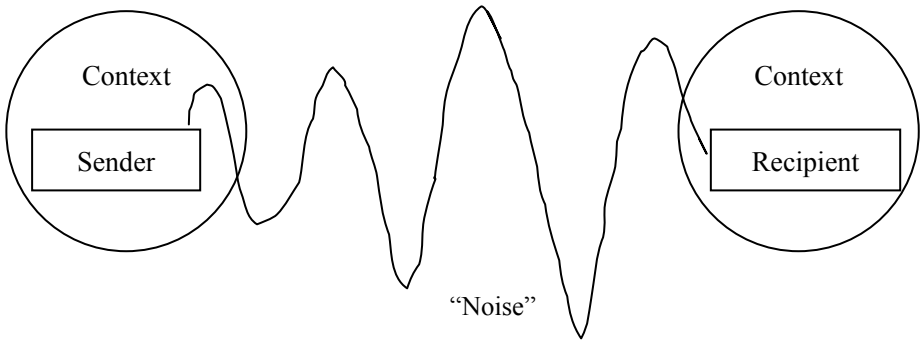
by that recipient which could lead to the development of new knowledge or eventually some changes in the recipient's behavior. Argote and Ingram (2000) have echoed that knowledge transfer at the organizational level can be defined as the process through which one unit (e.g. group, department or division) is affected by the experience of another (p.151). Based on prior studies, Minbaeva et al. (2003) conceptualizes knowledge transfer between organizational units as "a process that covers several stages starting from identifying the knowledge over the actual process of transferring the knowledge to its final utilization by the receiving unit" (p587). Accordingly, Wang et al. (2004) define knowledge transfer as "a process of systematically organized exchange of information and skills between entities" (p.173), in a study of knowledge transfer from MNCs to their subsidiaries in China.

Figure 2.1 provides a simplified communication model based on Shannon and Weaver (1957) depicting a message's flow from a sender (source of information or knowledge) to a recipient. In the model, sending a message can be considered a communicative act by the sender, while receiving a message is a communicative act by the recipient. The sender codifies the information or knowledge into a suitable form and starts the process of sending the information or knowledge to the recipient. The recipient receives the information and decodes it and implements the information or knowledge received in his or her context.

The communication model is also adopted to investigate the process of retail management know-how (message) transfer from international retailers (sender) to their subsidiaries (recipient) in China in the present study since it can be seen as

the foundation of a knowledge transfer process (Chini, 2004).

Figure 2.2 A general transmission model of communication



Source: Based on Shannon and Weaver (1957).

2.4 Knowledge Transfer Effectiveness

Knowledge transfer cannot guarantee the recipient will in fact learn the required knowledge (China, 2004). Davenport and Prusak (1998) have suggested that the objective of knowledge transfer is to improve an organization's ability to do things so that to increase value to the desired business goals. Zander and Kogut (1995) use the term of "successful knowledge transfer" to describe the transfer that results in the receiving unit accumulating or assimilating new knowledge. Along with the line, Grant (1996) has used the term "effective utilization" to refer to the potential of turning knowledge transferred into a competitive advantage-yielding competence. Foss and Pedersen (2002) has contended that the effectiveness of knowledge transfer processes depends on the perceived benefit. Schlegelmilch and

Chini (2003) have echoed that effective knowledge transfer implies the recipient unit will be able to integrate the new knowledge in the unit's context and make use of it. Minbaeva et al. (2003) have emphasized that the key element in knowledge transfer is the extent to which the recipient acquires potentially useful knowledge and utilizes the knowledge in his own operations, and that this knowledge utilization leads to the development of new ideas or/and some behavioral change. Some other researchers focus on the extent/volumes to which knowledge has been internalized and institutionalized in the recipient (Kostova, 1999).

Previous studies have measured knowledge transfer effectiveness in different ways. For instance, Szulanski (1996) have identified timing, budget, and recipient satisfaction, in evaluating internal "best practice" transfer, whereas Zahra et al. (2000) have used breadth (amount), depth (understanding), and speed (pace) when examined technological learning in the context of international expansion by new ventures. Most studies, however, have used the extent/degree of knowledge transferred (e.g. Bresman et al., 1999; Dhanaraj et al., 2004; Håkanson and Nobel, 2001; Lyles and Salk, 1996; Mowery et al., 2002; Tsang, 2002), the rate of knowledge transfer (e.g. Darr et al., 1995; Zander and Kogut, 1995), or how transferred knowledge has helped the recipient unit/organization (e.g. Björkman et al., 2004; Lane and Lubatkin, 1998; Simonin, 1999a, 1999b) to measure knowledge transfer effectiveness.

Following most studies on knowledge transfer, the present study employs the extent of knowledge transferred and learned to measure the effectiveness of

knowledge transfer, considering effective knowledge transfer as that the retail management know-how transferred from the foreign parent is fully understood by the local subsidiary which subsequently makes use of the knowledge transferred to facilitate business planning and operations. In this regard, the effectiveness of knowledge transfer would be evaluated based on the perception of the knowledge receivers, i.e. international retailers' subsidiaries.

2.5 Factors Affecting Knowledge Transfer

Far from being readily or easily transferred from the source to the recipient, knowledge is normally immobile and knowledge transfer faces impediments (Attewell 1992), while differences between firms in established and transitioning economies add to the challenge (Lyles and Salk, 1996; Lane, Salk and Lyles, 2001; Wang et al., 2004). Hamel et. al (1989) have reported that knowledge transfer between organizations or firm-units depends on how easily that knowledge can be transported, interpreted and absorbed. Prior studies have shown that knowledge transfer is influenced by four sets of factors: knowledge nature-related (Kogut and Zander, 1992, 1993; von Hippel, 1994; Nonaka, 1994; Szulanski, 1996; Buckley and Carter, 1999; Simonin, 1999a), source-related (Gupta and Govindarajan, 2000; Tsang, 2001; Minbaeva et al., 2004; Wang et al., 2004), recipient-related (Cohen and Levinthal, 1990; Hamel, 1991; Lyles and Salk, 1996; Lane et al., 2001; Minbaeva et al., 2003) and context-related factors (Hansen, 1999; Bartlett and Ghoshal, 1989; Bartlett and Ghoshal, 1994).

Regarding knowledge nature-related factors, the researchers have emphasized the different characteristics of knowledge, such as knowledge tacitness (Nonaka, 1994), "inertness of knowledge" (Kogut and Zander, 1992, p.387), knowledge "ambiguity" (Simonin, 1999a) and knowledge complementarities (Buckley and Carter, 1999). For instance, Von Hippel (1994) have used "sticky information" to describe "information that is difficult to transfer, stickiness being reflected in the incremental cost of transferring the information" (p.430). Szulanski (1996) have examined the concept of "internal stickiness" in a study of internal transfer of best practices, defining it as "the difficulty of transferring knowledge within the organization" (p.29). Following the same line, Simonin (1999a) introduces the concept of "ambiguity", referring to "the same underlying notion of transferability of knowledge as construed under the previous appellations" (p.597) that facilitate or act as knowledge-related barriers to knowledge transfer. Stickiness in knowledge transfer, by definition, hinders knowledge from being transferred between organizations. Previous studies found that the higher the level the knowledge tacitness is, the more difficult the knowledge transfer process will be.

Concerning the context-related factors, organizational culture, relationship closeness in terms of trust (Nahapiet and Ghoshal, 1998), information technology infrastructure, leadership, the availability and richness of the communication system inside a company, shared understanding and normative integration have been emphasized, which are essential in creating the condition crucial for knowledge transfer (Hansen, 1999; Bartlett and Ghoshal, 1989; Bartlett and Ghoshal, 1994).

In addition to the knowledge nature-related and context-related factors, source and recipient-related factors have been proved to be the most important factors impacting knowledge transfer process. For instance, Wang et al. (2004) have reported that "successful knowledge transfer requires the transferors to be capable and willing to transfer knowledge on the one hand, and the recipients to be capable and willing to acquire knowledge on the other hand" (p.168). Tsai (2001) have suggested that knowledge transfer is enabled through absorptive capacity of the receiving business unit. Simonin (1999a, 1999b) and Lane et al. (2001) have argued that knowledge transfer depends on the level of absorptive capacity and the complexity of the knowledge being transferred.

Concerning the source-related factors, some researchers have reported that foreign parent' active management involvement in and intensive communication with their subsidiaries are associated with increased knowledge acquisition (Lyles and Salk, 1996; Tsang, 2002; Berdrow and Lane, 2003). Lane and Lubatkin (1998) have suggested that tacit learning is by nature a type of experiential learning, but it is not merely learning by doing; effective tacit learning frequently involves the active involvement of the teacher.

Referring to recipient-related factors, the ability to absorb and assimilate transferred knowledge, or absorptive capacity of the recipient units has been emphasized to a great extent (Cohen and Levinthal, 1990; Hamel, 1991; Lyles and Salk, 1996; Szulanski, 1996; Gupta and Govindarajan, 2000; Kim, 2001; Zahra and George, 2002; Minbaeva et al., 2003; Wang et al., 2004). For instance, Lyles

and Salk (1996) have reported that the capacity to learn, measured by flexibility and creativity of the organization, significantly influence the level of knowledge acquisition. Szulanski (1996) have concluded that high absorptive capacity on the part of recipients would facilitate the transfer of best practices. Luo and Peng (1999) have echoed that an IJV's success would strongly depend upon its local partner's learning capability, or its ability to acquire, assimilate, integrate and exploit knowledge and skills. Wang et al. (2004) has come to the same conclusion that a subsidiary's capacity to learn (measured by management staff's qualifications and emphasis on training) was positively related to knowledge transfer from its MNC parent.

The present study therefore identifies absorptive capacity of the subsidiaries and commitment of the foreign parent as major impacting factors which would affect retail management know-how transfer from international retailers to their subsidiaries in China and aims to empirically test their effects on the effectiveness of retail management know-how transfer.

2.6 Studies on Knowledge Transfer in MNCs

Different terms such as "knowledge transfer", "knowledge diffusion", "knowledge acquisition", "knowledge dissemination", "transfer of best practice", transfer of organizational competencies", "transfer of marketing know-how", etc. have been used by researchers to describe various directions and classes of knowledge

transfer in the context of MNC (Chini, 2004). Chronologically, earlier studies before the mid-1980s have concentrated exclusively on technology knowledge, whereas later studies have incorporated a more diversified field of knowledge. For instance, Simonin (1999b) has examined the transfer of marketing knowledge and identified some key barriers to knowledge transfer, such as cultural and organizational distance.

The most relevant studies discussing knowledge transfer in MNCs have been categorized in Table 2.1 summarizing the focus of investigation and related findings of major studies that have been reviewed and discussed in this section. These studies have focused on knowledge transfer in joint ventures, strategic alliances or mergers and acquisitions in the MNC context, and made theoretical contributions as well as qualitative and quantitative empirical contributions. Turning to theoretical contributions, Krogh and Köhne (1998) have identified three phases of knowledge transfer: initiation, actual transfer and integration and reported several impacting factors such as the nature of knowledge, the interaction of sender and recipient, motivation and corporate and local culture that have a bearing on knowledge transfer process. Dixon (2000), on the other hand, distinguishes between different types of knowledge transfer, namely serial, near, far, strategic and expert transfer and offers an integrated system. Turning to the empirical studies, Gupta and Govindarajan (2000), Lahti and Beyerlein (2000) and Lyles and Salk (1996) have contributed valid empirical studies on organizational knowledge transfer in MNCs. There are studies that are of particular relevance for the present work. For instance, based on an empirical study of 62 firms, Wang et al

(2004) have developed a two-stage model addressing knowledge transfer from MNCs to their subsidiaries in China. In the first stage, the model proposes factors affecting the extent of knowledge contributed by an MNC to its China subsidiary. In the second stage, the model proposes factors affecting the extent of knowledge acquired by the China subsidiary from its MNC parent. Their findings reveal that knowledge contributed by the parent company to the subsidiary is affected by two groups of factors: the parent's capacity to transfer knowledge and the parent's willingness to transfer knowledge; whereas knowledge acquired by the subsidiary from its parent is determined by two groups of factors: the subsidiary's capacity to acquire knowledge and the subsidiary's intent to acquire knowledge. Simonin (1999b) also has an important bearing on this current study in that he focuses on marketing function and identifies some key barriers to knowledge transfer, such as cultural and organizational distance.

Table 2.1 Studies on knowledge transfer within MNCs: summary of findings

Study	*Type of knowledge*	*Aim*	*Main Findings*
Gupta and Govindarajan (1991)	Procedural and declarative knowledge	Influence of knowledge flow on control mechanisms	Formal and informal administrative mechanisms reflect knowledge flows
Gupta and Govindarajan (1994)	Procedural and declarative knowledge	Roles of subsidiaries in the MNC according to knowledge flows	Differentiated knowledge flow roles are linked to differentiated processes and systems with the MNC
Darr, Argote and Epple (1995)	Not specified	Learning in service organizations	Knowledge is found to transfer in the same franchise but not across others
Zander and Kogut (1995)	Procedural knowledge	Determinants of the speed of knowledge transfer and imitation	Codifiability, teachability and the threat of market preemption is critical
Appleyard (1996)	Technical knowledge	The mechanisms by which technical knowledge is disseminated	Patterns of knowledge exchange are different both across industries and across countries
Gilbert and Cordey-Hayes (1996)	Instrumental and developmental knowledge	Conceptual model of knowledge transfer	Acceptance is critical for technological change
Grosse (1996)	Technology knowledge	Technology transfer in service industries	Training and transfer of expertise is vital
Szulanski (1996)	Best practice	Comprehensive taxonomy of barriers to intra-firm knowledge transfer	Major barriers are lack of absorptive capacity, causal ambiguity and difficult source-recipient relationship
Doz and Santos (1997)	Not specified	Knowledge transfer in geographical dispersion and context differentiation	Knowledge management can be eventful in different cultures and contexts and has to be packaged differently
Inkpen and Beamish	Not specified	Theoretical framework of local	Acquisition of local knowledge by the foreign partner and the

(1997)		knowledge acquisition by IJVs	impact that this acquisition of knowledge has on the stability of the IJVs
Inkpen and Dinur (1998)	Organizational knowledge	The impact of context on knowledge transfers	Context similarity and the nature and extent of knowledge transfer mechanism employed are the key success factors
Birkinshaw, Hood, and Jonsson (1998)	Not specified	Determinants of the contributory role of the subsidiary and subsidiary initiative	Subsidiary companies are able to contribute to the firm-specific advantages of the MNC
O'Dell and Grayson (1998)	Not specified	Identification and transfer of best practices	Best practice transfer as a benchmarking process
Bresman, Birkinshaw, Nobel (1999)	Technological know-how and patents	Facilitators of knowledge transfer	Technological know-how transfer is facilitated by communication and time elapsed, while patent transfer is associated with the articulability of the knowledge, size of the acquired unit
Buckley and Carter (1999)	Not specified	Conceptual model of knowledge transfer and combination	Drivers, constraints, and outcomes of the proposed framework
Si and Bruton (1999)	Not specified	Knowledge acquisition goals assessment in IJVs in China	Informational needs of the Western partner firm differed significantly from those of their Chinese counterparts
Simonin (1999a)	Marketing know-how	The role of knowledge properties on its transfer in international strategic alliances	The tacitness of the transferred know-how is an overwhelming significant determinant of its transferability
Downes and Thomas (2000)	Not specified	Role of expatriate managers in enhancing group intellectual capital	Expatriate managers facilitate the transfer of knowledge across national borders
Gupta and Govindarajan (2000)	Procedural and declarative knowledge	Determinants of subsidiary knowledge flows	Different determinants of knowledge inflows and outflows
Sveiby (2001)	Individual and organizational	Epistemological approach to strategy formulation	Levels of knowledge transfer and their characteristics

	knowledge		
Tsai (2001)	Not specified	Impact of a unit's absorptive capacity and network position on knowledge transfer	Units in central network positions create more innovation
Foss and Pederson (2002)	Not specified	Sources of transferable subsidiary knowledge	Knowledge from different sources within the unit has to be transferred differently
Schlegelmilch and Chini (2003)	Procedural and declarative knowledge	Headquarter's benefits of knowledge transfers from subsidiaries	Subsidiaries strategic mandate and the headquarters absorptive capacity are critical
Wang et al. (2004)	Not specified	Factors affecting the extent of knowledge contributed by MNC and knowledge acquired by the subsidiary	Parent's capacity and willingness to transfer knowledge and subsidiary's capacity and intent to acquire knowledge

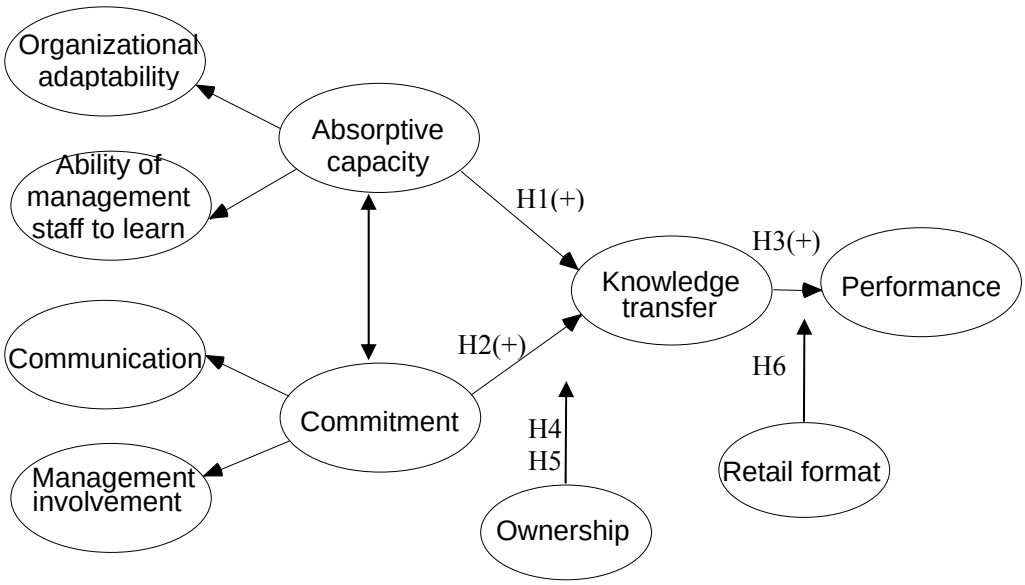
CHAPTER 3 RESEARCH HYPOTHESES

In this section, a conceptual research model is proposed based on the literature review in Chapter 2. Then, a set of hypotheses are established to test the relationships among absorptive capacity, commitment, knowledge transfer and business performance accordingly. Whether ownership type and retail format will help explain the differences in the content and activities of the transfer of retail management knowledge is also tested.

3.1 Conceptual Model

Figure 3.1 encapsulates the conceptual model.

Figure 3.1 Retail management know-how transfer model



3.2 Hypotheses Development

As evidenced in previous studies, the convention is to treat absorptive capacity, the learning ability of management staff, and organizational adaptability as distinctive constructs to build formative model to examine their potential effects on the transfer of technology and/or management knowledge. The conventional practice can be followed to build a competing model that includes four first-order constructs, suggesting a formative view of absorptive capacity and commitment. A formative model assumes that the two formative factors of both absorptive capacity and commitment are designed to be somewhat mutually exclusive and that they together cause an additive effect on absorptive capacity and commitment correspondingly. A change in any of the first-order factor is assumed to result in a consistent change in absorptive capacity, or commitment. If the research opts to adopt a formative model for absorptive capacity and commitment, the research question, hypotheses, and design must be consistent with an additive or cumulative process of formation of absorptive capacity and development of commitment. Therefore, one of the advantages of a first-order model is that it allows researchers to draw conclusions about each of the first-order constructs' relative effects on absorptive capacity and commitment.

When adopting a first-order model to investigate the impact of absorptive capacity and commitment to explain knowledge transfer activities, the research questions and hypotheses may address only the first-order constructs, including organizational adaptability, management staff's ability to learn, management involvement, and

communication, but not the concept represented by the grouping, that is, absorptive capacity and commitment.

However the model in Figure 3.1 is a second-order model. Second-order constructs are constructs with first-order constructs as their indicators. Modeling absorptive capacity and commitment as a second-order construct suggests a reflective view of absorptive capacity. This approach promises a number of advantages over the first-order formative model. First, the second-order models present a more parsimonious nomological networks by reducing the number of causal linkages and provide a mechanism to explain the common variance across first-order dimensions so as to minimize multi-collinearity (Erez and Judge, 2001; Gerbing and Anderson, 1984). Second, the second-order construct captures better the theoretical definition of the construct in logical sense. If the construct is proved to be a second-order construct, the use of first-order factors may be in contradiction with the theoretical definition of the construct. Third, normally second-order constructs provide a richer model of the consequences of predictors. i.e. constructs (variables).

Dwyer et al. (1987) suggests that a second-order construct be used to combine several related constructs into a higher-order construct using structural equation analysis. Second-order measurement models are potentially applicable under the following conditions:

1) The conceptualization of the higher construct implies that the embedded lower order factors should not be separate, distinctive constructs; instead they all

represent the domain of the higher order construct. The higher order factor is hence hypothesized to account for the relations among the lower order factors.

2) Being consistent with the conceptualization, the lower order factors are assumed to be correlated with each other and are not theoretically independent

3) The lower-order factors have a similar theme and normally have the same antecedents and consequences (Jarvis et al., 2003).

Second-order measurement models have been used over a wide variety of domains in psychology, for instance, meaning and satisfaction in life (Harlow and Newcomb, 1990), HIV stigma (Berger et al., 2001), Big Five personality structure (DeYoung et al., 2002), quality of life (Gotay et al., 2002) and psychological well-being (Hills and Argyle, 2002). Potential advantages of second-order factor measurement model over a first-order one are summarized in Table 3.1.

Table 3.1 Advantages of second-order model over a first-order one

Advantages	Sources
1. The second-order factor model "can test whether the hypothesized higher order factor actually accounts for the pattern of relations between the first-order factors".	Chen et al., (2005, p.473)
2. The second-order factor model creates a structure on the pattern of covariance between the first-order factors, explaining the covariance in a more parsimonious way with fewer parameters.	Rindskopf and Rose (1988), Gustafsson and Balke (1993)
3. The second-order factor model "separates variance due to specific factors from measurement error, leading to a theoretically error-free estimate of the specific factors. The unique variance of each first-order factor that is not shared by the common second-order factor represents the specific factors (Eid et al., 2003). These specific factors are represented by the disturbance of each first-order factor".	Chen et al. (2005, p.473)
4. The second-order factor provide useful simplification of the interpretation of complex measurement structures such as multitrait–multimethod models[1] and latent state-trait models[2].	[1]Eid et al. (2003), [2]Steyer et al. (1992)
5. Proposing absorptive capacity as a second-order construct is that the relative significance of each of the dimensions on overall absorptive capacity can be ascertained.	Kwan and Walker (2003, p.706)

Source: Based on Chen al. (2005) and Kwan and Walker (2003).

Following this line of though, the discussion in the ensuing section will explain the

justification of proposing both absorptive capacity and commitment as second-order measurement model.

3.2.1 Direct effects

3.2.1.1 Absorptive capacity and knowledge transfer

The notion of absorptive capacity has been applied in various studies (e.g. Cohen and Levinthal, 1990; Bosch, Volberda and Boer, 1999; Gupta and Govindarajan, 2000; Tsai, 2001; and Minbaeva et al., 2003; Wang et al., 2004) and previous studies have suggested that absorptive capacity is an antecedent to effective knowledge transfer. However, there was no general consensus on how to define and operationalize the construct of absorptive capacity (Cohen and Levinthal, 1990; Lyles and Salk, 1996; Minbaeva et al., 2003; Wang et al., 2004). For instance, absorptive capacity has been explored to a great extent either at organization level (Lyles and Salk, 1996), or at management staff level (Minbaeva et al., 2003; Wang et al., 2004), whether there is interconnectedness between these two dimensions has never been discussed. In essence, the different dimensional nature of the construct demonstrates that absorptive capacity seems to be a complex system of interrelated elements. Further effort is thus needed to explore the domain of this construct and its underlying structure.

Cohen and Levinthal (1990) have contributed seminal work on conceptualizing absorptive capacity as the "ability to recognize the value of new external information, assimilate it, and apply it to commercial ends" (p.128). In the author's view,

absorptive capacity is "more likely to be developed and maintained as a byproduct of routine activity when the knowledge domain that the firm wishes to exploit is closely related to its current knowledge base", and a firm's absorptive capacity tends to develop cumulatively, is path dependent and builds on existing knowledge (Minbaeva et al., 2003; p.588). Building on this concept of absorptive capacity, Hamel (1991) have used the notion of "receptivity" to describe the capacity of organizations to learn from their partners, and a central premise of such an organizational capability is that the appropriateness of resource deployment, both human and support assets, shapes the learning outcomes.

Zahra and George (2002), however, criticized that previous studies do not always capture the rich theoretical arguments and the multi-dimensionality of the construct of absorptive capacity (p.186). According to the authors, absorptive capacity consists of four dimensions - acquisition, assimilation, transformation and exploitation. While the former two dimensions form potential absorptive capacity; the latter two forms realized absorptive capacity. The authors further argued that "firms can acquire and assimilate knowledge but might not have the capability to transform and exploit the knowledge for profit generation" (p.191), and that more attention should be devoted to studying the realized absorptive capacity which emphasizes the firm's capability to leverage the acquired knowledge, i.e., applying and transforming the absorbed knowledge in creative and flexible ways so as to customize the solution to deal with the problems encountered by the transferor in the local market.

Following the path of Zahra and George's (2002), Minbaeva et al. (2003) have

argued that absorptive capacity is an organization-level construct that resides with its employees, whose prior knowledge and intensity of effort will determine how effective they can learn through knowledge transfer (p.589). Based on Kim's (2001) definition of prior knowledge which refers to "existing individual units of knowledge available within the organization" (Kim, 2001, p 271), Minbaeva et al. (2003) have suggested prior knowledge be represented by employees' ability, educational background and acquired job-related skills. This is in consistence with Hamel's (1991) observation that low quality of staff will cripple any learning attempt, thus leaving no leeway for knowledge transfer between the source and the recipient. As such, in addition to identifying employees' ability and motivation as the key aspects of the firm's absorptive capacity that facilitate internal knowledge transfer, Minbaeva et al. (2003) also consider different organizational practices which may contribute to the development of absorptive capacity (Minbaeva et al., 2003, p.589). The authors argued that in addition to the prior related knowledge, there should be a certain level of "organizational aspiration" which is characterized by the organization's innovation efforts (Minbaeva et al. 2003, p.589). Following this line, Lyles and Salk (1996) have included international joint ventures' capacity to learn as an independent variable to analyze knowledge acquisition from foreign parents, with the conclusion that organization's capacity to learn, mainly the flexibility and creativity, is a significant indicator of knowledge acquisition from the foreign partner (p.896).

However, while fully exploring the individual's role (Cohen and Levinthal, 1990; Minbaeva et al., 2003; Wang et al., 2004) or organization's characteristics (Lyles and

Salk, 1996), so far no study has explored the relationships between this two dimensions, let alone the attempt to investigate whether the pattern and relationships amongst the first-order factors would support the development of second-order model. Based on and developed from the definitions and suggestions from previous studies (Cohen and Levinthal, 1990; Lyles and Salk, 1996; Zahra and George's, 2002; Minbaeva et al., 2003; Wang et al., 2004), it's suggested that the domain of absorptive capacity should include both the organizational elements, and employee factors to assess the extent and specific nature of benefits rendered by absorptive capacity activities (Minbaeva et al., 2003). As such, absorptive capacity is re-conceptualized as composed of a set of staff and organization components in which employees' ability and motivation to learn and creativity and flexibility in organizational practice when applying the acquired knowledge are the key aspects of the firm's absorptive capacity. When considering absorptive capacity as a reflective model, the first-order indicators are expected to share similar content and theme (Jarvis et al., 2003). The antecedents to organizational adaptability and management staff's ability to learn might be different but both could lead to the same outcome, that is, learning and applying the transferred knowledge to run the business. Management staff's ability to learn and organizational adaptability are integral parts of absorptive capacity and not considered as the external causes or antecedents of absorptive capacity of the recipient. These requirements are clearly applied to explain the property of the indicators of all first-order factors incorporated in the structural model.

The present study thus incorporates both the role of management staff (identified as

management staff's ability to learn) and the organization's role (identified as organizational adaptability) into a second-order factor absorptive capacity. This multidimensional conceptualization of the construct is theoretically and operationally needed to (a) capture multiple aspects of absorptive capacity that may be subsumed within general measures; (b) provide insight into the nature of interrelationships among absorptive capacity dimensions; and (c) provide a more accurate diagnostic tool to assess absorptive capacity activities within organizations (Minbaeva et al., 2003). Previous studies suggested that second-order models are most typically applicable in research contexts in which measurement instruments assess several related constructs, each of which is measured by multiple items (Chen et al., 2005). In comparison to first-order models with correlated factors that have been commonly adopted by previous studies, second-order factor models can provide a more parsimonious and interpretable model when researchers hypothesize that higher order factors underpin their data (Chen et al., 2005, p.472). Another benefit of proposing absorptive capacity as a second-order construct is that the relative significance of each of the dimensions on overall absorptive capacity can be ascertained. Therefore, it is hypothesized that,

H1: Absorptive capacity is positively related to the level of retail management know-how acquisition.

3.2.1.2 Commitment and knowledge transfer

Previous studies have shown that foreign parent' active involvement in and intensive communication with their subsidiaries facilitate knowledge acquisition (Lyles and

Salk, 1996; Tsang, 2002). Management involvement refers to the extent that the foreign parent participates in various aspects of venture operation (Tsang, 2002). Management involvement is vital to successful transfer of knowledge to the subsidiary, in particular, tacit knowledge, because for tacit knowledge to be exchanged there need to be close relationships between the teacher and the student, and tacit learning is not merely 'learning by doing' or experiential learning; it frequently involves the active involvement of the teacher (Lane and Lubatkin, 1998). Makhija and Ganesh (1997) hold the same belief that to accomplish knowledge transfer effectively, it is necessary for foreign parent to actively participate in the relevant organizational processes in which the knowledge is embedded.

Communication is a major aspect of commitment. It refers to two-way formal and informal sharing of meaningful and timely information between entities (Anderson and Narus, 1991). Past research has suggested that frequent communication would assist in creating of shared meaning and a common context in which the knowledge transfer process can be facilitated (Davenport and Prusak, 1998; Szulanski, 1996, Bresman et al., 1999). Davenport and Prusak (1998) noted that "in a knowledge-driven economy, talk is real work" (p. 90) and "it is through extended discussions that an individual's ideas, viewpoints, and beliefs are shared with, and made available to others" (p.91). They further suggest that communication is the main mode by which workers "discover what they know," and "share it with their colleagues" (p.91) Gupta et al. (1991, 1994 and 2000) have argued that communication plays a crucial role in the process of knowledge transfer because it leads to socialization that nurtures social relationships important for cooperation and

consensus. Bartlett and Ghoshal (1989) suggest that communications between organizational units would facilitate knowledge flows. Nonaka (1994) argues that knowledge is created and organized by the flow of information that is anchored in the commitment and beliefs of its holder. The need for frequent communications between the knowledge sender and receiver is apparent. Madhok (1995) suggested that open communication would enable the parties to clarify mutual expectations and understand each other's goals. Clear and effective communication will have a direct impact on organizational learning that contributes to knowledge transfer (Cyr, 1995). In the context of knowledge transfer from international retailers to their subsidiaries in China, communication between the foreign parent and its subsidiaries is more important given the separation of time, space, culture and language (Chini, 2004).

While previous studies identified management involvement and communication as major factors affecting knowledge transfer, these studies treated management involvement and communication as distinctive constructs without exploring their interrelationship. However, recent behavioral research has incorporated these two types of activity into the domain of commitment to establish a more parsimonious and interpretable model on its impact on knowledge transfer (e.g. Postmes et al., 2001). Communication can be deemed as a kind of involvement behavior. More frequent communications initiated by the parent firm or the foreign partner reflects high level of commitment to support knowledge transfer activities. In this regard, there are overlaps in the content of these two factors. In addition, both communications and management involvement can have the same antecedents and consequences. Therefore, a higher-order factor measurement model for commitment

is justified. It is hence hypothesized that,

H2: Commitment is positively related to the level of retail management know-how acquisition.

3.2.1.3 Knowledge transfer and performance

As discussed in an earlier section, the effectiveness of knowledge transfer may lead to the development of some new knowledge that trigger new work methods or eventually changes in the recipient's behavior (Davenport and Prusak, 1998) that will subsequently have impact on organizational performance. In essence, previous studies have reported a positive impact of knowledge transfer on firm's business performance (Lyles and Salk, 1996; Steensma and Lyles, 2000; Dhanaraj et al., 2004). For instance, Dhanaraj et al. (2004) found that, for both young and mature IJVs, "knowledge acquired by the IJV builds the organizational capabilities leading to enhanced performance" (p.432).

From a resource-based perspective, Lyles and Salk (1996) have postulated that "knowledge transferred from the parent firms can be utilized to create and augment the competitive capabilities" (p.884). In a study of 178 foreign corporations operating in China, Luo (1999) have reported that technological, organizational and marketing skills, as well as knowledge of the local environment possessed by these corporations, strengthened financial returns and overall performance in China. Beamish and Berdrow (2003) have echoed that the transferred knowledge, if accurately and appropriately applied, would change behaviors, leading to enhanced

competitive advantage.

However, better understanding of how and to what extent the knowledge transferred impacts the recipient's performance is warranted since the evidence of the effects of knowledge transferred on subsidiaries' performance is still limited. Although it is impossible to isolate the benefits of knowledge transfer from other impacts on business performance (Schlegelmilch and Chini, 2003), new attempts are needed so as to specify and test the processes, or the underlying mechanisms, through which subsidiaries within a MNC receive knowledge from their parent. It is thus hypothesized that:

H3: The level of retail management know-how acquisition is positively related to business performance.

3.2.2 Moderating effects of demographic characteristics

Previous studies have demonstrated the moderating effect of demographic characteristics of Sino-foreign joint ventures, or of the subsidiaries in China, like the country-of-origin of the foreign partner, ownership type, and equity ownership on knowledge transfer and its resultant impact on organizational performance (e.g. Shenkar, 1999; Tsang, 2001; Wong, Maher and Luk, 2002; Wong, Luk and Li, 2005). Therefore, it is worthwhile to investigate whether the same phenomenon would be observed in the retail sector. Following this line of thinking, the present study is designed to test whether the differences in ownership type and retail format will lead to variations in knowledge transfer and business performance respectively.

3.2.2.1 Ownership

Control is a frequently discussed topic in the context of multinational research since it provides the parent company with the power to influence business philosophy, systems, methods and decision-makings in their subsidiaries and associate companies (Anderson and Gatignon, 1986). Yang (1998) suggests that the ability to exercise majority control of the joint venture is a key success factor in China, in addition to good products and an effective business strategy. Child and Yan (1999) have made the same claim in their study in this area.

Since equity share of a firm in the international joint venture is a means of influencing strategic control (Beamish, 1985; Harrigan, 1985; Killing, 1983; Yan and Gray, 1994), it indicates the level of its control over the joint venture (Anderson and Gatigonon, 1986; Griffth et al., 1998; Wang et al, 2004; Wong et al, 2005) in a sense that a dominant equity position will generally lead to greater power on the board of directors and greater ability to influence the operation of the joint venture (Mjoen and Tallman, 1997). For instance, Lecraw's (1984) studied 153 ASEAN subsidiaries and found that there is a positive correlation between the equity share held by the parent firm and the level of overall management control over those subsidiaries. Child and Yan (1999, p.5) also have found that possession of a majority equity share in a Sino-foreign joint venture enabled the foreign partner to have "control over the venture through the right to appoint board members who approve strategic decisions and the ability to influence appointments to key executive positions". In the knowledge transfer research stream, it' also reported that that entry mode affects the sophistication of knowledge that the parent transfers to its subsidiary. For instance,

Mansfield and Romeo (1980) and Lyles and Salk (1996). found that firms tends to transfer latest technologies abroad through WOE rather than JVs or other modes of operation such as licensing. Similarly, surveys conducted in Guangdong (Chen, 1999) and Beijing (Jiang and Feng, 2000) have revealed that MNCs transferred more advanced technological and management knowledge to their WOE subsidiaries than to JV subsidiaries. All these lead to the assumption that retail management knowledge transfer activities might be different between wholly-owned retail outlets and retail joint ventures. The following hypothesis is hence developed:

H4: Absorptive capacity has a greater impact on the level of retail management know-how acquisition for JV than for WOE retail establishments.

H5: Commitment has a greater impact on the level of retail management know-how acquisition for JV than for WOE retail establishments.

3.2.2.2 Retail format

Messinger and Narasimhan (1997) defined retail format as the mix of variables that retailers use to develop their business strategies and the mix comprises assortment, price, transactional convenience and experience. Levy and Weitz's (2002) definition of retail format is the store "package" that the retailer presents to the shopper. Kumar (1997) defined retail format as the system for delivering the value promised to the shoppers so as to create a sustainable competitive advantage. Au-Yeung (2003) suggested that retail format is the physical elements of a retail outlet that are visible to consumers, such as assortment, store atmosphere, services inside the store,

physical location and price.

Over the past few decades many different retail formats were developed, from small scale retail outlets conveniently located and personalized to mega discount stores and hypermarkets. The emergence of diverse types of retail formats has triggered research interest in investigating the factors underlying consumers' choice of stores. Goldman (2001) believed that format strategy is often the key to an international retailer's ability to gain a strong competitive position in the host country "The failure of international expansion plans is often format related" (p.222). Since different retail formats contain varying types of retail know-how, it will affect the outcome of knowledge transfer, therefore, it is hypothesized,

H6: Retail format moderates the relationship between the level of retail management know-how acquisition and business performance.

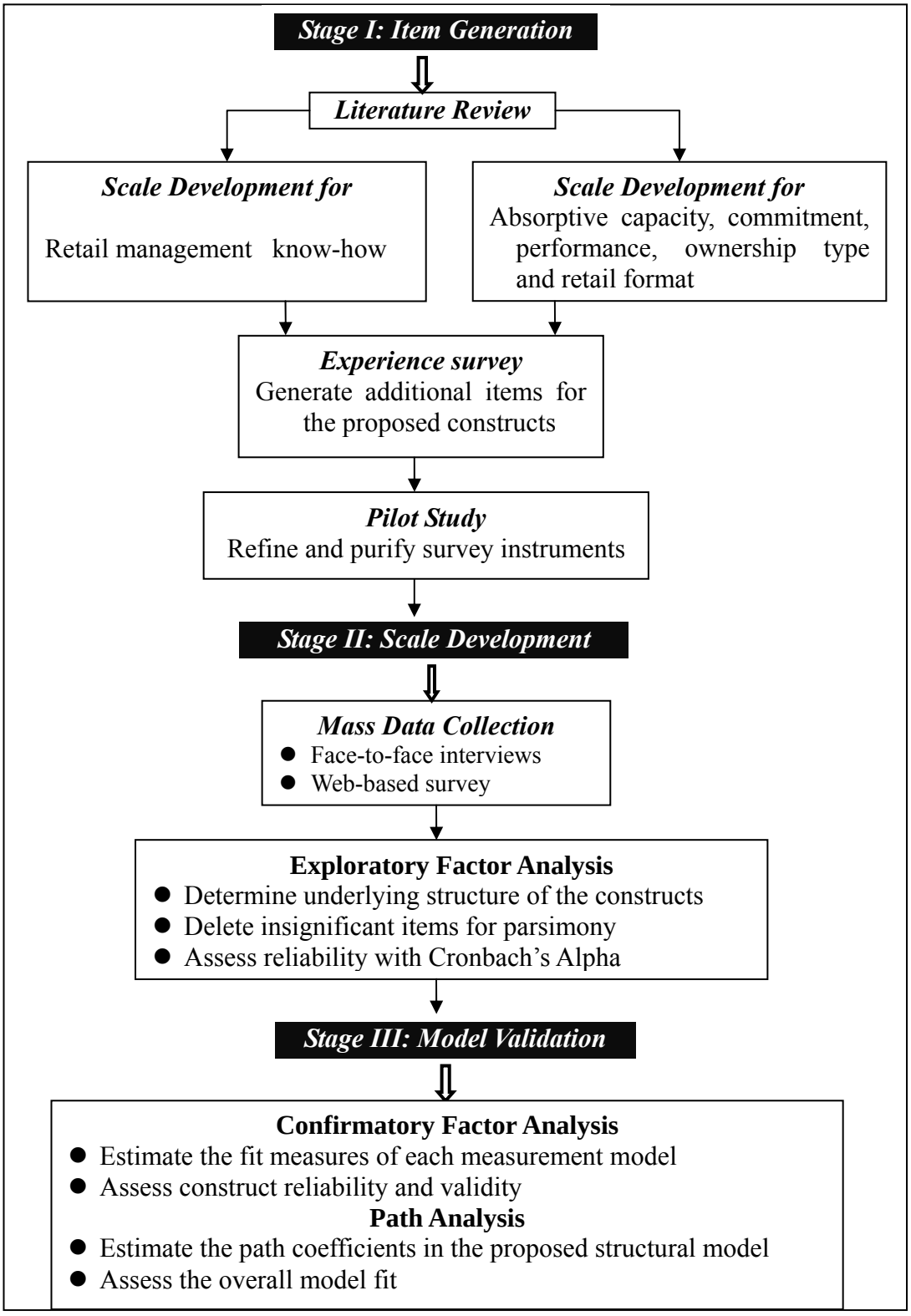
CHAPTER 4 RESEARCH METHODOLOGY

This chapter explains the research design techniques and methodology the present study employed. The unit of analysis is firstly discussed, followed by scale development procedures. Questionnaire survey was conducted to collect data from two sources. One was face-to-face interview and the other web-based survey in the form of a self-administered questionnaire. The questionnaire contains items pertaining to the measurement scales for the proposed constructs in the conceptual model. The details of the research design and data analysis strategies employed here is depicted in the following diagram (Figure 4.1).

4.1 Unit of Analysis

The unit of analysis of this research is the individual foreign-owned retail outlet in China. It has been reported that the corporate systems, structures and managerial resources are required to facilitate the absorption of the transferred functional knowledge, and are normally not yet developed at the early stage of the subsidiary's lifecycle (Norburn et al., 1986). There has been empirical evidence that it normally takes two and a half years for an establishment in the service sector to meet the formation objectives (Norburn and Schoenberg, 1994). This provides justification to the screening criterion for identifying qualified retail outlets for our survey. Therefore only those retail outlets whose operation history in China was more than two years was selected for investigation. Using the length of operation as a theoretical sampling criterion is also consistent with recent studies on knowledge transfer (Tsang, 2002) and helps assure the collection of valid information pertaining

Figure 4.1 Overview of research design and data analysis strategy



to the theme of the present study. In addition to the length of operation criterion, another sampling criterion is that the retail format of the participating retail stores was confined to supermarket, specialty shop, and department store only, so as to see if retail format moderates the relationship between the level of knowledge transfer and business performance.

Store managers of the sampled retail establishments were identified as the key informants for the study. They were qualified informants according to the criteria recommended by Campbell (1955) and Brown et al. (1990), including: (1) they were responsible for planning and operation of retail activities; (2) they had access to the desired information; (3) they were knowledgeable about retailing management; and (4) they would be willing and able to communicate with the researchers. Previous research provides support for relying on the subsidiary general manager for reliable data to study knowledge transfer procedural behavior. For example, Geringer and Hebert (1991) have found a significant correlation between the parent's assessment of subsidiary performance and that of the subsidiary's general manager. Child et al. (1997) have also reported significant inter-rater reliability among subsidiary managers for the assessment of parental power and influence. Peng and Luo (2000) have echoed with the conclusion that there is a high correlation between self-reported data and archival data in China.

4.2 Scale Development Process

Hinkin (1998) provided guidelines for the development of measures for use in survey questionnaires. He has suggested the scale development process as the

following stages: (1) Item generation, (2) Questionnaire administration, (3) Exploratory factor analysis, (4) Confirmatory factor analysis, and (5) Convergent/discriminant validity. This process ensures construct validity in the final scales.

4.2.1 Item generation

The constructs proposed in the research model are absorptive capacity, commitment, organizational adaptability, management staff's ability to learn, management involvement, communication, retail management know-how and business performance. The extensive literature review reveals that the conceptualization of most of these constructs have undergone extensive empirical research. However, hitherto knowledge on the construct of retail management know-how is still undergoing review and its operationalization remains at the exploratory stage and has not been empirically examined. This triggers the need to develop a measurement scale for retail management know-how. The first stage of scale development procedure for a construct begins with the creation of items (Hinkin, 1998). According to Churchill (1979), a comprehensive literature search must first be undertaken at this stage to specify the domain of the construct under investigation; and "through the development of adequate construct definitions, items should capture the domain of interest" (Hinkin, 1998, p.107). Churchill (1979) also had justified that extensive literature review and expert opinion can provide a sound foundation upon which a theoretical domain (or construct space) of complex variables can be formed. Recognizing that practice is much ahead of theory development in the area of retailing, it was considered appropriate to complement

secondary data with an exploratory qualitative study that enhances our understanding of the proposed constructs. An experience survey was thus conducted for this purpose. In order to refine the survey instruments, and also to uncover any administration problems related to the construct items, a pilot study was followed.

4.2.2 Experience survey

The experience survey in the form of in-depth interviews with seven senior management staff from foreign-invested retail outlets was conducted in Xi'an to collect the information pertaining to retail operation and the kinds of retail management knowledge the local subsidiary retail outlets learned from the foreign parent/partner. The collected information would enhance our understanding of the characteristics of current retail activities, the development trend, and scope of operation of both local and foreign wholly-owned retail stores in China. This information is crucial for ensuring the content validity of the measures designed to capture the domain of retail management know-how. A semi-structured questionnaire was employed to facilitate conversation during interview (Appendix I). The time spent on each interview was around one hour to one and a half hours, and the whole interview process was tape-recorded and transcribed. The semi-structured interview was conducted by the researcher. Prior to the discussion, the researcher briefly explained the purpose and theme of the present research. Then each participant was given the semi-structured questionnaire with two parts of questions. Part One was composed of five structured questions designed to investigate the background information about the interviewee and the retail outlet, e.g. the participant's position, educational level, working period in the retail sector, retail

format of the outlet, and the nationality of the foreign parent. The second part included open-ended questions in regard to retail management know-how transfer process, with altogether nine questions including: (1) What are the reasons for setting up the retail outlet? (2) What kinds of retail management know-how the parent would like to transfer to the retail outlet? (3)What is the estimated time to meet the formation objective? (4) Currently who is responsible for knowledge transfer activities? (5) What factors are critical to effective transfer? What kinds of difficulties has the retail firm encountered in relation to knowledge transfer activities? (7) What kind/level of support did the retail outlet get from the parent firm? How important was this kind of support to effective knowledge transfer? (8)What strategic decision making authority does the subsidiary, or the retail joint venture have?

From the first part of the structured questionnaire, the background information on the participants' position, educational level, working period in the retail sector, the retail format of the retail outlet, and the nationality of the foreign parent was recorded. The participants profile is given in Table 4.1. Among these seven key informants, five were male, and the other two were female. Three were from supermarkets, two from department stores, one from a warehouse club, one from a specialty store, and the last one was a business development manager of a well-known international retailer in charge of its hypermarket business in north-western China. Other participants are all store managers/vice store managers. The working period in retail sector was from three and a half years to six years. As for the country of origin, one was from Taiwan, one from Malaysia, one from Germany, one from

the USA, one from France, one from Hong Kong, and the last one from Thailand. For the second part of the questionnaire, each manager was asked to express their views on the important issues covered in the nine open-ended questions; they were encouraged to freely express their opinions on each question which would be important to retail management know-how acquisitions from their foreign parent.

Table 4.1 Description of experience survey participants' profile

Name Initials	***Sex***	***Position***	***Working Period in Retail Sector***	***Retail Format***	***Country of Origin***
SL	Femal	Store manager	6	Supermarket	Taiwan
XXH	Male	Vice store manager	4	Department	Malaysia
FXL	Male	Store manager	3	Warehouse	Germany
XJW	Femal	Store manager	3.5	Specialty store	USA
WZG	Male	Development manager	5	Hypermarket	France
LF	Male	Vice store manager	4.5	Supermarket	Hong Kong
SDH	Male	Store Manager	5	Supermarket	Thailand

First of all, each respondent was asked to describe what types of retail management knowledge had been transferred to the local operation. The feedback from in-depth interviews also provided insights on the types of retail management knowledge that were commonly transferred from international retailers to their subsidiaries in China. According to the participants' answers, comments and suggestions, the attributes identified for the measures of retail management know-how from previous studies in the literature (Kacker, 1988; Goldman, 2001) were mostly supported. New attributes

or items that had been generated from the experience survey were "customer relationship management", "credit management", "cash flow management", "cost control and budget", "inventory management", and "customer service", which were repeatedly mentioned by those participating managers when they answered the question: What kinds of retail management know-how the parent would like to transfer to the retail outlet? Since there were few empirical studies on the same or a similar topic, the experience survey provided rich and useful qualitative information on the domain of retail management know-how that are normally transferred from foreign parent to their subsidiaries in China.

Then, each participant was asked to identify, based on his/her store's experience, the factors and issues pertaining to knowledge transfer in their own words. Major comments and responses to each question are extracted as follows:

A. *Reasons for setting up the retail outlet?*

"The main reason for setting the retail outlet is to learn China's market characteristics, access to knowledge of local culture." (SL, store manager of a supermarket)

"The reason we chose to establish a retail outlet in this city is because of the saturation in domestic market and of a strategic need to explore new market. China is known to be a fast growth market with promising potential and this motivated us to test the water there first " (XXH, vice

store manager of a department store)

"We establish the retail outlet to gain knowledge of local economy and politics, to learn Chinese customers' behavior, and also to get access to the local low cost labor." (FXL, store manager of a warehouse club)

"We set up the retail outlet with a local partner to share possible risks with the partner, to understand local government's stipulations via partnership." (XJW, store manager of a specialty store)

"We establish the retail outlet in the city because it's most rapidly developing area in Northern China and we need it to gain strategic hold in this region." (WZG, developing manager of a hypermarket)

"We set up the retail outlet with a Chinese partner to meet the legal requirements to explore China market, the one nobody can afford to ignore." (LF, store manager of a supermarket)

"We use partnership with a Chinese partner so as to gain access to its marketing resources and business connections which would be useful for our expansion plan in the future." (SDH, store manager of a supermarket)

B. *Kinds of retail management know-how the parent firm has transferred to the retail outlet and the estimated time to meet the formation objective*

"Since the establishment of this retail outlet, our foreign parent has been transferring retailing philosophy, corporate culture, strategic planning, advertising planning, human resources management, and marketing planning to the outlet." "More than one year" (SL, store manager of a supermarket)

"The knowledge that our foreign parent transferred are business philosophy, strategic planning, promotion planning, business policies, and human resources management to the establishment." "Around two years" (XXH, vice store manager of a department store)

"We have learned corporate culture, business philosophy, strategic planning, and promotion planning from our foreign paren." "More than two years" (FXL, store manager of a warehouse club)

"The knowledge we learned from our foreign parent are corporate culture, business philosophy, supply chain management, promotion planning and pricing strategy." "More than one and a half years" (XJW, store manager of a specialty store)

"The retail know-how our foreign parent would like to transfer to the retail outlet is retailing philosophy, corporate culture, cash flow management, inventory management, and credit management." "About two years" (WZG, developing manager of a hypermarket)

"The most important knowledge we have learnt from our foreign parent is business philosophy, strategic planning, marketing planning, corporate culture, and human resources management. And it spent us more than one year to achieved the desired objectives, quicker than our expectation." (LF, store manager of a supermarket)

"What we have learned from our foreign parent is strategic planning, business philosophy, corporate culture, information technology etc." "More than two years" (SDH, store manager of a supermarket)

C. *The management staff responsible for knowledge transfer*

"It is the store manage, assisted by HR manager, responsible for knowledge transfer in our store, for example, arranging trainings held by the foreign parent." (SL, store manager of a supermarket)

"The store manager and the one who is in charge of training and development." (XXH, vice store manager of a department store)

"The store managers, HR management staff, and sometimes public relation personnel are responsible for knowledge transfer. However, the General Manager (Regional) also closely monitor all training activities and business performance." (FXL, store manager of a warehouse club)

D. *Factors and the type of support critical to effective transfer.*

"To me, the human resources development plays the most important role. Failure to learn faster the modern retail management knowledge means it will be difficult to expand our business because of the lack of competent management staff ." (SL, store manager of a supermarket)

"Communications with the foreign parent is probably the most important factor for transfer of retail management knowledge. Mutual understanding is also important, particularly when we have difficulties to implement the activities or when the performance is below expectation.." (XXH, vice store manager of a department store)

"I think the amount of time and effort that our parent managers would like to spend on understanding the operation of the retail outlet is crucial to the knowledge acquisition, because this can make sure that our store is under the same retail culture so that the core concept and method are maintained." (FXL, store manager of a warehouse club)

"Training for local employee is the most important factor; but it must be well planned and closely monitored." (XJW, store manager of a specialty store)

"The learning ability of the senior managers of the retail outlet is the determinant to successful knowledge acquisition from our foreign parent, because they are the change agents or role model." (WZG, developing manager of a hypermarket)

"Being flexible in our daily operations is very important, because we have to adapt to local customers. Sometimes we have to be creative in reaction to market changes in order to attract and retain customers. The foreign parent is very experienced in supermarket business and its business model has been so successful in terms of several marketing and financial measures. It has a comprehensive plan for knowledge transfer but is willing to pay attention to local needs here." (LF, store manager of a supermarket)

"The actual involvement of our parent in managing the daily operation of our store is of importance. For example, senior management staff have visited our store frequently. They have good understanding of our learning behavior and whether we have learned effectively or not. In addition, this is a good indicator of the commitment from the parent firm and let us have a feeling the business in China is important to the firm. Employees here all feel the pressure and are motivated to do a better job." (SDH, store manager of a supermarket)

E. *Difficulties encountered during the knowledge transfer process*

When asked about this question, nearly all the store managers/other senior managers would respond immediately that the difficulties encountered are always people-related factors. For instance:

"We think the difficulty is always about people, including their learning ability and attitudes towards learning." (SL, a store manager of a supermarket)

"Communications sometimes are not as effective as expected because we don't know whether the staff from the foreign really understand the local culture." (SDH, store manager of a supermarket)

"There is a significant knowledge gap in terms of retail management between local staff and expatriates. This helps explain why some management staff at middle and junior level has learned less effectively." (WZG, developing manager of a hypermarket)

The answers then were analyzed with content analysis technique, which is an appropriate research method for coding open-ended questions and grouping the ideas into the categories that would be used for future analysis (Weber, 1990). The first step of content analysis was to develop a "word-frequency list" (Appendix II), indicating the frequency of relevant key words that occurred in the transcript. The next step was contextual classification to classify and group the relevant key words into categories on the basis of similarity (Krippendroff, 1980). In order to obtain a high level of reliability, coding was done by two different coders independently at the same time, one was the author, and the other was a PhD student in marketing. Inter-coder reliability was assessed as 0.94, showing a good extent of consensus between the two independent coders.

4.2.3 Pilot study

Items generated from qualitative discussions have to be assessed for the content validity. For such assessment, a pilot study was taken as an item-identification technique (DeVellis, 1991). Pilot study is a crucial element of a good research design. Conducting a pilot study is very important in doing research because it might give advance warning about where the main research project could fail, where research protocols might not be followed, or whether the proposed methods or instruments are inappropriate or too complicated. Conducting a pilot study does not guarantee success in the main study, but it does increase the likelihood of success (Baker, 1994). As such, a pilot study with a small sample of six senior managers from six foreign-owned retail establishments was conducted. These managers had rich experience of establishing and managing retail outlets in China. The managers were asked to complete the questionnaire (Appendix III) and the questions or measures that were not clear in meaning were identified. The pilot study serves three purposes: (a) to detect any weakness in the survey instruments such as expression and conceptual in-equivalence of some terms; (b) to delete the items which are irrelevant to the current study from the instruments; and (c) to probe for possible issues related to the administration of data collection activities for the formal, large scale survey. Through this step the face validity of each scale was assessed by the managers. The questionnaire was revised according to their comments and suggestions. Appendix IV presents the revised questionnaire. The questionnaire was initially drafted in English but later printed in Chinese after going through a translation-back-translation process.

4.2.4 Measures

The survey instruments for the latent constructs proposed in the research model were developed, adding newly developed items to the borrowed scales from previous research. Using multi-items for operationalization can help to achieve the purpose of a valid scale as well as capturing the domain of the constructs. Borrowed scales from previous research in the relevant literature tend to have higher reliability values than newly developed ones (Churchill, 1979). All the items were measured with a Likert 5-point scale from strongly disagree (1) to strongly agree (5). For the items with which the participants were not familiar or didn't utilize, "Not Applicable" (NA) was given as a choice. The details of survey instruments are described in Table 4.2.

4.2.4.1 Organizational adaptability

Organizational adaptability was measured with three items comprising (1) the establishment is flexible; (2) the establishment is creative in its management; and (3) the establishment commits to management staff training and development. The first two items were adapted from Lyles and Salk (1996) with an alpha = 0.71 and the third item was identified based on the findings from the experience survey. Respondents were asked to indicate the extent to which they agree with these three statements, using a Likert 5-point scale.

4.2.4.2 Ability of management staff to learn

Management staff's ability was measured with three items consisting of (1) majority of local managers are good at foreign language; (2) majority of local managers have

working experience in retail company; and (3) majority of local managers have a university degree or higher. The three items were adapted from Minbaeva et al. (2003) with an alpha =0.77. Respondents were asked, with a Likert 5-point scale, to indicate the extent to which they agreed with the three statements.

4.2.4.3 Management involvement

A four-item scale was used to capture the degree to which the foreign parent was involved in the transfer of retail management know-how to its subsidiaries. These included: (1) regular training provided to store managers; (2) marketing support to the store; (3) administrative support to the store; and (4) incentive to the store manager based on performance assessment. The first three items were adapted from Lyles and Salk (1996) with an alpha = 0.84. The fourth item, dealing with the store manager's performance appraisal by the foreign parent, was included in the questionnaire as an additional item identified from the experience survey. Respondents were asked, again with a Likert 5-point scale, to indicate the extent to which they agreed with each of the four statements.

4.2.4.4 Communication

This construct was measured with three items: (1) there has been frequent meeting between the subsidiary and the foreign parent; (2) there has been frequent phone communication between the subsidiary and the foreign parent; and (3) there has been frequent email communication between the establishment and the foreign parent. These three items were adapted from Bresman et al. (1999) with alpha = 0.90 Respondents were asked to indicate, with a Likert 5-point scale, the extent to which

they agreed with each of the three statements.

4.2.4.5 The acquired retail management know-how

This is core component of the proposed conceptual model. It is defined based on the level of knowledge utilization by the recipients assuming both acquisition and use of knowledge (Minbaeva et al., 2003). Accordingly, the respondents were asked to what extent they applied knowledge acquired from the foreign parent. A five-point Likert-type scale was used where 1 indicated very little use of knowledge and 5 indicated substantial use of the acquired knowledge. Twelve types of retail management knowledge identified from both the literature review and in-depth interviews with store managers were incorporated: (a) retailing philosophy, (b) business policies, (c) business systems, (d) management mechanisms, (e) corporate culture, (f) strategic planning, (g) business controls, (h) marketing planning, (i) advertising planning, (j) promotion planning, (k) pricing strategy, and (l) human resources planning.

4.2.4.6 ***Performance***

The measures for business performance were adapted from Lyles and Salk (1996) with an alpha = 0.82. In addition, new items (customer satisfaction, services standards, store image, labor productivity) generated from the findings of the experience survey were added. The store managers were asked, using a five-item scale anchored on (1) not at all to (5) to a great extent, to evaluate performance level in terms of the following marketing metrics: sales volume, market share, profit, customer satisfaction, services standards, store image, labor productivity.

4.2.4.7 Ownership

Knowledge transfer may be conditioned by ownership type. ANOVA was performed to see whether knowledge transfer would vary by ownership type of the retail outlet. Ownership type was measured by asking the respondents if the retail outlet was an IJV, wholly-owned enterprise or other type. Ownership of the establishment was designated as follows: 1 = JV, 2 = WOE, and 3 = Other type. A Likert 5-point scale was used to indicate the level of agreement.

4.2.4.8 Retail Format

As aforesaid in Chapter 3, business performance may be conditioned by retail format. In order to test if there is significant difference between retail establishment with different types of retail format, ANOVA was performed. Retail format was measured by asking the respondents to specify which of the following retail format the retail establishment belongs to: 1 = supermarket, 2 = specialty shop, and 3 = department store.

Table 4.2 Measures for individual construct

Constructs	*Operationalization*
Organizational adaptability	The establishment is flexible The establishment is creative in its management The establishment commits to management staff training
Management staff's ability to learn	Majority of local managers are good at foreign language Majority of local managers have working experience in retail company. Majority of local managers have a university degree or higher.
Management involvement	Regular training for the store manager Contributed enough marketing support Contributed enough administrative support Regularly assessed the store manager's performance
Communication	Regular meeting, Phone communication, Communication via email
Retail management know-how	Retailing philosophy, Business policies, Business systems, Management mechanisms, Corporate culture, Strategic planning, Business controls, Marketing planning, Advertising planning, Promotion planning, Pricing strategy, Human resources planning
Performance	Sales volume, Market share, Profit, Customer satisfaction, Services standards, Store image, Labor productivity
Ownership	1 = JV 2 = WOE 3 = Other type
Retail format	1 = Supermarket 2 = Specialty shop 3 = Department store

4.2.5 Sampling and questionnaire administration

According to the report published by *Ministry of Commerce of the People's Republic of China* in 2006, by the end of 2005, altogether there were 1341 JV or wholly owned retail establishments in China, including those invested in by Hong Kong or Taiwanese investors. The 1341 establishments were population to be studied in this research. I identified those target retail outlets in four major cities in China, including Kunming, Changsha, Wuhan, and Xi'an in order to minimize possible bias created by regional disparities in business practice, economic development levels, and the period of time that the city had been opened to foreign investment in the service sector. Being the commercial center of Yunnan province in the south-western region, Kunming is always the first choice for foreign direct investment without exception in the retail sector. It has attracted top international retailers such as Wal-mart and Carrefour to set up several establishments there. Changsha city, being the capital of Hunan province, has been one of the most important commercial centers in central China; its retail business has been flourishing since China's opening up its service sector since 1992. Also being a major retail and wholesale center in central China and having been successfully attracted many international retailers to move in its retail sector, Wuhan was also chosen for investigation in this research for similar reasons. As for Xi'an, being the capital city of Shaanxi province it is the most important city in north-western China. Its retail industry has been developing very fast since the late 90's. These sampled cities ensure the representativeness of the sampled establishments and enhance the generalizability of the findings. Altogether 128 foreign retail outlets in the above four cities were identified with the information provided by the local Foreign Trade Bureaus. Only 19 store manager or other senior

managers finally agreed to participate in face-to-face interview, representing a 22.6% response rate. The interviewers included the researcher and a small number of interviewers from local universities in Xi'an, Kunming, and Wuhan. A training meeting was conducted beforehand to brief all the interviewers the scope and objectives of the research, the required interviewing techniques and the procedures to follow during the interview. The main reason to hire local research personnel is that although China has relaxed its control over research activities on many issues of interest to management scholars, control on market research activities has not been relinquished and a clear definition of what is restricted information, as well as guidance on which type of surveys are not permissible, is often lacking (Roy et al., 2001). In order to overcome this problem and facilitate the interview process, local researchers were recruited because they were able to obtain permission to do survey work that might be sensitive in China.

Given the low response rate of personal interviews, a web-based survey method was employed to collect more responses from informants so as to make the sample size adequate for reliable statistical analysis. Obtaining data from a different source can mitigate possible problems associated with common method variance; but it would end up with collecting information from retail outlets beyond the four sampled cities. This alerts us to interpret the findings cautiously.

Better data measures of several variables are expected from online survey method since the respondents can go back and forth and easily change a response. The service agency I used for this data collection job enjoyed high publicity in the

country in the field of retailing business through its online channel and its portal website was a leading e-media channel in China's retail sector with over 100,000 registered members, among them were a large number of senior managers of foreign-owned retail establishments. This website provides professional service with regard to the retail sector including all kinds of retail formats, from department store, supermarket, hypermarket, shopping mall, to specialty stores. The survey took three months to complete until the end of 2005 and resulted in 70 completed questionnaires being collected.

Table 4.3 shows the distribution of the questionnaires that were collected from those two different sources. Independent samples t-test was employed to test the differences in responses between these two sets of questionnaires collected via face-to-face interviews and the web-based questionnaire survey respectively. The t-test results (Appendix VI) show no statistically significant differences in responses between these two groups of respondents in terms of demographic characteristics, the participant stores and the retail format at the significance level of 0.05. Following the approach by Guest (1997), the questionnaires were then combined into one data set for analysis, totaling a sample size of 89. Since the model for the current study is simple and makes use of established constructs, the sample size is deemed adequate. In essence, this sample size is comparable to, or even larger than, that of previous studies on the similar research theme (Tsang, 2002b, Wang et al., 2004). For instance, Tsang (2002b) proposes and tests a model of how firms acquire knowledge from their international joint venturing experience with respect to their joint ventures set up in China, based on survey responses from 73 Singapore and 89

Hong Kong firms respectively, with results indicating that overseeing effort and management involvement are significant channels of knowledge acquisition.

In essence, this strategy of using different sources of information for some of the key measures can avoid or correct Common Method Variance (CMV) (Podsakoff et al., 2003). In particular, if possible, the dependent variable should be constructed using information from different sources than the independent variables.

Common Method Variance is "variance that is attributable to the measurement method rather than to the constructs the measures represent" (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003: 879). CMV creates a false internal consistency, that is, an apparent correlation among variables generated by their common source. For example, this could occur if a researcher asks respondents to evaluate an MNE's organizational capabilities and the firm's international performance in the same survey. In such cases, self-report data can create false correlations if the respondents have a propensity to provide consistent answers to survey questions that are otherwise not related. Thus, common methods can cause systematic measurement errors that either inflate or deflate the observed relationships between constructs, generating both Type I and Type II errors.

Podsakoff et al. (2003) explore four general sources of CMV: the use of a common rater, the manner in which items are presented to respondents, the context in which items on a questionnaire are placed, and the contextual influences (time, location and media) used to measure the constructs. Some CMV sources may be more

problematic than others, for example, perceptual data from single raters may be more worrisome than the manner in which items are presented in the survey instrument. A manuscript that suffers from more potential sources of CMV should, in general, be more problematic than one with fewer sources. The most worrisome example of CMV, according to the authors (2003: 885), occurs when ‘‘the data for both the predictor and criterion variable are obtained from the same person in the same measurement context using the same item context and similar item characteristics’’.

In general, four approaches have been recommended in the literature as methods that researchers should use to avoid or correct CMV (see, for example, Podsakoff et al., 2003): a) The obvious strategy is, of course, to avoid any potential CMV in the research design stage by using other sources of information for some of the key measures. In particular, if possible, the dependent variable should be constructed using information from different sources than the independent variables; b) A number of procedural remedies in designing and administering the questionnaire, from mixing the order of the questions to using different scale types, can reduce the likelihood of CMV; c) Complicated specifications of regression models reduce the likelihood of CMV. Specifically, respondents are unlikely to be guided by a cognitive map that includes difficult-to-visualize interaction and non-linear effects. This is less likely the more complicated the model; d) There are several statistical remedies to detect and control for any possible CMV. A post hoc Harman one-factor analysis is often used to check whether variance in the data can be largely attributed to a single factor. Additionally, other statistical procedures can be applied to partial

out common factors or to control for them.

In addition to employing different sources for collecting data, I also used the Harman's one-factor test to examine the extent of common method bias in my data, following (Podsakoff and Organ, 1986). If CMV is an issue, either a single factor would emerge from the EFA or one general factor would account for a considerable proportion of covariance among the measures (Podsakoff et al., 2003). No general factor was evident in the unrotated factor, with the first factor accounting for about 28% of variance. A principal component factor analysis reveals there are 7 factors with an eigenvalue > 1, which together account for 74% of the total variance Appendix VII . The presence of several distinct factors combined with the relatively low amount of variance explained by the first factor and second factor (only 23 and 14%) indicates that the data do not suffer from common method variance (Podsakoff and Organ, 1986). As such, common method variance is unlikely a concern in this study.

Table 4.3 Distribution of questionnaires

Source of data collection	*Sets of Questionnaires*
Face-to-face interviews	**19**
Web-based survey	70
Total	***89***

Descriptive data (mean values, standard deviation, minimum and maximum values) of the questionnaires (N=89) on all variables is provided in Table 4.4.

Table 4.4 Descriptive statistics for all variables

Variable	*Mean*	*Std. deviation*
Organizational adaptability	3.4417	.8712
Management staff's ability	3.3034	1.0249
Management involvement	3.3652	1.1954
Communication	3.1801	1.3654
Effectiveness of know-how transfer	3.7167	.7905
Business performance	3.5980	.8328

Location of the surveyed retail stores was then analyzed. Table 4.5 shows the distribution of the respondents from the total 89 questionnaires completed by senior managers in the targeted foreign-owned retail establishments. The participant stores were located in 14 cities across China, and most of them were in major urban cities such as Beijing, Shanghai, Guangzhou, and Shenzhen.

Table 4.5 Distribution of the respondents by city

Region	*City*	*No. of Respondents*
Eastern	Shanghai	9
	Hangzhou	6
Southern	Shenzhen	9
	Guangzhou	9
Western	Xi'an	5
Northern	Beijing	10
Central	Wuhan	8
	Changsha	8
	Zhengzhou	2
	Hefei	1
Southwestern	Kunming	7
	Chengdu	2
	Chongqing	2
Northeastern	Harbin	1
	Total	***89***

4.2.6 Exploratory factor analysis

Initial items are usually reduced by exploratory factor analysis (EFA) and internal consistency assessment. Hinkin (1998) has recommended that once the data have been collected, exploratory factor analysis is used to further refine the new scales. EFA helps determine which items should be retained in the scale and which factors most likely present the domain of the construct. Internal consistency assessment refers to how well the questions correlate to each other and to the total test score. There are several different statistical procedures for this estimation. The most common method is to estimate the Cronbach coefficient alpha. If a scale is multi-dimensional, consisting of numerous subscales, then coefficient alphas must be estimated for each subscale. The present study used Cronbach alpha for internal consistency assessment. Details will be provided in the Findings and Discussions Chapter.

4.2.7 Confirmatory factor analysis

Confirmatory factor analysis (CFA) is conducted for the data obtained from mass data collection where the items retained in the exploratory factor analysis were then a priori specified to load on a particular factor for goodness-of-fit assessment. EFA is used for scale development, whereas CFA is used to assess measurement construct reliability and validity. The same set of data was used in the present study for both EFA and CFA analyses, as the sample size is comparatively too small (N=89) for a further split. The details of CFA results will be reported in the next chapter. It is not uncommon practice to conduct both an EFA and CFA on the same dataset. In this

study the initial use of EFA was to identify a suitable measurement model using a retail sector sample, and identify poor item loadings. The use of confirmatory techniques was to examine the latent factors once poor items have been removed. In addition, given that absorptive capacity, commitment, performance are developed constructs which had been empirically researched, it was deemed appropriate to examine the extent to which those structures are robust using the same retail sector sample.

4.2.8 Convergent/discriminant validity

Construct validity is concerned with the relationship of the measure to the underlying attributes it is attempting to assess, and it should be examined in addition to the assessment of content adequacy and internal consistent reliability (Hair et al., 1995). The objective is to measure variables under investigation completely and accurately before any hypothesis testing (Hair et al., 1995). Construct validity mainly includes convergent and discriminant validity. Basically, by providing evidence of convergent and discriminant validity, the scale is valid for use.

Convergent validity is demonstrated by the extent to which the measure correlates with other measures designed to assess the construct. It is normally evaluated for the measurement model by determining the significance of the items' estimated coefficients to their posited underlying construct factor, whereas each coefficient is two times greater than the respective standard error (Andersen and Gerbing, 1988).

Discriminant validity refers to the degree to which the scale does not correlate with

other measures designed to assess dissimilar constructs (Fornell and Larcker, 1981; Hair et al., 1995; Hinkin et al., 1997). A common approach is to assess the constructs by constraining the estimated correlation parameter between them as 1.0, and then conducting a chi-square difference test on the values obtained from the constrained and unconstrained models (Anderson and Gerbing, 1988). A significantly lower chi-square value for the model with unconstrained correlation to unity implied the traits are not perfectly correlated and therefore discriminant validity is achieved (Bagozzi and Phillips, 1982).The average variance extracted value was therefore compared with the squared correlations among paired constructs for determining the quality of discriminant validity (Fornell and Larcker, 1981). In the present study, both convergent validity and discriminant validity are assessed, and the results will be discussed in the ensuing chapter.

CHAPTER 5 FINDINGS AND DISCUSSIONS

This chapter first presents the profile of both key informants and participant retail stores. Second is the test of data normality results. Third, it will report the results of exploratory factor analysis (EFA) using principal component extraction method with varimax rotation. Fourth, each of the measurement models was evaluated separately with confirmatory factor analysis (CFA) to assess both internal and external consistency. Fifth, the structural paths and the model fit indices of the proposed model were assessed by using structural equation modeling (SEM hereafter) technique with MLE estimation. Lastly, the results were discussed in relation to the research hypotheses.

5.1 Descriptive Statistics

As outlined above (Chapter 4), a total of 89 completed questionnaires were used for analysis: 19 from face-to-face questionnaire interview, and 70 from web-based questionnaire survey. The response rate of face-to-face questionnaire interview is around 12%, and that of web-based questionnaire survey close to 25%. Usually the main reason given by managers who did not agree to participate in the face-to-face questionnaire interview was that they were not allowed to attend an interview according to company policy.

5.1.1 Demographic profile of respondents

The demographic profile of the respondents is shown in Table 5.1. Of the 89 respondents, male and female respondents are not evenly distributed with the

percentage of 79.8% and 20.2% respectively, which reveals that males dominate senior management position at foreign-owned retail establishments. For the whole sample, 84.4% respondents fell in the age range of 26 to 45, and 95.5% completed university degree or higher. With regard to occupation, 44.9% were store managers, 15.7% were financial managers and 21.3% were HR managers, and 18.0% from other functional departments. These managers were qualified as key informants for this research because, according to the criteria recommended by Campbell (1955) and Brown and Lusch (1992), they were responsible for planning and operation of retail activities; had access to the desired information; and were knowledgeable about retail management know-how acquisition. In terms of the length of work experience, 34.8% respondents fell in the period range of 6-10 years, and 43.8% respondents had only worked for between 2-5 years, 15.7% reported a range of 11-15 years, 4.5% 16-20 years, whereas a minority (1.1%) fell into the category of working 20 years or more. This phenomenon reflects that sino-foreign joint ventures and multinational firms prefer to recruit young university graduates for management position to support their localization strategy because the new generation of youths in China is more willing to learn and more inclined to accept western management approaches. This finding is consistent with that reported in previous studies on employment trends in China (e.g. Björkman and Fan, 2002; Hong et al., 2006).

Table 5.1 Demographic profile of respondents

	n	***%***
Gender		
Male	71	79.8
Female	18	20.2
Age		
25 or below	8	9.0
26-35	63	70.8
36-45	12	13.5
46-55	6	6.7
Education		
Secondary	4	4.5
University/tertiary	96	88.8
Postgraduate	7	6.7
Position		
Store manager	49	55.1
Financial manager	16	18.0
HR manager	19	21.3
Others	5	5.6
Working Experience in Retail Sector		
5 years or below	39	43.8
6-10	31	34.8
11-15	14	15.7
16-20	4	4.5
20 or above	1	1.1

5.1.2 Characteristics of participant stores

As summarized in Table 5.2, the foreign parent of these subsidiaries were from different parts of the world, such as Hong Kong and Taiwan (28.1%), USA (12.4%), and France (10.1%). 58% of the participant stores reported that their foreign parent operated more than 20 retail establishments in China. The majority of the participant stores had a monthly sales volume of over RMB7.5 million. 64% of them were joint ventures (JVs), and wholly owned enterprise (WOE) accounted for 30.3%, this ratio is consistent with the data provided in March 2005 by the National Bureau of Statistics (NBS) that WOE to JV ratio was 29.7%. The reason why WOE accounted for a smaller proportion probably is that international retailers were not permitted to establish a WOE retail outlet in China until December 2004. According to the NBS, the ratio of WOE to JV had increased to 63% in 2006, due to the fact that the restriction on ownership had been removed by the China government since the end of 2004. Most international retailers thus changed their operation mode from JV to WOE to allow full control of their business in China.

Table 5.2 Characteristics of participant stores

	n	%
Country of Origin		
USA	11	12.4
Japan	4	4.5
UK	6	6.7
France	9	10.1
Germany	5	5.6
HK/TW	25	28.1
Thai	7	7.9
Malaysia	5	5.6
Others	17	19.1
No. of retail establishments		
1-5	13	14.6
6-10	11	12.4
11-15	5	5.6
16-20	8	9.0
20 or more	52	58.4
Average monthly sales revenue in 2004		
below2.5m	16	18.0
2.5-5.0m	7	7.9
5.0-7.5m	11	12.4
over 7.5m	55	61.8
No. of Management staff		
1-25	4	4.5
26-50	9	10.1
51-75	4	4.5
76-100	1	1.1
100 or above	71	79.8
Ownership		
JV	48	53.9
WOE	32	36.0
Other	9	10.1
Retail Format		
Supermarket	45	50.6
Specialty store	22	24.7
Department store	22	24.7

5.2 Exploratory Factor Analysis

Exploratory factor analysis (EFA) was performed to identify the underlying dimensions of each construct. EFA is a technique to reduce the number of variables with the attempt to retain as much of the information as possible and make the remaining variables meaningful and easy to work with (Hair et al., 1995). Principal component extraction method with varimax rotation was used. All factors with eigenvalue greater than unity were extracted. There are no strict guidelines for evaluating factor loading and deciding which items should be retained, however the 0.4 criterion level appears most commonly used in judging factor loadings as meaningful (Hinkin, 1998). In the study, items with factor loadings higher than 0.4 were thus identified as the composites of each factor and those with factor loadings lower than 0.4 were then deleted from the analysis. When deciding the percentage of the total item variance that is explained, there are no hard-and-fast rules either, but 50% could serve as a minimum acceptable target (Hinkin et al., 1997). Examining the communality statistics is another way to determine the proportion of variance in the variable explained by each of the items and "retaining the items with higher communality" is recommended (Hinkin, 1998, p.112). Internal consistency of the individual factor was assessed based on Cronbach's alpha value. The results of EFA are discussed in the following section.

5.2.1 Factor structure of absorptive capacity

The test of Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy yielded a value of 0.794, which could be interpreted as "meritorious" for factor analysis

(Kaiser, 1974). Barlett's test of sphericity obtained a value of 246.517 with an associated significance of 0.00, suggesting that the correlation matrix should unlikely be an identity matrix (Hair et al., 1995) and that the data set would be appropriate for analysis. To assess the unidimensionality of the six indicators of absorptive capacity, the Alpha value was assessed and resulted in 0.786, indicating satisfactory unidimensionality. A two-factor solution emerged based on eigenvalue larger than the unity criterion, with an accumulated variance of 68.507%. As presented in Table 5.3, the pattern of these two factors looks condensed and clear. Factor one is composed of four items, which are "the majority of local managers are good in foreign language", "the majority of local managers have working experience in retail company", "the majority of local managers have a university degree or higher", and "management staff training and development activities". On this basis, this factor is interpreted as "the ability of management staff to learn" factor. Factor two contains two items, including "establishment is flexible", and "establishment is creative in its management". These two items suggest an "organizational adaptability" factor. The Cronbach's alpha value of the two factors is 0.784 and 0.834 respectively, exceeding the suggested cut-off value of 0.70 (Nunnally, 1978) and higher than that reported in the original studies (Lyles and Salk 1996; Alpha value is 0.71 and 0.77 respectively).

The finding of a two factor structure of absorptive capacity is important in the sense that previous studies have only investigated this concept either from a firm-level (e.g. Lyles and Salk, 1996) or individual-level perspective (e.g. Minbaeva et al., 2003), but whether these two dimensions are interconnected has not previously been noted.

In essence, the difference in the nature of each of these dimensions reveals that absorptive capacity seems to be a complex concept. Further insights into this construct need to be explored so as to better conceptualize and operationalize the construct. This will be discussed in the ensuing section.

Table 5.3 EFA result of absorptive capacity

	Factor loadings	
	Ability of management staff to learn	Organizational adaptability
Majority of local managers are good at foreign language.	.819	
Majority of local managers have a university degree or higher.	.800	
Majority of local managers have working experience in retail company.	.782	
This establishment commits to management staff training and development.	.626	
This establishment is flexible.		.902
This establishment is creative in its management.		.846
Cumulative variance (%)	**39.395%**	**68.507%**
Eigenvalue	**2.758**	**2.038**
Alpha Value	**0.784**	**0.834**

5.2.2 Factor structure of commitment

The test of KMO and the Barlett's test of sphericity indicate that the data set is appropriate for exploratory factor analysis. The unidimensionality assessment for the seven indicators of commitment was satisfactory with an Alpha value of 0.928. The EFA results revealed a two-factor solution with the cumulative variance of 84.385% as shown in Table 5.4. Factor one is composed of four items, including "foreign parent provides regular training for store manager", "foreign parent contributes marketing support to this establishment", "foreign parent evaluates store manager's performance regularly", and "foreign parent has provided enough administrative support". On this basis, the factor is interpreted as a "Management Involvement" factor. Factor two contains three items which refer to: "frequent email communication", "frequent phone communication", and "frequent regular meeting". Based on these items, this factor can be defined as "Communication".

The Cronbach's alpha values of these two factors are 0.913, 0.944 respectively, exceeding the suggested cut-off value of 0.70 (Nunnally, 1978). As previous studies have only investigated management involvement of the parent firm (Lyles and Salk, 1996), the two-factor structure findings of the present study enables additional insights to be gained into the construct of commitment.

Table 5.4 EFA result of commitment

	Factor loadings	
	Management involvement	Communication
The foreign parent provides regular training for store manager.	.889	
The foreign parent contributes marketing support to this establishment	.857	
The foreign parent evaluates store manager's performance regularly	.854	
The foreign parent has contributed enough administrative support	.667	
Frequent email communication		.916
Frequent phone communication		.888
Frequent regular meeting		.807
Cumulative variance (%)	**42.196%**	**84.385%**
Eigenvalue	**3.130**	**2.777**
Alpha Value	**0.913**	**0.944**

5.2.3 Factor structure of retail management know-how

To evaluate the unidimensionality of the nine indicators of retail management know-how, the Alpha value was assessed and resulted in 0.838, indicating satisfactory unidimensionality. A two-factor solution emerged with the cumulative variance of 67.113%; the results of KMO test and Barlett's test of sphericity also suggest that the data set is appropriate for factor analysis. As presented in Table 5.5, factor one is composed of five items including strategic planning, business system, business policy, business control and corporate culture. Based on these items, this factor is interpreted as a "Strategic Management/Control Know-how" factor. Factor two contains four items which refer to promotion, advertising, marketing and pricing program. On this basis, factor two can be defined as a "Tactical Program Management" factor.

The results of the Cronbach reliability test indicate that the alpha values of individual factors exceed the recommended cut-off line of 0.70, displaying good reliability. The two factor structure result of management know-how is consistent with previous studies, such as one investigating equity ownership and management control in Sino-foreign JV hotels in China, in which Wong et al. (2005) reported a similar two-factor solution for management know-how, with the factors being strategic management and operational activities control.

Table 5.5 EFA result of retail management know-how

	Factor loadings	
	Strategic/Control management know-how	Tactical program management know-how
Strategic planning	.856	
Business system	.826	
Business policy	.820	
Business control	.693	
Corporate culture	.600	
Promotion		.858
Advertising		.851
Marketing		.741
Pricing program		.659
Cumulative variance (%)	**36.270%**	**67.113%**
Eigenvalue	**3.264**	**2.776**
Alpha Value	**0.840**	**0.839**

5.2.4 Factor structure of business performance

The value of KMO was 0.854 and Barlett's test of sphericity obtained a value of 430.440 with an associated significance of 0.00, indicating the data set would be appropriate for analysis. One factor solution emerged with the variance of 66.736%. As presented in Table 5.6, the factor is composed of seven market metrics, including: store image, customer satisfaction, sales volume, labor productivity, services standards, market share and profit.

Table 5.6 EFA result of performance

	Factor loadings
Store image	.859
Customer satisfaction	.847
Sales volume	.844
Labor productivity	.826
Services standards	.797
Market share	.774
Profit	.767
Variance (%)	**66.736%**
Eigenvalue	**4.671**
Alpha value	**0.915**

5.3 Confirmatory Factor Analysis

The results of EFA provide supports to the scales developed in the original studies in terms of construct reliability. The Alpha value of each scale is higher than that found in original studies. Therefore, I continued to perform confirmatory factor analysis (CFA) to assess the robustness of these factors identified via EFA. While EFA is used for scale development, CFA is used for assessing construct reliability and validity.

5.4 Assessment of Data Normality

In order to implement the methodology for confirmatory factor analysis (CFA), the assumption of normality distribution must be satisfied. “Assessing data normality (along with skewness and kurtosis) is important because many model estimation

methods are based on an assumption of normality" (Shah and Goldstein, 2006, p.157). Non-normal data may result in inflated goodness of fit statistics and underestimated standard errors; although these effects are lessened with larger sample sizes (Lei and Lomax, 2005).

Since multivariate normality is difficult to test, it is recommended that univariate normality among variables be initially tested. In essence, establishing univariate normality among of a collection of variables helps gain, though not guarantee, multivariate normality (Hair et al.1992). The assessment of normality requires the values of skewness and kurtosis. "Skewness is a measure of a distribution's deviation from symmetry" (Hair et al., 1995, p.639). Positive skewness (toward the left) indicates the curve is above the normal diagonal, while negative skewness (toward the right) indicates the curve is below the normal diagonal. A positive kurtosis value indicates a relatively peaked distribution, while negative value indicates a flat distribution. All fifty-seven measured items were tested along these two values. The values of skewness were found from the range of -1.30 to -0.21 and those of kurtosis were found from -0.06 to 2.50. All items had negative skewness value suggesting all of the items tailed off to the left. Besides, there were forty-two items showing a relatively peaked distribution while the remaining fifteen items were in a relatively flatter distribution. All values were within the range of ±2.58, denoting the assumption about the normality of distribution is accepted at 0.01 significant levels (Hair et al., 1995, p639). Detailed results of skewness, kurtosis, mean and standard deviation of the measured items can be referred to in Appendix VII.

5.5 Structural Equation Model

A structural equation model (SEM) can be defined as a technique to specify, estimate and evaluate models of linear relationships among a set of observed/measured/ manifest variables in terms of a generally smaller number of unobserved/underlying/latent variables (Shah and Goldstein, 2006, p149). Structural equation model is composed of observed/measured/manifest variables and unobserved/underlying/latent variables that can be independent (exogenous) or dependent (endogenous) in nature. Unobserved variables are hypothetical constructs that cannot be measured directly, and in structural equation model they are typically represented by multiple observed variables that serve as indicators of the underlying constructs. SEM falls into the category of multivariate methods, and typically conveys causal processes. Byrne (2001, p.4) have reported that causal analysis enables the modeling and the estimation of a complex structure of dependence simultaneously, which is especially useful in the behavioral sciences where researchers are often interested in studying theoretical constructs that cannot be observed directly. This requirement is often recognized in the knowledge trnafer literature, where constructs tend to be complex and, by definition, not directly observable. Previous studies (Fornell and Larcker, 1981; Bentler and Chou, 1987) have shown that SEM is particularly effective when testing models that (1) are path analytic with mediating variables and (2) contain latent constructs that are being measured with multiple indicators. As the model of retail management know-how transfer contains several latent variables, structural equation modeling was deemed appropriate.

In a review of the use of SEM in operations management research, Shah and Goldstein (2006, p152) have suggested that "there are many important issues to consider when using SEM, whether for evaluating a measurement model or examining the fit of structural relationships, separately or simultaneously". Shah and Goldstein (2006) organized these issues into three groups: (1) issues to consider prior to analysis, which include conceptual issues, sample size issues, measurement model specification, latent model specification and degrees of freedom issues; (2) issues to address during analysis, which include examining sample data for distributional characteristics and generating an input matrix; and (3) issues related to the post-analysis stage, which are related to model estimation, model fit and re-specification of the model. Some of these issues which are relevant to the present study will be discussed in subsequent sections which address data normality assessment, measurement evaluation and overall structural evaluation.

5.6 Estimation of the Measurement Models

The results from EFA in section 5.2 were inputs for the formulation of the measurement models for each construct. These measurement models need to be validated and assessed with CFA. Since the assumption about the normality of distribution is accepted at 0.01 significant level, full information maximum likelihood (FIML) method was used for estimating the parameters with AMOS. This method is advantageous to other methods in managing missing data (such as listwise deletion, pairwise deletion, data imputation) and leads to the lowest rate of convergence failures, least bias in parameter estimates and lowest inflation in goodness of fit statistics (Enders and Bandalos, 2001).

A total of four measurement scales were examined with CFA, including: absorptive capacity, commitment, retail management know-how and performance. When considering the extent of goodness-of-fit of each measurement model, two sets of fit indices are used. One is absolute fit indices while the other is incremental fit indices (Bollen, 1989). Absolute fit indices indicate the degree to which the hypothesized model reproduces the sample data, whereas incremental fit indices measure the proportional improvement in fit when the hypothesized model is compared with a restricted, nested baseline model (Hu and Bentler, 1998). The most basic measure of absolute fit is the χ^2-statistic. Other commonly used measures include root mean square error of approximation (RMSEA), the standard root mean square residual (RMR or SRMR), goodness-of-fit index (GFI) and adjusted goodness of fit (AGFI). Browne and Cudeck (1993) suggested that the values of the RMSEA of 0.05 or less indicate a close fit, and 0.08 or less indicate adequate fit. The standard root mean square residual (RMR or SRMR) is a measure of the average of standardized fitted residual. It ranges from 0.00 to 1.0, with a value of less than 0.08 indicating a good fit. While RMSEA and RMR decrease as goodness of fit increases and are bounded below by zero, GFI and AGFI increase as goodness of fit increases and are bounded above by 1.00 (Browne and Cudeck, 1993).

Incremental fit measures compare the model under study to two reference models: (1) a worst case or null model, and (2) an ideal model that perfectly represents the modeled phenomena in the studied population. The most popularly used incremental fit indices are normed fit index (NFI), non-normed fit index (NNFI or TLI), comparative fit index (CFI) and incremental fit index (IFI). There has been an

ongoing debate on which index would be more appropriate to use than another (Shah and Goldstein, 2006). For instance, Hu and Bentler (1998) are against the use of GFI and AGFI because they are significantly influenced by sample size and are insufficiently sensitive to model misspecification. In order to evaluate the underlying fit of the data to the model from multiple perspectives, the present study will use both absolute fit indices and incremental fit indices to report the results. Absolute fit indices include $\chi 2$, RMSEA, and GFI, whereas incremental fit indices comprise IFI, NFI, and CFI.

Aside from model fit assessment, the reliability of each scale is evaluated with construct reliability. It is a measure of the internal consistency of a construct. Convergent validity and discriminant validity (Hair et al., 1995) are also described for assessing the validity of each scale for all measurement models. Convergent validity refers to the extent to which the measures used in this study are highly correlated with other measures of the same construct (Anderson and Gerbing, 1998; Hinkin, et al., 1997). Discriminant validity refers to the degree of measures in conceptually different constructs that are distinct with very low or even no correlation (Hinkin, et al., 1997).

5.6.1 Absorptive capacity

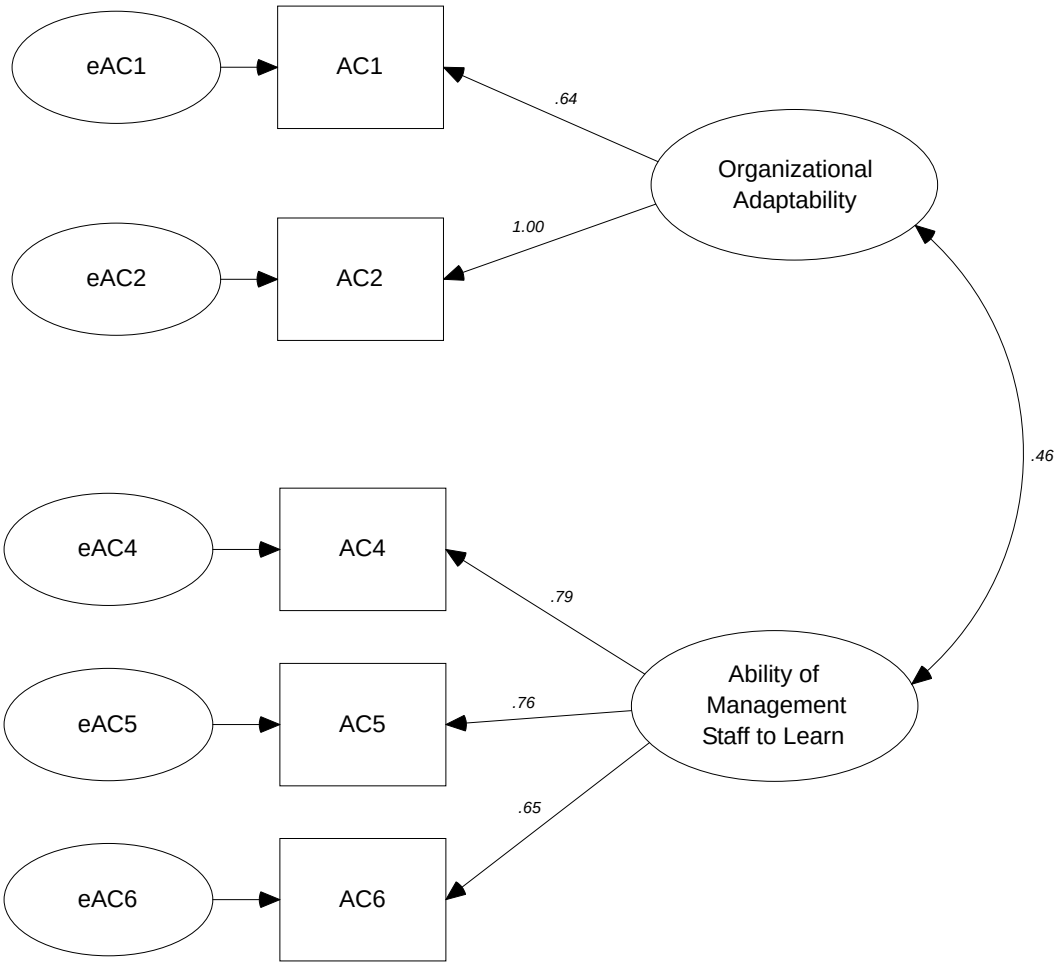
The result of the two-factor structure of absorptive capacity identified from EFA was validated by CFA (Figure 5.1). The results reported one offending estimate with a negative error variance value for the variable “the retail outlet commits to management staff training and development”. This value is inappropriate because

variance cannot be negative thus must be corrected before the model can be interpreted and the goodness-of-fit assessed. There are several possible remedies for correcting the offending estimate, including dropping the variable. In this case, the variable was retained and according to conceptual theory the corresponding error variance was set to a small value (0.005) to ensure that this value for the variable would be appropriate. The model was then re-estimated and resulted in no offending estimates. However, model fit indices indicated a less satisfactory statistical outcome. According to the modification indices and the performance of each observed variable, the item "the retail outlet commits to management staff training and development" was deleted. Details are shown in Table 5.7.

Table 5.7 Measurement scale for absorptive capacity

Dimensions	***Labels***	***Items***	***Status***
Organizational adaptability	AC1	This establishment is flexible.	Remained
	AC2	This establishment is creative in its management.	Remained
Ability of management staff to learn	AC3	This establishment commits to management staff training and development.	Deleted-1
	AC4	Majority of local managers are good at foreign language.	Remained
	AC5	Majority of local managers have working experience in retail company.	Remained
	AC6	Majority of local managers have a university degree or higher.	Remained

Figure 5.1 Confirmed measurement model of absorptive capacity



Legends: AC1= This establishment is flexible.
AC2= This establishment is creative in its management.
AC4= Majority of local managers are good at foreign language.
AC5= Majority of local managers have working experience in retail company.
AC6= Majority of local managers have a university degree or higher.

The final results (Table 5.8) showed that all 5 item loadings are significant at 0.00 without any offending estimates reported. The fit indices indicate a satisfactory

model fit ($\chi 2$=3.163 at p=0.675; df=5; $\chi 2$/df=0.633; RMSEA=0.003; IFI=0.986; NFI=0.999; CFI=0.999). The scale composite reliability (SCR) and average variance extracted (AVE) values are higher than the recommended levels (0.7 for SCR and 0.5 for AVE); therefore satisfactory reliability tests are obtained. All estimated loadings are greater than twice the respective standard error; and the critical ratio values are all greater than 1.96, revealing the presence of convergent validity. To assess discriminant validity, Fornell and Larcker (1981) suggest the use of average variance extracted (i.e., the average variance shared between a construct and its indicators), which should be greater than the variances shared between the construct and other constructs in the model (i.e., the squared correlation between two constructs). The comparison can be made in a correlation matrix, which includes the correlations between different constructs in the off-diagonal elements of the matrix, and the square roots of the average variance extracted values calculated for each of the constructs along the diagonal. In order that the discriminant validity is adequate, the diagonal elements should be significantly greater than the off-diagonal elements in the corresponding rows and columns. Table 5.13 indicates that the two constructs with reflective indicators had adequate discriminant validity. As a result, discriminant validity is also supported. These values are able to lend strong support to the acceptance of the measurement model.

Table 5.8 CFA result of absorptive capacity

	Estimate	*S.E.*	*C.R.*	*P*	*Std. Estimate*	*Error Term*	*S.E.*[e]	*C.R.*[e]
Organizational Adaptability							0.153	6.601
AC1	0.632	0.080	7.884	***	0.645	eAC1	0.085	6.610
AC2*	1.000				0.998	eAC2		
Ability of Management Staff to Learn							0.186	3.063
AC4	1.370	0.257	5.744	***	0.792	eAC4	0.177	3.588
AC5	1.211	0.229	5.293	***	0.658	eAC5	0.150	4.211
AC6*	1.000				0.652	eAC6	0.144	5.339

	ALPHA	*SCR*	*AVE*
Organizational Adaptability	0.783	0.971	0.818
Ability of Management Staff to Learn	0.777	0.894	0.756

χ2	*df*	*χ2/df*	*RMSEA*	*IFI*	*NFI*	*CFI*
3.163	5	0.633	0.003	0.986	0.999	0.999

* The corresponding parameter was constrained to unity (1.00) to ensure model identification

Legends: AC1= This establishment is flexible.

AC2= This establishment is creative in its management.

AC4= Majority of local managers are good at foreign language.

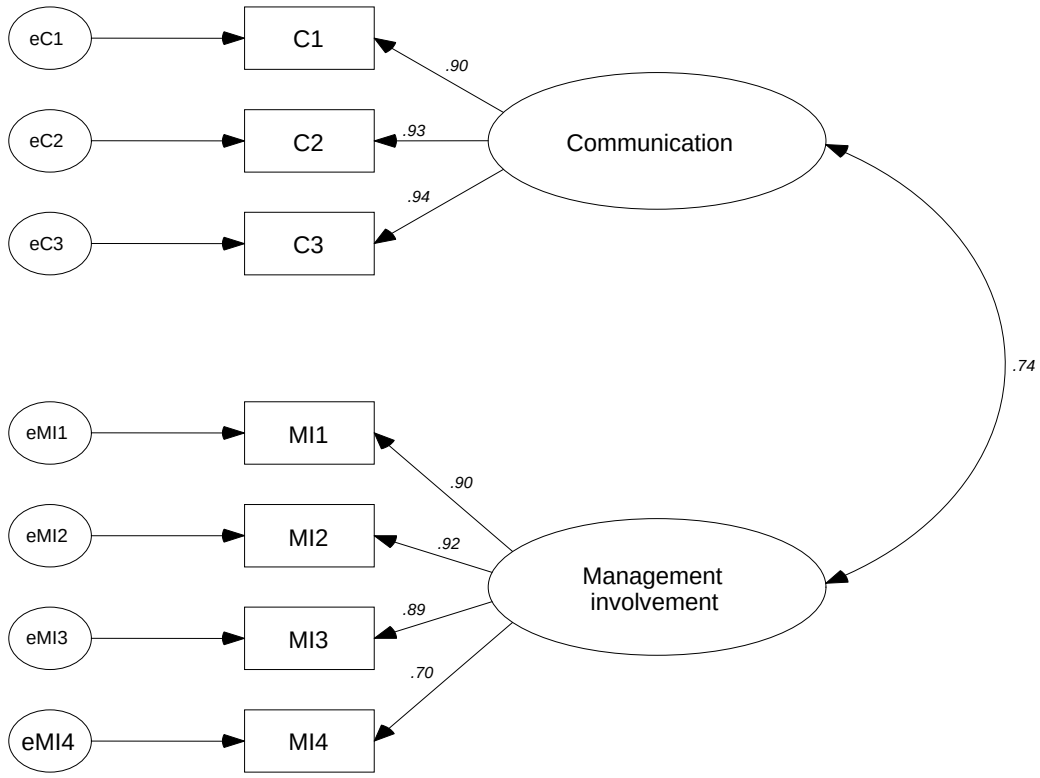
AC5= Majority of local managers have working experience in retail company.

AC6= Majority of local managers have a university degree or higher.

5.6.2 Commitment

From the EFA results stated previously, commitment is measured by 7 observed variables along two factors: management involvement and communication. This factor structure was then validated by using CFA (Figure 5.2).

Figure 5.2 Confirmed measurement model of commitment



Legends: C1= Regular meeting
C2= Phone communication
C3= Email communication
MI1= Provided regular training to store manager.
MI2= Contributed enough marketing support.
MI3= Regularly assessed the store manager's performance.
MI4= Contributed enough administrative support.

Table 5.9 CFA result of commitment

	Estimate	*S.E.*	*C.R.*	*P*	*Std. Estimate*	*Error Term*	*S.E.*[e]	*C.R.*[e]
Management Involvement							.318	5.801
MI1	1.278	.160	8.015	***	.898	eOS1	.071	4.759
MI2	1.314	.160	8.210	***	.924	eOS2	.064	4.054
MI3	1.293	.163	7.951	***	.891	eOS3	.077	4.926
MI4*	1.000				.702	eOS4	.144	6.220
Communication							.235	3.710
C1	.949	.066	14.346	***	.897	eC1	.079	5.109
C2	.970	.060	16.029	***	.932	eC2	.064	4.081
C3	1.000				.939	eC3	.066	3.803

	ALPHA	*SCR*	*AVE*
Management involvement	.913	.876	.859
Communication	.944	.956	.953

χ2	*df*	*χ2/df*	*RMSEA*	*IFI*	*NFI*	*CFI*
21.580	13	1.660	.087	.985	.964	.985

* The corresponding parameter was constrained to unity (1.00) to ensure model identification

Legends: C1= Regular meeting
C2= Phone communication
C3= Email communication
MI1= Provided regular training to store manager.
MI2= Contributed enough marketing support.
MI3= Regularly assessed the store manager's performance.
MI4= Contributed enough administrative support.

The final results (Table 5.9) showed that all estimated loadings were statistically significant at 0.00 without any offending estimates reported. Chi-square test was statistically significant at 0.062 and RMSEA was larger that 0.08, which can be explained by Jackson (2003) that smaller sample sizes were generally characterized by parameter estimates with greater bias in χ2 and RMSEA fit statistics. Other model fit indices are satisfactory (χ2= 21.580 at p= 0.062; df=13; χ2/df=1.660; RMSEA=0.087; IFI=0.985; NFI=0.964; CFI=0.985). The SCR and AVE values suggest satisfactory reliability. All seven items attach with critical ratio values greater than 1.96, with all having high standardized estimated loadings (i.e. larger than 0.50), and all estimated loadings are greater than twice the respective standard

error, revealing the presence of convergent validity. For the discriminant validity, table 5.13 shows that the square roots of the average variance extracted values calculated for the two constructs along the diagonal (0.976 and 0.927 respectively) are much larger than the off-diagonal elements in the corresponding rows and columns (0.716 and 0.423 respectively), thus discriminant validity is also supported. All these values meet respective threshold points, lending support to the acceptance of the measurement model.

5.6.3 Retail management know-how

From the EFA results stated previously, the construct of retail management know-how has a two-factor structure with 9 items loading on the factors. The first factor is defined as "strategic/control management know-how", and the second one "tactical program management know-how". This factor structure was then validated by using CFA (Figure 5.3).

The final results are shown in Table 5.10. All item loadings are statistically significant at 0.05 without any offending estimates reported. Chi-square test was statistically significant at 0.05 and RMSEA was smaller than the recommended thresholds 0.08. Other indices also indicated good results ($\chi 2$=37.477 at p=.068; df=26; $\chi 2$/df=1.441; RMSEA=0.071; IFI=0.971; NFI=0.912; CFI=0.971). Satisfactory reliability tests were obtained for SCR and AVE; the two values were both higher than the recommended levels. All estimated loadings are greater than twice the respective standard error, attaching critical ratio values greater than 1.96, and most of them have high standardized estimated loadings (i.e. larger than 0.50).

These findings reveal the presence of convergent validity. The discriminant validity is also supported by table 5.13 which shows that the square roots of the average variance extracted values calculated for the two constructs along the diagonal (0.724 and 0.746 respectively) are much larger than the off-diagonal elements in the corresponding rows and columns (0.177, 0.670 and 0.224 respectively). All these values meet respective threshold points, lending supports to the acceptance of the measurement model.

Figure 5.3 Confirmed measurement model of retail management know-how

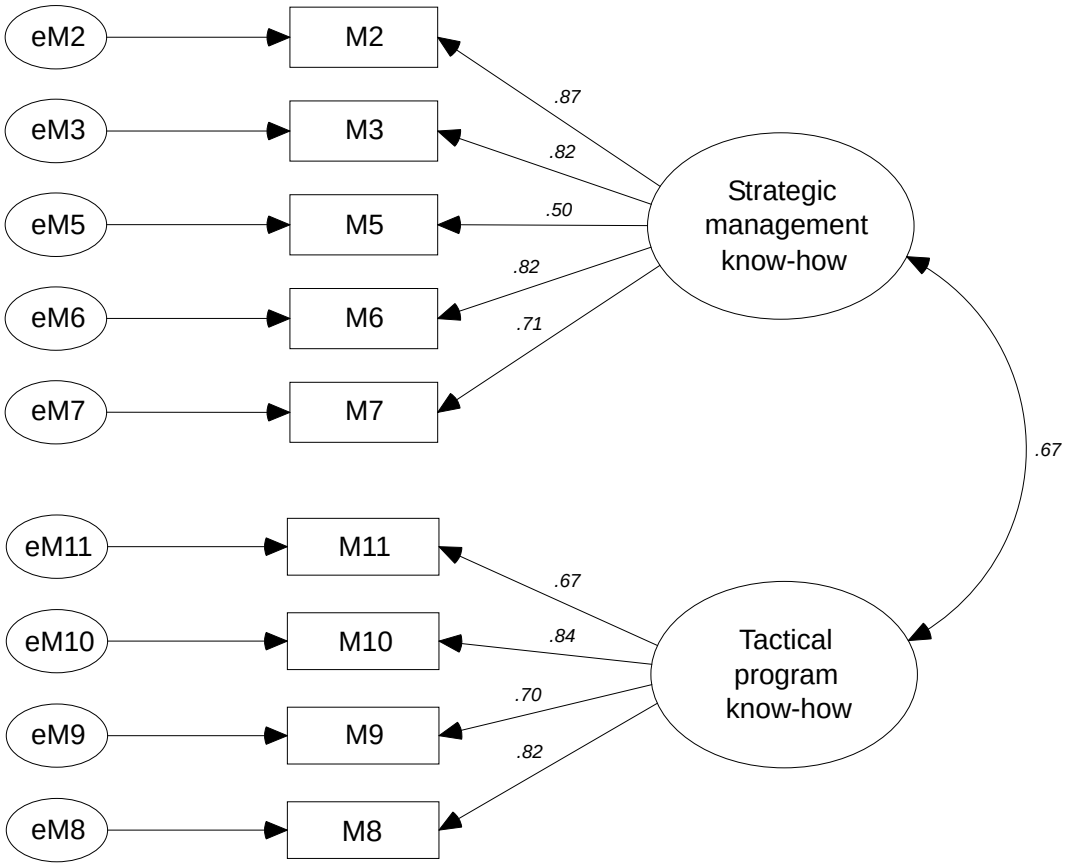


Table 5.10 CFA result of retail management know-how

	Estimate	*S.E.*	*C.R.*	*P*	*Std. Estimate*	*Error Term*	*S.E.*[e]	*C.R.*[e]
Strategic/control management know-how							0. 152	3.726
M2	1.367	.178	7.666	***	.873	eM2	.078	4.242
M3	1.198	.166	7.221	***	.816	eM3	.079	5.147
M5	.738	.167	4.424	***	.497	eM5	.147	6.398
M6	1.197	.164	7.277	***	.822	eM6	.076	5.068
M7*	1.000				.715	eM7	.092	5.870
Tactical program management know-how							0.145	3.362
M8	1.268	.197	6.443	***	.818	eM8	.085	4.540
M9	1.074	.188	5.702	***	.701	eM9	.103	5.669
M10	1.143	.175	6.540	***	.838	eM10	.064	4.210
M11*	1.000				.671	eM11	.103	5.819

	ALPHA	*SCR*	*AVE*
Strategic/Control management know-how	0.840	0.842	0.524
Tactical program management know-how	0.839	0.833	0.557

χ2	*df*	*χ2/df*	*RMSEA*	*IFI*	*NFI*	*CFI*
37.477	26	1.441	0.071	0.971	0.912	0.971

* The corresponding parameter was constrained to unity (1.00) to ensure model identification

Legends:
M2= Business policy
M3= Business control
M5= Strategic planning
M6= Corporate culture
M7= Business system
M8= Marketing planning
M9= Advertising planning
M10= Promotion planning
M11= Pricing program

5.6.4 Performance

From the EFA results stated previously, the construct of performance was found to be a unidimensional construct with 7 items retained. This result was then validated by using CFA. Though initially all item loadings were significant at 0.00 and no offending estimates were reported, the model fit indices showed a less satisfactory statistical outcome. Two measures were then deleted because of their high

correlation with other measures. The first deleted item was services standards, and the second was labor productivity, leaving 5 items, which were all marketing metrics for assessment of performance, in the scale. Maintaining service standard at high level was an important measure always mentioned by senior managers during in-depth interviews and labor productivity was a major concern as well. Perhaps many respondents considered these two measures should be highly related to operation instead of marketing. Satisfactory statistical results were achieved finally (Table 5.11).

Table 5.11 Measurement scale for performance

	Labels	***Items***	***Status***
Performance	P1	Sales volume	Remained
	P2	Market share	Remained
	P3	Profit	Remained
	P4	Customer satisfaction	Remained
	P5	Services standards	Deleted-1
	P6	Store image	Remained
	P7	Labor productivity	Deleted-2

The final results in Table 5.12 show that all estimated loadings are significant at the level equal to 0.00 without any offending estimates reported. Chi-square value is not statistically significant (p=0.285) and RMSEA is smaller than 0.08. Other model fit indices are also satisfactory ($\chi2$= 5.021at p= 0.285; df=4; $\chi2$/df=1.255; RMSEA=0.054; IFI=0.996; NFI=0.982; CFI=0.996). The SCR and AVE values show satisfactory reliability tests. All the five items attach with critical ratio values greater than 1.96, all having high standardized estimated loadings (i.e. larger than 0.50), and all estimated loadings are greater than twice the respective standard error, revealing the presence of convergent validity. The discriminant validity is also

adequate since the square root of the average variance extracted values calculated (0.926) is significantly greater than the off-diagonal element in the corresponding row (0.224) in the Table 5.13. The result lends strong support for the acceptance of the measurement model.

Figure 5.4 Confirmed measurement model for performance

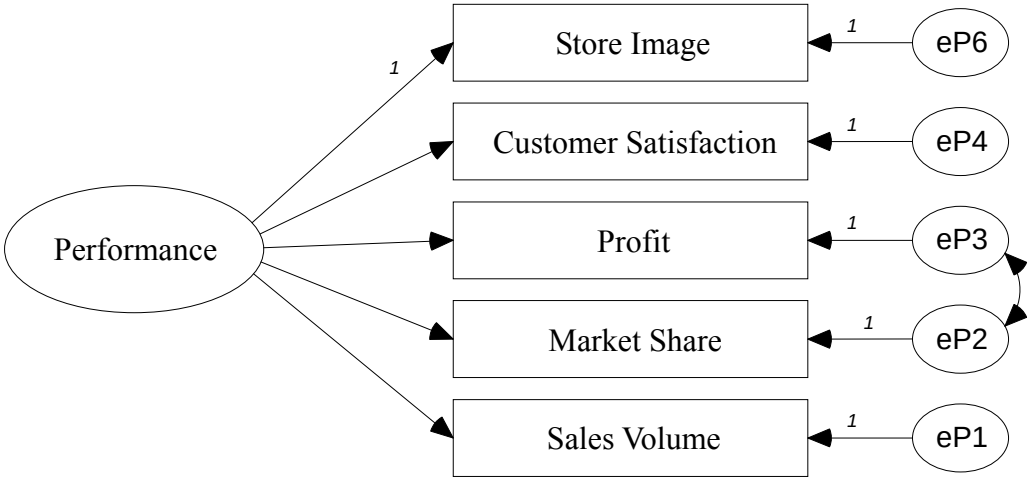


Table 5.12 CFA result of performance

	Estimate	*S.E.*	*C.R.*	*P*	*Std. Estimate*	*Error Term*	*S.E.*^{e}	*C.R.*^{e}
Performance							.150	4.493
P1	1.037	.117	8.861	***	.845	eP1	.064	4.514
P2	.863	.139	6.195	***	.636	eP2	.121	6.072
P3	.842	.129	6.538	***	.664	eP3	.101	5.988
P4	.989	.109	9.077	***	.865	eP4	.054	4.121
P6*	1.000				.819	eP6	.067	4.929

	ALPHA	*SCR*	*AVE*
Performance	0.889	0.967	0.858

χ2	*df*	*χ2/df*	*RMSEA*	*IFI*	*NFI*	*CFI*
5.021	4	1.255	0.054	0.996	0.982	0.996

* The corresponding parameter was constrained to unity (1.00) to ensure model identification

Legends: P1 = Sales volume P2 = Market share
P3 = Profit P4 = Customer satisfaction
P6 = Store image

Table 5.13 Correlations and discriminant validity

Variable	1	2	3	4	5	6	7
1. Communication	.976						
2. Involvement	.716	.927					
3. Adaptability	.244	.423**	.904				
4. Ability	.568*	.611**	.334**	.869			
5. Strategic management know-how	.303**	.417**	.227*	.177	.724		
6. Tactical program know-how	.104	.157	.227*	.109	.670	.746	
7. Performance	.410**	.540**	.557**	.446**	.361**	.224*	.926

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

In summary, good model fit is obtained with the above four measurement models of absorptive capacity, commitment, retail management know-how and performance. Table 5.14 is a summary of measures of model fit assessment. Though not all absolute fit indices reached satisfactory results, e.g. the Chi-square value (0.068) was significant at 0.1, all RMSEA values are smaller than recommended level 0.08, most of the incremental fit indices IFI, NFI and CFI achieved satisfactory values. The problem of the significant Chi-square could be explained by the small sample size and the comparatively large number of variables in the proposed models.

Table 5.14 A summary of measures of fit of the four measurement models

Constructs	*χ2*	*P-value*	*df*	*χ2/df*	*RMSEA*	*IFI*	*NFI*	*CFI*
Absorptive capacity	3.163	0.675	5	0.633	0.003	0.986	0.999	0.999
Commitment	2.978	0.226	2	1.489	0.075	0.996	0.989	0.996
Retail management know-how	37.477	0.068	26	1.441	0.071	0.971	0.912	0.971
Performance	5.021	0.285	4	1.255	0.054	0.996	0.982	0.996

In conclusion, all the four measurement models of absorptive capacity, commitment, retail management know-how and performance can be assessed as reliable and valid

at this stage, with the internal reliability, convergent validity, as well as discriminant validity also achieved. Face validity of each proposed construct was retained in the measurement model.

5.7 Estimation of the Overall Models

Upon the estimation of each measurement model fit, the overall model proposed in Chapter 3 was examined. In order to be of scientific use, a model has to be over-identified – that is, "the number of data points has to exceed the number of parameters to be estimated" (Byrne, 2001, p.35). Due to the small sample size (N=89), an estimation of the original model including all indicators would lead to an under-identified model. It was therefore decided to split the overall model into two submodels based respectively on knowledge source-related and knowledge recipient-related factors that may influence the knowledge transfer process. This way of breaking down large models with small sample size and large number of indicators and estimating submodels that contain only a subset of the variables is justified by Kenny and McCoach (2003), who have suggested that the researcher "might break down large models and estimated submodels that contain only a subset of the variables, when addressing the effect of the number of variables on measures of fit" (p.333).

5.7.1 Submodel 1: Absorptive capacity and knowledge transfer

The first submodel (Figure 5.5) addresses the relationship paths among absorptive capacity, knowledge transfer and performance. Among the three latent constructs,

absorptive capacity is operationalized as second-order construct since the two underlying factors are highly correlated (coefficient α=0.46). The other two constructs, which are knowledge transfer and performance, belonged to first-order constructs, with knowledge transfer composed of two factors resulted from CFA, i.e. strategic management know-how and tactical program management know-how.

Figure 5.5 Submodel 1: Absorptive capacity and knowledge transfer

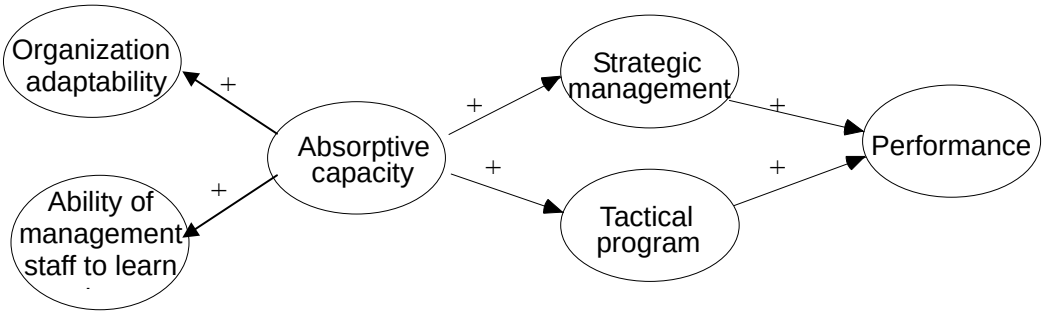
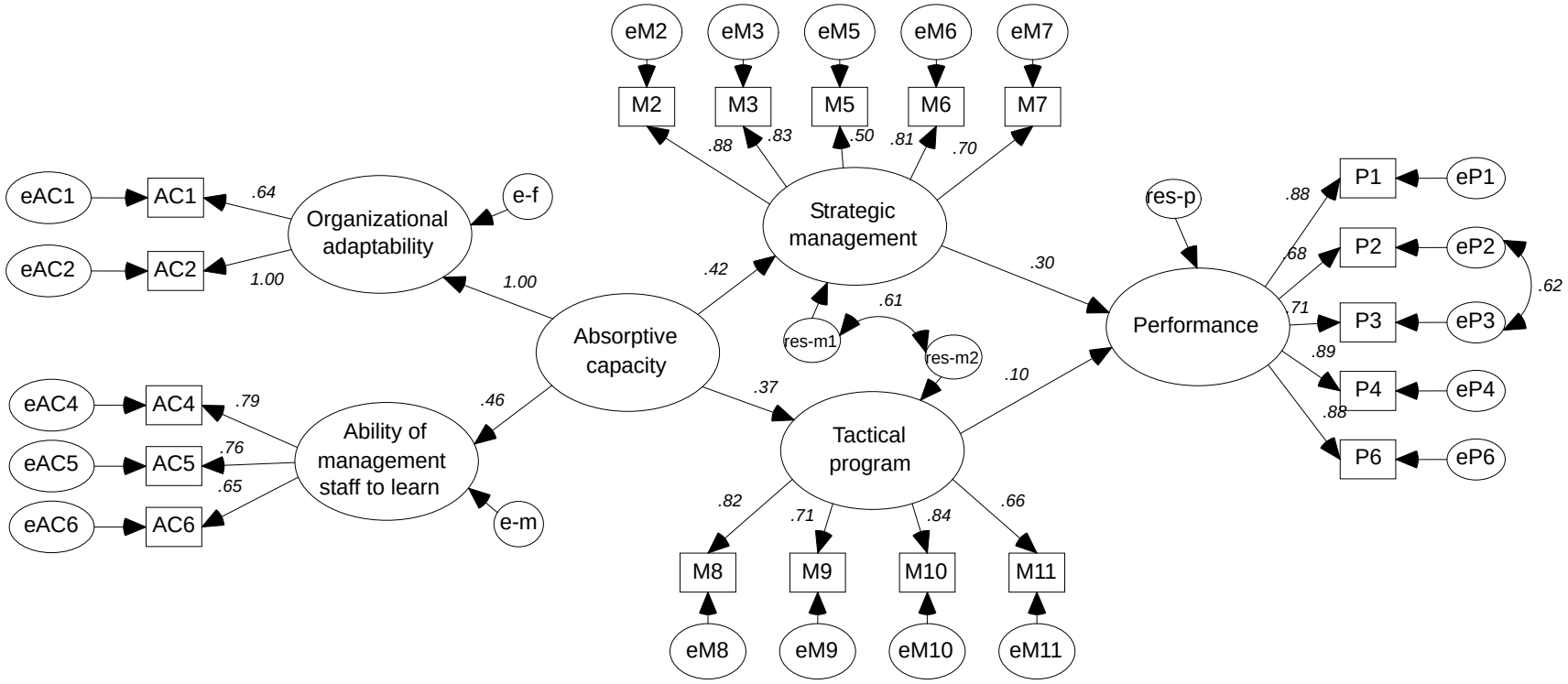


Figure 5.6 depicts the structural paths of submodel 1 among absorptive capacity, its two measurement factors, i.e. organizational adaptability and ability of management staff to learn, strategic management know-how, tactical program management know-how and performance with their indicators. Table 5.19 describes the statistical results of model fit. No offending estimates are reported in the structural model. All item loadings are statistically significant at 0.000 level. Structural path effects are all statistically significant except the one from tactical program management know-how to performance (p=0.450), but the flow of influence matches our expectation. The fit indices are: $\chi 2$= 253.958 is statistically significant at p=0.000, $\chi 2$/df=1.728; IFI=.885 NFI=.863 CFI=.882; RMSEA=.091. The fit indices indicate that the model is

marginally acceptable. To be sure that this model is acceptable, additional evidence is generated by comparing its fit indices with the results of the competing model, which are reported in the following section.

Figure 5.6 Structural paths in submodel 1



Legends:

AC1= Establishment is flexible
AC2= Establishment is creative
AC4= Good at foreign language
AC5= Working experience
AC6= University/higher degree

M2= Business policy
M3= Business control
M5= Strategic planning
M6= Corporate culture
M7= Business system

M8= Marketing planning
M9= Advertising planning
M10= Promotion planning
M11= Pricing program

P1= Sales volumes
P2= Market share
P3= Making profit
P4= Customer satisfaction
P6= Store image

Table 5.15 Parameter estimations of submodel 1

Structural paths/Item loadings	*Std. Estimate*	*S.E*	*C. R.*	*P*
Absorptive capacity → Organizational adaptability	.998	.776	3.678	***
Absorptive capacity → Ability of management staff to learn	.465			
Absorptive capacity → Strategic/control management know-how	.424	.460	2.710	***
Absorptive capacity → Tactical program management know-how	.367	.303	2.379	**
Strategic/control management→ Performance know-how	.303	.170	1.863	*
Tactical program management→ Performance know-how	.104	.258	.634	.526
Organizational adaptability				
Establishment is flexible	.645	.080	7.883	***
Establishment is creative	.998			
Management staff's ability to learn				
Good at foreign language	.792	.257	5.326	***
Working experience in retail industry	.758	.229	5.293	***
University/higher degree	.652			
Strategic/control management know-how				
Business policies	.878			
Business systems	.832	.091	9.757	***
Corporate culture	.496	.111	4.816	***
Strategic planning	.809	.092	9.344	***
Business controls	.698	.095	7.480	***
Tactical program management know-how				
Marketing	.820	.202	6.360	***
Advertising	.706	.193	5.678	***
Promotion	.838	.180	6.446	***
Pricing	.662			
Performance				
Sales volume	.881	.072	12.695	***
Market share	.684	.096	7.775	***
Making profit	.710	.088	8.272	***
Customer satisfaction	.893	.066	13.100	***
Store image	.885			

χ2	*df*	*χ2/df*	*RMSEA*	*IFI*	*NFI*	*CFI*
253.958	147	1.728	.091	.885	.863	.882

* p < 0.1; ** p < 0.05; *** p < 0.01.

5.7.2 Proposed submodel 1 vs. competing model 1

A competing model conceptualizing absorptive capacity as a first-order model that is composed of two factors, organizational adaptability versus the ability of management staff to learn, is proposed in Figure 5.7. This model will be compared with Submodel 1 in terms of model fit indices to investigate which measurement model would lead to an optimal explanatory model.

Figure 5.7 Competing model 1

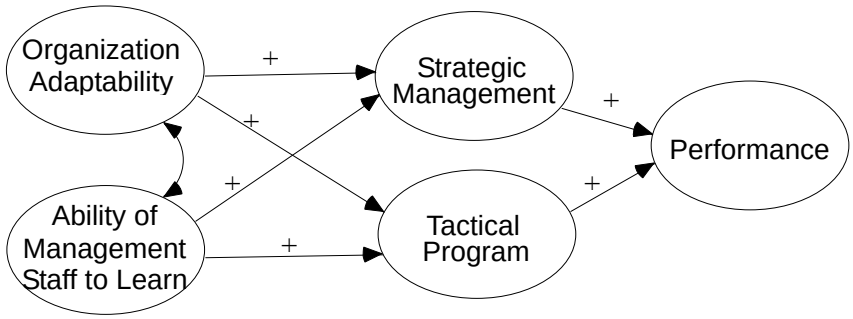
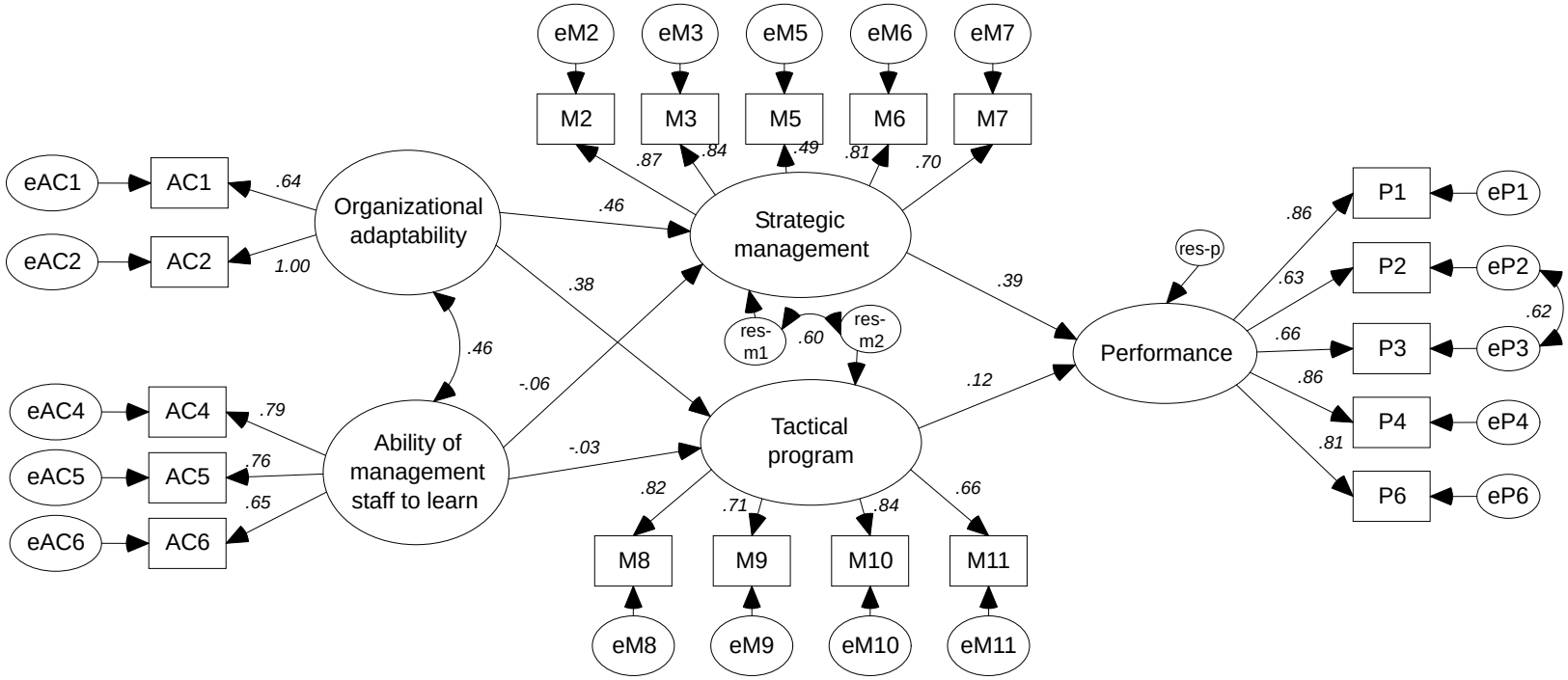


Figure 5.8 depicts the structural paths of competing model 1 among organizational adaptability, ability of management staff to learn, strategic/control management know-how, tactical program management know-how and performance with their indicators.

Figure 5.8 Structural paths in competing model 1



Legends:

AC1= Establishment is flexible
AC2= Establishment is creative
AC4= Good at foreign language
AC5= Working experience
AC6= University/higher degree

M2= Business policy
M3= Business control
M5= Strategic planning
M6= Corporate culture
M7= Business system

M8= Marketing planning
M9= Advertising planning
M10= Promotion planning
M11= Pricing program

P1= Sales volumes
P2= Market share
P3= Making profit
P4= Customer satisfaction
P6= Store image

Table 5.16 describes the statistical results of the competing model 1 fit. From the results, though all item loadings are statistically significant at 0.000 level, three insignificant structural paths (ability of management staff to learn → strategic management; ability of management staff to learn → tactical program; tactical program → performance) were observed. In addition, the flow of influence is contrary to expectations. Ability of management staff to learn does not have a direct impact on strategic/control management know-how and tactical program management know-how, while tactical program management does not have a positive and direct impact on performance. Besides, two structural paths (ability of management staff to learn → strategic management; ability of management staff to learn → tactical program) were found to be negative, which contradicts the theory. The fit indices are: $\chi 2$= 244.917 is statistically significant at p=0.000, $\chi 2$/df=1.701; IFI=.892; NFI=.773 CFI=.889; RMSEA=.089. The fit indices indicate that the model is marginally acceptable. As compared with the fit indices of proposed Submodel 1 (Table 5.15), the latter performs much better than this competing model, and further supports the conjecture that absorptive capacity should be a second-order factor measurement model. As a result, H1a is supported. Absorptive capacity is a second-order construct composed of two first-order factors, management staff's ability to learn and organizational adaptability. Besides, the findings also support H1b, that is, the greater the level of absorptive capacity, the greater the extent of retail management know-how transfer, are supported. For H3, the effectiveness of retail management know-how transfer will have positive impact on firm performance, is partly supported.

Table 5.16 Parameter estimations of competing model 1

Structural paths/Item loadings	*Std. Estimate*	*S.E*	*C. R.*	*P*
Organizational adaptability → Strategic/control management know-how	.460	.126	3.751	***
Organizational adaptability → Tactical program know-how	.381	.093	2.822	***
Ability of management staff to learn → Strategic/control know-how	-.063	.184	-.468	.640
Ability of management staff to learn → Tactical program management know-how	-.027	.129	-.189	.850
Strategic/control management know-how → Performance	.387	.182	2.353	**
Tactical program management know-how → Performance	.122	.266	.756	.450
Organizational adaptability ↔ Ability of management staff to learn	.464	.109	3.210	**
Organizational adaptability				
Establishment is flexible	.636	.083	7.391	***
Establishment is creative	.997			
Ability of management staff to learn				
Good at foreign language	.792	.225	5.790	***
Working experience in retail company	.761	.199	5.495	***
University/higher degree	.649			
Strategic/control management know-how				
Business policies	.872	.118	7.047	***
Business systems	.836	.124	9.319	***
Corporate culture	.493	.117	8.820	***
Strategic planning	.812	.117	8.820	
Business controls	.701	.133	4.654	***
Tactical program management know-how				
Marketing	.820	.203	6.358	***
Advertising	.707	.194	5.655	***
Promotion	.837	.180	6.439	***
Pricing	.661			
Performance				
Sales volume	.862	.081	9.264	***
Market share	.628	.094	8.769	***
Making profit	.659			
Customer satisfaction	.860	.076	10.128	***
Store image	.809	.079	11.945	***

χ2	*df*	*χ2/df*	*RMSEA*	*IFI*	*NFI*	*CFI*
244.917	144	1.701	.089	.892	.773	.889

* p < 0.1; ** p < 0.05; *** p < 0.01.

5.7.3 Submodel 2: Commitment and knowledge transfer

The second submodel (Figure 5.9) addresses relationship paths among constructs of commitment, knowledge transfer and performance, among which commitment was conceptualized as a multi-level construct (second-order) measured by two factors, which are management involvement and communication. This structure is compared with a competing model conceptualizing commitment as a unidimensional construct determined by the two factors (first-order) in order to provide greater confidence in accepting the proposed Submodel 2.

Figure 5.9 Submodel 2: Commitment and knowledge transfer

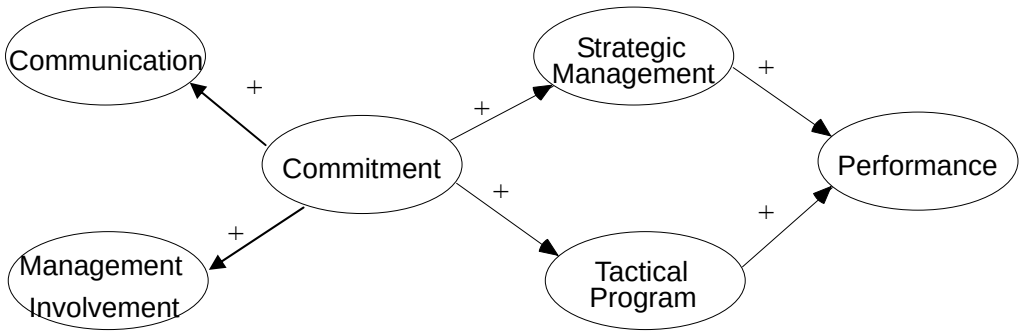
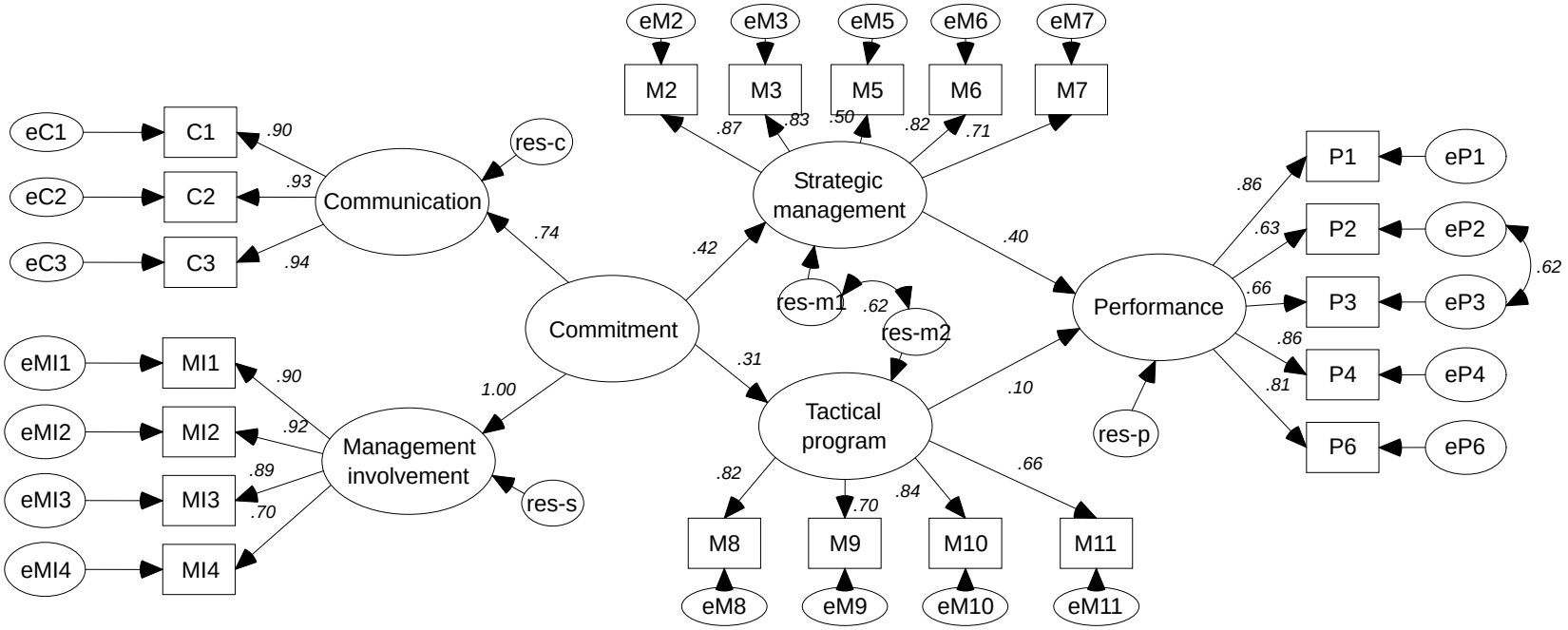


Figure 5.10 depicts the structural paths of Submodel 2 among communication, management involvement, strategic know-how, tactical program management know-how and performance with their indicators.

Figure 5.10 Structural paths in submodel 2



Legends:

C1= Regular meeting
C2= Phone communication
C3= Email communication
MI1= Regular training
MI2= Regular evaluation
MI3= Marketing support
MI4= Administrative support

M2= Business policy
M3= Business control
M5= Strategic planning
M6= Corporate culture
M7= Business system

M8= Marketing planning
M9= Advertising planning
M10= Promotion planning
M11= Pricing program

P1= Sales volumes
P2= Market share
P3= Making profit
P4= Customer satisfaction
P6= Store image

The statistical results are described in Table 5.17. No offending estimates are reported and all item loadings are statistically significant at 0.00. Structural path effect are all statistically significant except the one from tactical program management know-how to performance, nevertheless the flow of impact is as expected. The respective fit indices are: $\chi 2$=298.153 at 0.000; $\chi 2$/df=1.638; IFI=.916; NFI=.901; CFI=.914; RMSEA=.085. The fit indices indicate an acceptable result.

5.7.4 Proposed submodel 2 vs. competing model 2

Since commitment resulted in two factors from CFA, which are communication and management involvement, this construct could also be a unidimensional construct (first-order) determined by the two factors. Therefore it was decided to propose a competing model (shown in Figure 5.11) conceptualizing commitment as a first-order construct. This structure will be compared with Submodel 2 in terms of model fit indices to investigate which conceptualization would lead to the development of a better explanatory model.

Table 5.17 Parameter estimations of submodel 2

Structural paths/Item loadings	*Std. Estimate*	*S.E*	*C.R*	*P*
Commitment → Communication	.736	.105	7.966	***
Commitment → Management involvement	.998			
Commitment → Strategic/control management know-how	.417	.085	3.679	***
Commitment → Tactical program management know-how	.305	.070	2.520	**
Strategic/control management know-how → Performance	.404	.213	2.416	**
Tactical program management know-how → Performance	.101	.266	.623	.534
Communication				
Regular meeting	.897	.066	14.346	***
Phone communication	.932	.061	16.021	***
Email communication	.938			
Management involvement				
Regular training	.901			
Regular evaluation	.922	.075	13.592	***
Marketing support	.891	.080	12.585	***
Administrative support	.703	.097	8.050	***
Strategic/control management know-how				
Business policies	.869	.123	9.345	***
Business systems	.827	.117	8.780	***
Corporate culture	.500	.132	4.730	***
Strategic planning	.816			
Business controls	.705	.117	7.122	***
Tactical program management know-how				
Marketing	.822	.202	6.381	***
Advertising	.704	.193	5.670	***
Promotion	.836	.179	6.449	***
Pricing	.663			
Performance				
Sales volume	.862	.081	9.372	***
Market share	.628	.099	6.172	***
Making profit	.659	.092	6.552	***
Customer satisfaction	.860	.076	9.334	***
Store image	.809	.083	8.587	***

χ2	*df*	*χ2/df*	*RMSEA*	*IFI*	*NFI*	*CFI*
298.153	182	1.638	.085	.916	.901	.914

* p < 0.1; ** p < 0.05; *** p < 0.01.

Figure 5.11 Competing model 2

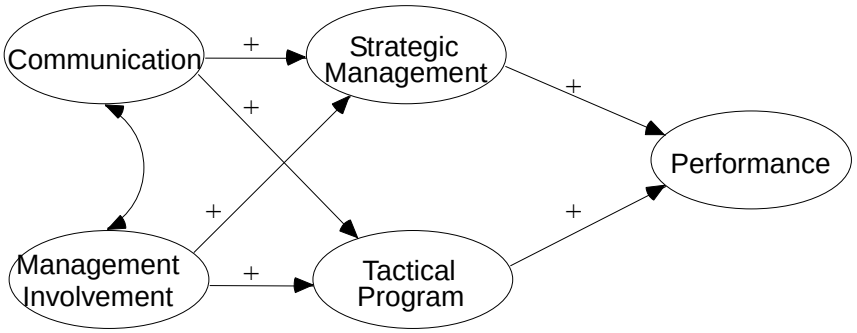
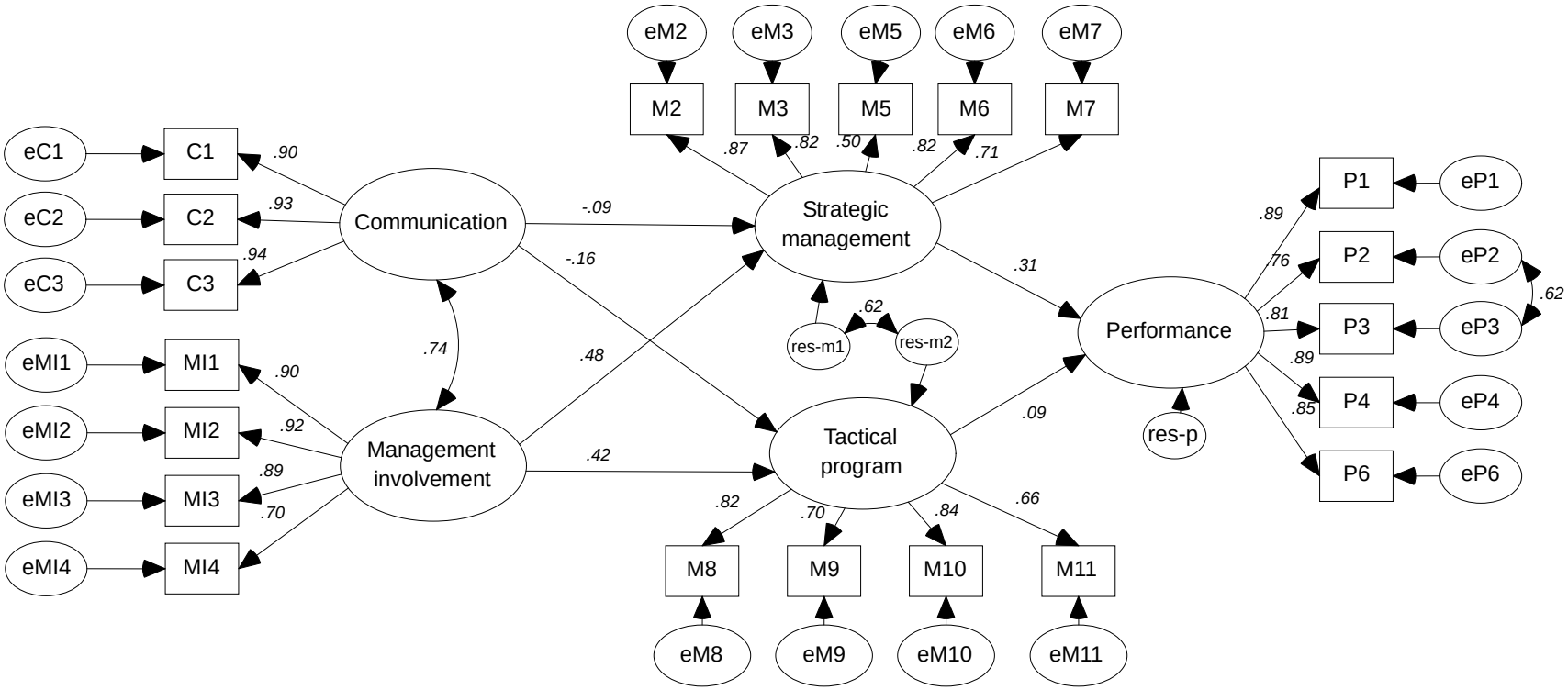


Figure 5.12 depicts the structural paths of competing model 2 among communication, management involvement, strategic/control management know-how, tactical program management know-how and performance with their indicators. Table 5.18 describes the statistical results of model fit. No offending estimates are reported in the structural model and all item loadings are significant at 0.000 levels. The fit indices are: $\chi 2$= 253.958 at 0.000, $\chi 2$/df=1.716; IFI=.906 NFI=.802 CFI=.904; RMSEA=.090. The fit indices indicated that the model presents a poor fit when compared with Submodel 2. Consequently, **H2a:** Commitment is a second-order construct composed of two first-order factors, management involvement and communication; **H2b:** Higher level of commitment will lead to greater extent of retail management know-how transfer are supported; while **H3:** The effectiveness of retail management know-how transfer will have a positive impact on firm performance is partly supported. .

Figure 5.12 Structural paths in competing model 2



Legends:

C1= Regular meeting
C2= Phone communication
C3= Email communication
MI1= Regular training
MI2= Regular evaluation
MI3= Marketing support
MI4= Administrative support

M2= Business policy
M3= Business control
M5= Strategic planning
M6= Corporate culture
M7= Business system

M8= Marketing planning
M9= Advertising planning
M10= Promotion planning
M11= Pricing program

P1= Sales volumes
P2= Market share
P3= Making profit
P4= Customer satisfaction
P6= Store image

Table 5.18 Parameter estimations of competing model 2

Structural paths/Item loadings	*Std. Estimate*	*S.E*	*C.R*	*P*
Commitment → Strategic/control management know-how	-.091	.111	-.540	.589
Commitment → Tactical program management know-how	-.156	.091	-.868	.386
Management involvement → Strategic/control management know-how	.478	.127	2.740	**
Management involvement → Tactical program management know-how	.424	.106	2.257	*
Strategic/control management know-how → Performance	.305	.199	1.855	**
Tactical program management know-how → Performance	.094	.258	.571	.568
Communication ↔ Management involvement	.745	.185	4.581	***
Communication				
Regular meeting	.896	.066	14.326	***
Phone communication	.932	.060	16.048	***
Email communication	.938			
Management involvement				
Regular training	.901	.072	13.574	***
Regular evaluation	.921			
Marketing support	.891	.075	13.216	***
Administrative support	.703	.093	8.205	***
Strategic/control management know-how				
Business policies	.873	.122	9.403	***
Business systems	.823	.116	8.737	***
Corporate culture	.501	.132	4.746	***
Strategic planning	.817	.116	7.155	***
Business controls	.707			
Tactical program management know-how				
Marketing	.823	.204	6.362	***
Advertising	.700	.194	5.628	***
Promotion	.840	.181	6.440	***
Pricing	.660			
Performance				
Sales volume	.891	.077	12.241	***
Market share	.761	.071	13.097	***
Making profit	.807			
Customer satisfaction	.889	.072	12.176	***
Store image	.848	.079	11.041	***

χ2	*df*	*χ2/df*	*RMSEA*	*IFI*	*NFI*	*CFI*
310.641	181	1.716	.090	.906	.802	.904

* p < 0.1; ** p < 0.05; *** p < 0.01.

The theoretical interpretation of the two higher-order factors is an overall trait for overall absorptive capacity and commitment respectively. The second-order factors in this model are merely explaining the co-variation among first-order factors in a more parsimonious way (i.e. one that requires fewer degrees of freedom). Therefore, even when the higher-order model is able to explain the factor covariations, the goodness-of-fit of the higher-order model can not be viewed as better than the corresponding first-order model. It has been suggested that the efficacy of second-order models be assessed through examination of the target (T) coefficient [T=χ2 (baseline model)/χ2 (alternative model)] (Marsh and Hocevar, 1985). This coefficient has an upper bound of 1.0 with higher values implying that the relationship among first-order factors is sufficiently captured by the higher-order factor" (Segars and Grover, 1998, p.153). The calculated target coefficient between the baseline and hypothesized models is very high at 0.99, suggesting that the addition of the second-order does not significantly increase χ2. Therefore, since the second-order model represents a more parsimonious representation of observed covariances, it should be accepted over the baseline as a "truer" representation of model structure.

Further empirical support for acceptance of the high-order factor structure is found in the magnitude and significance of estimated parameters as well as the amount of variance explained by the structural equations. All structural equation parameters are of higher magnitude and exhibit significantly high t-values. These parameter estimates are analogous to the reliabilities of observed indicators to posited

constructs. Their high magnitude and consistency provide strong evidence of convergence validity and unidimensionality for the second-order construct.

In order to provide stronger evidence in validating the research model, full model method using summation/factor score in place of large number of indicators was also tested. In the full model, factor score is used as a single index for each of the latent variables so as to reduce the number of indicators. Appendix VIII depicts the structural paths among absorptive capacity, commitment, strategic management know-how, tactical program management know-how and performance with their factor score indicators. Appendix IX describes the statistical results of the full model test. Though statistical results show that all item loadings are statistically significant at 0.01 level, two offending estimates are reported. One is regression weight of strategic management know-how → performance (β=3.781 at p=.224), the other is regression weight of tactical program know-how → performance (β=-3.561 at p=.264). This contradiction problem may be explained by the problematic way of using single index for each latent variable. Just as Kenny and McCoach (2003) pointed, the problem with single index method "treats the error variances as known parameters rather than values that are statistically estimated. A more problematic alternative has been to treat this index as if its reliability were perfect. The failure to adjust for unreliability is a serious deficiency and leads to biased parameter estimates" (p.335).

5.8 Test of Moderating Effects of Retail Format and Ownership Type

One-way ANOVA (Appendix VIII to XII) was conducted in order to see if ownership type and retail format could influence knowledge transfer activities. Table 5.19 and 5.19 provide the detailed descriptive statistics for group comparison on ownership and retail format respectively. Since only one to three items of all the measures for transferred knowledge and for all other constructs are statistically significant at the level of 0.05, we can conclude that retail management transfer is not influenced by retail format and ownership. In this regard, both H4, H5, and H6 are rejected. There are two possible explanations to this phenomenon. First, many foreign wholly-owned retail stores and sino-foreign retail joint ventures only have a short operation history and they all tend to place emphasis on the transfer of operation-related instead of strategic planning related retail management knowledge. Second, the three segments of the retail market, supermarket, department store, and chain of specialty stores, are in fact dominated by a few foreign players plus just 1-3 local state-owned retailers and some of them have adopted similar business models (e.g. local supermarkets always imitated the business model of leading international retailers like Wal-Mart). In addition, a certain number of the participant stores were from the same groups. As such, it is not surprised to observe that there were some commonalities in their knowledge transfer behavior.

Table 5.19 Descriptive statistics for two-group comparison on ownership

Variables	*Ownership (N=89)*							
	JV (n=48)				*WOE (n=32)*			
	Means	*Std. deviation*	*Min.*	*Max.*	*Means*	*Std. deviation*	*Min.*	*Max.*
Organizational adaptability	***3.54***	***.933***	***1.333***	***5***	***3.25***	***1.203***	***1***	***5***
The establishment is flexible	3.46	.898	2	5	3.34	1.125	1	5
The establishment is creative in its management	3.42	.895	1	5	3.25	1.136	1	5
The establishment commits to management staff training	3.73	1.005	1	5	3.16	1.347	1	5
Ability of management staff to learn	***3.34***	***1.072***	***1***	***5***	***3.29***	***1.451***	***1***	***5***
Majority of local managers are good at foreign language	3.21	1.110	1	5	3.06	1.544	1	5
Majority of local managers have working experience in retail company.	3.04	1.091	1	5	3.19	1.447	1	5
Majority of local managers have a university degree or higher	3.77	1.016	1	5	3.63	1.362	1	5
Management involvement	***3.55***	***1.053***	***1***	***5***	***3.03***	***1.677***	***1***	***5***
Regular training for the store manager	3.46	.967	1	5	2.84	1.725	1	5
Contributed enough marketing support	3.81	1.065	1	5	3.22	1.621	1	5
Contributed enough administrative support	3.50	1.072	1	5	2.91	1.692	1	5
Regularly assessed the store manager's performance	3.42	1.108	1	5	3.16	1.668	1	5
Communication	***3.27***	***1.228***	***1***	***5***	***2.88***	***1.706***	***1***	***5***
Regular meeting	3.25	1.263	1	5	2.81	1.712	1	5
Phone communication	3.08	1.217	1	5	2.81	1.655	1	5
Communication via email	3.48	1.203	1	5	3.03	1.750	1	5
Strategic/Control know-how	***3.72***	***1.129***	***1***	***5***	***3.89***	***1.103***	***2.2***	***5***

Strategic planning	3.81	1.197	1	5	3.94	.982	2	5
Business system	3.69	1.055	1	5	4.16	1.139	2	5
Business policy	3.58	1.145	1	5	3.59	1.292	2	5
Business control	3.75	1.082	1	5	4.06	.982	2	5
Corporate culture	3.79	1.166	1	5	3.69	1.120	3	5
Tactical program know-how	***3.59***	***1.044***	***1.75***	***5***	***3.89***	***.984***	***1***	***5***
Promotion	3.54	1.010	2	5	3.88	.833	1	5
Advertising	3.42	1.088	1	5	3.69	.998	1	5
Marketing	3.79	1.010	2	5	4.00	1.107	1	5
Pricing program	3.60	1.067	2	5	3.97	.999	1	5
Business performance	***3.66***	***1.074***	***1.57***	***5***	***3.57***	***1.216***	***1***	***5***
Store image	3.75	1.016	2	5	3.78	1.394	1	5
Customer satisfaction	3.72	1.023	1	5	3.78	1.302	1	5
Sales volume	3.59	1.073	1	5	3.78	1.302	1	5
Labor productivity	3.75	1.107	2	5	3.56	1.236	1	5
Services standards	3.50	1.047	2	5	3.33	1.118	1	5
Market share	3.81	1.148	2	5	3.33	1.118	1	5
Profit	3.50	1.107	1	5	3.44	1.041	1	5

Table 5.20 Descriptive statistics for three-group comparison on retail format

Variables	***Retail Format (N=89)***											
	Supermarket (n=45)				*Department store (n=22)*				*Specialty store (n=22)*			
	Means	*Std. deviation*	*Min.*	*Max.*	*Means*	*Std. deviation*	*Min.*	*Max.*	*Means*	*Std. deviation*	*Min.*	*Max.*
Organizational adaptability	***3.36***	***1.108***	***1***	***5***	***3.32***	***.936***	***1.7***	***4.7***	***3.74***	***1.062***	***1.7***	***5***
The establishment is flexible	3.38	1.072	1	5	3.41	.796	2	5	3.68	.995	2	5
The establishment is creative in its management	3.18	1.072	1	5	3.18	.795	2	4	3.86	.941	2	5
The establishment commits to management staff training	3.51	1.180	1	5	3.36	1.217	1	5	3.68	1.249	1	5
Ability of management staff to learn	***3.26***	***1.349***	***1***	***5***	***3.12***	***1.251***	***1***	***5***	***3.58***	***.901***	***1.7***	***5***
Good at foreign language	3.00	1.279	1	5	3.05	1.362	1	5	3.23	.922	1	5
Working experience in retail company.	3.64	1.282	1	5	3.45	1.184	1	5	4.00	.816	2	5
Have a university degree or higher	3.13	1.486	1	5	2.86	1.207	1	5	3.50	.964	2	5
Management involvement	***3.30***	***1.441***	***1***	***5***	***3.17***	***1.258***	***1***	***5***	***3.69***	***1.191***	***1***	***5***
Regular training for the store manager	3.20	1.440	1	5	2.95	1.253	1	5	3.68	1.129	1	5
Contributed enough marketing support	3.56	1.407	1	5	3.41	1.333	1	5	3.95	1.174	1	5
Contributed enough administrative support	3.18	1.466	1	5	3.00	1.234	1	5	3.73	1.202	1	5
Regularly assessed the store manager's performance	3.27	1.452	1	5	3.32	1.211	1	5	3.41	1.260	1	5
Communication	***3.32***	***1.534***	***1***	***5***	***2.82***	***1.439***	***1***	***5***	***3.26***	***1.220***	***1***	***5***
Regular meeting	3.22	1.521	1	5	2.82	1.500	1	5	3.23	1.232	1	5
Phone communication	3.22	1.550	1	5	2.68	1.323	1	5	3.14	1.207	1	5

Communication via email	3.51	1.532	1	5	2.95	1.495	1	5	3.41	1.221	1	5
Strategic/Control management know-how	***3.98***	***1.108***	***1.4***	***5***	***3.44***	***1.222***	***1***	***5***	***3.78***	***.929***	***2***	***5***
Strategic planning	4.09	1.083	1	5	3.59	1.182	1	5	3.68	.995	2	5
Business system	4.04	1.186	1	5	3.45	1.101	1	5	3.91	.868	2	5
Business policy	3.80	1.272	1	5	3.23	1.232	1	5	3.59	.854	2	5
Business control	4.11	.859	2	5	3.41	1.333	1	5	3.82	1.006	2	5
Corporate culture	3.87	1.140	2	5	3.50	1.263	1	5	3.91	.921	2	5
Tactical program know-how	***3.85***	***1.062***	***1***	***5***	***3.57***	***.919***	***2***	***5***	***3.57***	***1.076***	***1.3***	***5***
Promotion	3.78	.974	1	5	3.64	.953	2	5	3.59	.959	2	5
Advertising	3.64	1.151	1	5	3.45	.912	2	5	3.36	1.093	1	5
Marketing	3.87	1.140	1	5	3.95	.999	2	5	3.77	1.110	1	5
Pricing program	4.11	.982	1	5	3.23	.813	2	5	3.55	1.143	1	5
Business performance	***3.59***	***1.091***	***1***	***5***	***3.47***	***.822***	***2.3***	***5***	***3.74***	***1.060***	***1***	***5***
Store image	3.84	1.086	1	5	3.50	.802	2	5	3.86	1.037	1	5
Customer satisfaction	3.49	1.199	1	5	3.55	.912	2	5	3.68	1.171	1	5
Sales volume	3.60	1.031	1	5	3.32	.894	2	5	3.59	1.221	1	5
Labor productivity	3.69	1.062	1	5	3.50	.673	3	5	3.73	.935	1	5
Services standards	3.47	1.036	1	5	3.45	.739	3	5	3.77	.973	1	5
Market share	3.62	1.029	1	5	3.68	.945	2	5	3.82	1.053	1	5
Profit	3.42	1.196	1	5	3.32	.780	2	5	3.73	1.032	1	5

5.9 Summary of Path Analyses and Hypotheses Test Results

This section discusses the proposed research hypotheses developed in Chapter 3. All hypotheses are summarized in Table 5.21.

Table 5.21 A summary of the research hypotheses

Construct	*Research hypotheses of the conceptual model*
Absorptive capacity	H1: Absorptive capacity is positively related to the level of retail management know-how acquisition.
Commitment	H2: Commitment is positively related to the level of retail management know-how acquisition.
Performance	H3: The level of retail management know-how acquisition is positively related to business performance.
Ownership	H4: Absorptive capacity has a greater impact on the level of retail management know-how acquisition for JV than for WOE retail establishments. H5: Commitment has a greater impact on the level of retail management know-how acquisition for JV than for WOE retail establishments.
Retail format	H6: Retail format moderates the relationship between the level of retail management know-how acquisition and business performance.

Hypotheses **1a** and **1b** suggest that absorptive capacity should be a second-order factor measurement model and retail establishments with a higher level of

absorptive capacity will acquire more retail management know-how. Hypotheses **2a** and **2b** propose that commitment should be a second-order factor measurement model and address the effect of commitment on retail management know-how. Hypotheses **3** concerns the effect of effectiveness of retail management know-how transfer on business performance. Hypotheses **4** and **5** are about the potential moderating effects of ownership on the relationships between the impacting factors and knowledge transferred. Hypotheses **6** addresses the effect of retail format on the relationship between knowledge transferred and business performance.

The findings obtained and outlined in the previous section are recapped for further discussion. The direct effects drawn from the structural equation models reflect the causal relationships. Table 5.22 reports the results of hypothesis testing of the relationships among absorptive capacity, commitment, retail management know-how transfer, and business performance. All the eight path estimates had signs predicted by their respective hypotheses, and six of the eight hypotheses were supported. The findings from the previous section have provided support for hypotheses **1a** and **2a** which postulate that absorptive capacity and commitment is a second-order factor measurement model respectively. Absorptive capacity had significant effects on strategic/control management know-how and tactical program management know-how transfer respectively, revealing that retail establishments characterized with higher levels of absorptive capacity will acquire a higher level of retail management know-how transferred from their foreign parent. Hypotheses **1b** is thus supported. As compared between these two causal

relationships, the impact of absorptive capacity on strategic management retail know-how transfer is stronger (β=0.424, p<0.01) than its influence on tactical program management know-how (β=0.367, p<0.05).

Table 5.22 Summary findings of causal effects of research

Hypotheses	Path	Effect	Status
H1	Absorptive capacity → strategic management know-how	.424***	√
	Absorptive capacity → Tactical program know-how	.367**	√
H2	Commitment → Strategic management know-how	.417***	√
	Commitment → Tactical program know-how	.305**	√
H3	Strategic management know-how →Performance	.303* (.404*)	√
	Tactical program know-how →Performance	.104 (.101)	×
H4	Absorptive capacity has a greater impact on the level of knowledge acquisition for JV than for WOE retail establishments.		×
H5	Commitment has a greater impact on the level of knowledge acquisition for JV than for WOE retail establishments.		×
H6	Retail format moderates the relationship between the level of knowledge acquisition business performance		×

* p < 0.1; ** p < 0.05; *** p < 0.01.

The impact of commitment on strategic/control management and tactical program management know-how transfer were also found to be significantly positive, thus hypothesis 2b is supported. The impact of commitment on strategic management retail know-how transfer is stronger (β=0.417, p<0.01) than its influence on tactical program management (β=0.305, p<0.05).

Hypotheses **3** addresses the effect of the retail management know-how transfer on

the firm's performance. It suggested that the retail establishment with higher know-how transfer from their foreign parent performs better. Looking at the results obtained and shown in the previous section, the impact of strategic/control management know-how transfer on business performance was found to be significantly positive, with $\beta=0.303$ at $p<0.1$ in submodel 1 and $\beta=0.404$ at $p<0.1$ in submodel 2. However, the influence of tactical program management know-how transfer on business performance was found to be statistically insignificant both in submodel 1 and submodel 2; however the direction of impact matches the hypothesized relationship between the two constructs in both models. Thus hypothesis **3** is partly supported. However, the findings find no statistically significant differences in the factors crucial for successful transfer of retail management know-how and the content of the transferred knowledge across three major types of retail format and two ownership types H4 and H5 are thus rejected.

CHAPTER 6 CONCLUSIONS

This chapter concludes the research findings, contributions and implications for managerial practices, and discusses research limitations as well as directions for future research.

6.1 Conclusions of the Research

In tandem with the open of the country's domestic market and in particular the retail sector after its admission to the World Trade Organization, China has been able to attracted almost all major international retailers to invest in different regions of the country either in the form of joint venture, wholly-owned subsidiaries, or management contract. International retailers face the lack of qualified management staff when operating in China, particularly when expanding the scale of operations in the country. In order to acquire the managerial skills necessary for competitiveness, local managers need to learn this valuable knowledge from their foreign parent because in transition economies such as Hungary and China, foreign parents normally bring in technology and management know-how, and are a vital source of useful knowledge. The present study is thus designed to employ knowledge transfer theory to investigate transfer of retail management know-how from international retailers to their subsidiaries in China.

The study addresses the relationship between absorptive capacity, commitment, retail management know-how transfer effectiveness and business performance of international retailer's subsidiary in China. Absorptive capacity of the international

retailers' subsidiary is conceptualized as a second-order construct, with organizational adaptability and ability of management staff to learn as its first-order factors. Commitment of the foreign parent is also conceptualized as a second-order factor, with two first-order factors: management involvement and communication.

These two structural models were tested with a data set consisting of 89 retail establishments with foreign investment in China. The statistical results show that absorptive capacity and commitment are strong predictors of the effectiveness of retail management know-how transfer from a foreign parent to its subsidiaries in China. The greater the absorptive capacity of the recipient subsidiary, the more retail management know-how would be acquired. In addition, the greater the commitment from the foreign parent, the more knowledge would be transferred. It was found that subsidiaries which had effectively learned strategic management know-how from foreign parent firms in fact performed better in terms of several marketing performance measures, consistent with the findings in previous studies that knowledge transfer is critical for the creation and renewal of competitive advantage of the firm which enhances its performance (Kacker, 1988; Goldman 2001). In contrast, the influence of tactical program management know-how on business performance was found statistically insignificant, though the flow of impact was in the expected direction. Besides, the t-test results show no differences in terms of the acquired retail management know-how, both strategic and tactical, between international retail JVs and retail outlets that are wholly-owned by

international retailers. The type of retail management know-how acquired is also independent of the retail format of the retail establishment.

6.2 Contributions

The present study investigates in what ways source-related and recipient-related factors can affect the transfer of management knowledge in the context of China's retail sector. The findings confirm the positive impact of the source-related factor – commitment of the parent firm or the foreign partner, and the recipient-related factor – absorptive capacity on the transfer of both strategic and tactical retail management knowledge from the parent firm to its subsidiaries, or from the foreign partner to its retail joint ventures, in China. Consistent with the findings from previous studies (e.g. Dhanaraj et al., 2004), this study supports a positive relationship between the transfer of retail management knowledge and business performance. The most important contribution is that it is a pioneer study to treat both absorptive capacity and commitment as second-order measurement models, though much prior research on absorptive capacity focused only on the management staff aspect of absorptive capacity (Szulanski, 1996; Lane et al., 2001; Mowery et al., 2002; Zahra and George, 2002; Minbaeva et al., 2003). This treatment gains sound theoretical justification and the results provide empirical evidence to support that organizational factors are also the components of absorptive capacity. Both employee and organization factors are integral parts of the firm's absorptive capacity. Moreover, this treatment enhances the predictive power of absorptive capacity and commitment from the parent firm, or the foreign

partner, on the effectiveness of knowledge transfer.

The statistical test results support that, when the research objective is to assess the effect of absorptive capacity and commitment at component level, a first-order formative model, as what has been commonly adopted in previous studies on the same topic, is appropriate. However, the researcher has to pay attention to the multi-collinearity issue when testing and interpreting and effect of individual absorptive capacity and commitment factors. Considering individual absorptive capacity and commitment factors as distinctive constructs seems to be in conflict with the conceptualization of these constructs.

In contrast, if the research objective is to assess the overall impact of absorptive capacity and organizational commitment on knowledge transfer, a second-order model will be more appropriate for it can capture better the domain of each of these two constructs. In addition, treating absorptive capacity and commitment as second-order constructs allows us to understand the inter-relationships of the embedded first-order factors in a nomological network, producing a theoretically convincing structure.

Moreover, this research represents a pioneering effort to explore knowledge transfer from international retailers to their subsidiaries in China. It is expected that the findings enable an understanding about which types of retail management know-how are commonly transferred to the international retailers' subsidiaries in China by the foreign parent. The findings also identify the factors that would

determine the effectiveness of knowledge acquisition from international retailers to their subsidiaries. It is anticipated that the findings will fill the knowledge gap and provide a platform for future research in this area.

6.3 Managerial Implications

From the results of this research, issues concerned with the ability to transfer knowledge from international retailers to their subsidiaries are of significant managerial relevance and importance. With a good understanding of the factors influencing the process of knowledge transfer, international retailer's leaders and managers can allocate their resources to facilitate the transfer process more effectively and thus enhance firm's competitive advantage.

First, knowledge transfer requires an extensive commitment from the knowledge transfer entity (i.e. international retailers in this study) to the knowledge transferee (international retailers' subsidiaries in China in this study). Since commitment is composed of two first-order factors which are management involvement and communication, international retailers can deploy firm resources to these two channels to improve knowledge transfer effectiveness. Specifically, providing regular training to management staff of the subsidiary, regularly assessing their performance, together with contributing the required marketing and administrative support to the subsidiary, all can help improve the effectiveness of knowledge transfer. Establishing an interaction mechanism between the parent firm and its subsidiaries to encourage communication between these two entities is also

necessary to facilitate knowledge transfer.

Second，the results indicate that absorptive capacity of the subsidiary is a crucial factor that will positively impact the transfer result. Since absorptive capacity is composed of two first-order factors which are organizational adaptability and the ability of management staff to learn. It is therefore suggested that international retailers should encourage their subsidiaries to be more flexible and creative. They also have to be careful with management staff selection and recruitment. It makes no sense to add knowledge to management staff who are not qualified and lack learning motivation. Rigorous screening procedures and language test should be undertaken before accepting new management staff. Practices such as administering tests, conducting background checks and instituting a probation basis are highly recommended.

Third, more resources should be devoted to the training of subsidiaries Chinese management staff. Several types of training programs can be arranged for these personnel, such as orientation, on-the-job training and training abroad are considered the most useful in transferring the parent's knowledge, culture and values to its China subsidiaries. In addition to retail planning and operation knowledge, certain types of soft skills that are crucial for effective learning behavior must be emphasized, including communication and creative thinking skills. Absorptive capacity can be improved quicker if the management staff of the local subsidiary, or the joint venture, can learn faster.

The last implication of this study is its emphasis on the importance of strategic management know-how on the retail firm's performance. Based on the findings, strategic management knowledge is more important to retail performance than tactical and operational knowledge, this implies that strategic management know-how is largely responsible for the success of Western companies (Wong et al., 2002), and that foreign retailers in China need no longer be confined to a tactical/ operational mode. As such, international retailers seem destined to do in China what they have been accustomed to doing in their familiar, more traditional markets: employ the principles of strategic management to optimize their success in China market.

6.4 Limitations

Sampling issues could be the major limitation of the present study. The first sampling issue that may affect the quality of the collected data is that all participant retailers were recruited via convenience sampling method. Although this sampling method has been widely adopted in similar studies (Minbaeva et al., 2003; Tsang et al., 2004) and the sampling criteria adopted here were clearly specified, the participation in the survey was of the retail manager's own interest. There was no control of external validity.

The second sampling issue of concern here is that the sample size was relatively small. As a rule of thumb, at least five cases should be used for every estimated parameter in a structural equation model (Hair et al., 1995). Complex models thus require larger sample size. The likelihood of rejecting the hypothesized model will

increase if it is complex and tested on small sample. (Bearden et al., 1982) In the present study there is consistent convergence across all measurement models, limitations attributable to sample size seem not to be particularly threatening. However, the estimates like path coefficients may not be stable, given that there are at least 24 estimated parameters in the structural model and that no model refinement through independent sample test was attempted. A replication of the study with a larger size sample would provide greater empirical support for the hypothetical relationships among absorptive capacity, commitment, retail management know-how transfer and business performance.

Another limitation could be the potential response bias associated with the use of single informant as the source of information pertaining to knowledge transfer activities, organizational commitment and absorptive capacity, and the level of success. While the use of single informant is typical of knowledge transfer survey research (Pinsonneault and Kraemer, 1993), it is by no means an ideal method of data collection (Hufnagel and Conca, 1994). Multiple informants and structured methods of triangulation are perhaps the best method of obtaining the least biased information regarding knowledge acquisition behavior. Potential biases associated with self-reporting by store managers must be considered when interpreting the results of the present study (Segars and Grover, 1998)

The disparities in economic development, customers' knowledge and expectation of retail service, and business norms make China hardly be considered a single, but a highly fragmented, market. The retailers who responded to our survey in fact

scattered around different regions in China; but dividing all participant retailers on regional basis will end up with different sub-samples whose size would be too small for the test of group differences. This limitation may affect the generalizability of the conclusions.

Finally, regarding the property of second-order model, a second-order factor with two first-order factors normally results in a model that is just identified whereas a second-order factor with three, or four, first-order factors result in model which is over-identified (Chen et al., 2005). An over-identified second-order model will allow us to test the robustness and richness of the model by removing one first-order factor for model fit test. Only over-identified models with good model fit are considered to be a reasonable representation of the phenomena under investigation. In the present study each of the two second-order models is just identified to permit structural equation modeling analysis and there is a risk of yielding a trivially perfect fit.

6.5 Implications for Future Research

In relation to the findings of the present research study, several avenues for future research are suggested. A further exploration into the mechanisms used by international retailers to enhance retail management know-how transfer will provide a base for future research into this important area, particularly regarding the impact of financial compensation systems on the transfer. I would also encourage in-depth case studies on the mechanisms that MNCs employ to integrate

knowledge residing in their geographically dispersed subsidiaries.

Additionally, this study attempted to assess the transfer of retail management knowledge from the perspective of the recipient. Future study is encouraged to employ a balanced perspective by incorporating the views from both the parent firm, or from the foreign partner, to ensure an objective analysis and understanding of the transfer process and the resultant impact on business performance.

Another suggestion for future research is to further increase our understanding of how knowledge has been effectively or successfully transferred. Though several studies have focused on the outcome of knowledge transfer, the emphasis is often on factors determining transfer success, rather than on manifestations of successful transfer. Future research would need to take a longitudinal approach to study how knowledge transfer has, over time, resulted in desirable outcomes.

Ideally, knowledge transfer and its performance effect should be examined longitudinally (Luo and Peng, 1999) for two reasons. Firstly, as a more complete understanding of knowledge transfer processes in this field will necessitate the examination of process over time. Secondly, both absorptive capacity and commitment develop cumulatively and gradually in line with the growth of the subsidiary or the joint venture.

The present research is a cross-sectional analysis and most sampled retail establishments had an operation history from 2-5 years. The findings indicate that

newly established retail outlets in China place priorities in penetrating and building up its image and foothold in the local market, they tend to put more efforts on operations and promotional activities instead of investing more in sophisticated value-added functions/services. The development of their business has not yet reached the level to stress the activities important to consumers' total consumption experience of the retail service like customer relationship management and those crucial for risk management like credit management. As such, some functions that are common to modern retail management in western countries were not included in the knowledge transfer program at the time the survey was undertaken. The domain of retail management knowledge for transfer purpose was thus under-defined. Observing that retail development in China in the past two to three years was so rapid, the researcher suggests future research in the retail context of China on the same topic should cover the scope of retail management as comprehensive as possible. In particular, a longitudinal study will enable us not only to have an in-depth understanding of the transfer process but also to track the changes in the scope and type of transferred knowledge and their potential interaction effects with the process factors.

The role of location in knowledge transfer also deserves to be more fully explored, for instance by means of comparative studies in different developing country contexts. A comparison of China with the experience in other emerging economies like India would appear particularly interesting; at least, the findings will help validate our proposed models on the relationships among absorptive capacity,

commitment, the types of knowledge that are successfully transferred and the resultant impact on business performance.

In a nutshell, this research contributes to knowledge transfer theory in several ways. First, it provides a new conceptualization of the domain of absorptive capacity and commitment respectively and this will map out a new path for future research to investigate the mechanism of knowledge transfer. By identifying two determinants of knowledge transfer process which are absorptive capacity and commitment respectively, this study provides consistent results with previous studies that have dealt with the manufacturing sector, thus supporting the argument that it is possible to adopt these factors in retail studies (Sternquist, 1997). Second, a conceptual model on the transfer of retail management know-how is provided and tested empirically through quantitative research methods. Despite its limitations, this study significantly contributes to our knowledge of organizational learning in the retail MNCs context. The topic remains an under-researched area. It is expected that this study can stimulate more empirical research effort in this direction.

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Appendix I Interview Protocol for Experience Survey

访问地点 Place of interview: _____
访问日期 Date: _____
被访者姓名 Name: _____
被访者性别 Sex: _____

1. **Your position:** (please √)

您的职位：	❑店长	Store manager
	❑人力资源部经理	HR manager
	❑财务经理	Financial manager
	❑其他（请注明）	Others _____

2. Your Educational Level: (please √)

您的教育程度：	❑小学或以下	Primary or below
	❑中学	Secondary
	❑大学/大专	University/Tertiary
	❑研究生	Post-graduate

3. Your working period in the retail sector：

您在零售业的	❑五年以下	Less that 5 years
工作年限：	❑6-10 年	6-10 years
	❑11-15 年	11-15 years
	❑16-20 年	16-20 years
	❑20 年以上	Over 21 years

4. The retail format of this retail outlet:

超级市场	❑ Supermarket
专卖店	❑ Specialty store
百货商店	❑ Department store
其他业态 (请注明)	❑ Other format _____

5. The foreign parent of the retail outlet is from (please√)

本店的外国母公司来自

美国 ❑ The USA	日本 ❑ Japan
英国 ❑ The UK	法国 ❑ France
德国 ❑ Germany	香港/台湾 ❑ HK/Taiwan
其他 (请注明)	Others (please specify) _____

For the following questions, please provide as much information as you can.

Be specific please!

6. What are the reasons for setting up the retail outlet?

7. What kinds of retail management know-how the parent would like to transfer to the retail outlet?

8. How long does the knowledge transfer process take?

9. What are the underlying purposes for knowledge transfer?

10. Who will be responsible for knowledge transfer?

11. What factors are critical to effective transfer?

12. What kinds of difficulties you have encountered?

13. What kind/level of support from the parent firm? Is this kind of important?

14. What strategic decision making authority do you have?

Appendix II Word-Frequency List

Labels	*Items*	*f*
M1	Retailing philosophy	7
M2	Business policies	6
M3	Business systems	6
M4	Management mechanisms	2
M5	Corporate cultures	5
M6	Strategic planning	7
M7	Business controls	5
M8	Marketing planning	4
M9	Advertising planning	7
M10	Promotion planning	7
M11	Pricing strategy	6
M12	HR planning	4
M13	CRM	3
M14	Credit management	2
M15	Information Technology	3
M16	Supply chain relationship management	3
M17	Site selection	2
M18	Store development	3
M19	Cash flow management	3

Appendix III Questionnaire for Pilot Study

THE HONGKONG POLYTECHNIC UNIVERSITY
香港理工大學

绝对保密
Strictly Confidential

向中国转移外资零售管理知识的调查
A Survey of Retail management know-how Transfer to China

为了更好的了解外资零售知识对中国内地零售业的影响以及更好的传播外资零售知识，香港理工大学管理及营销学系展开题为“外资零售知识对中国内地零售业的影响”的专题调查。此调查纯属学术目的，所有涉及个人和企业的信息都将严格保密。请根据您对所供职的零售店铺及其所属母公司的了解真实准确地回答问卷中的问题。非常感谢您对此项研究的参与。

The Department of Management and Marketing of The Hong Kong Polytechnic University currently conducts a research on ***The Impact of Foreign Retailer's Retail Know-how Transfer to China***, which aims to investigate knowledge acquisition behavior of foreign-invested retailers in China. The research will be strictly used for academic purpose only and all information will be kept confidential. Neither you nor your company will be identified in the final report. Please answer the questions truly and accurately based on your understanding of your establishment and its parent(s). Your participation in this research will be highly appreciated.

如有疑问，请与我联系(Should you have any queries, please contact me at)：

香港理工大学管理及营销学系
刘亚平（博士研究生）
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非常小程度 very little 1	较小程度 a little 2	一般程度 to an average extent 3	较大程度 much 4	非常大程度 a great 5	不适用 not applicable NA

第一部分： 知识转移

Part A: Retail Management Knowledge Transfer

您在多大程度上同意本店自成立以来向外国母公司学习吸收到下列零售管理知识? 请圈出代表您的意见的数字。

To what extent do you agree that this establishment has learned from your foreign parent the following retail management know-how since it established? Please circle the appropriate number in each case.

M1	零售经营理念 (Retailing philosophy)	1	2	3	4	5	NA
M2	零售业经营政策 (Business policies)	1	2	3	4	5	NA
M3	零售企业的经营体系(Business systems)	1	2	3	4	5	NA
M4	零售管理机制 (Management mechanisms)	1	2	3	4	5	NA
M5	零售企业文化 (Corporate culture)	1	2	3	4	5	NA
M6	零售战略管理 (Strategic planning)	1	2	3	4	5	NA
M7	零售经营控制 (Business controls)	1	2	3	4	5	NA
M8	零售营销计划 (Marketing planning)	1	2	3	4	5	NA
M9	零售广告管理 (Advertising planning)	1	2	3	4	5	NA
M10	零售促销管理 (Promotion planning)	1	2	3	4	5	NA
M11	零售价格管理 (Pricing strategy)	1	2	3	4	5	NA
M12	人力资源管理 (HR planning)	1	2	3	4	5	NA
M13	客户关系管理 (CRM)	1	2	3	4	5	NA
M14	信用管理 (Credit management)	1	2	3	4	5	NA
M15	信息技术 (IT management)	1	2	3	4	5	NA
M16	供应链关系管理 (Supply chain relationship management)	1	2	3	4	5	NA
M17	选址(Site selection)	1	2	3	4	5	NA
M18	店铺发展(store development)	1	2	3	4	5	NA
M19	现金流管理(Cash flow management)	1	2	3	4	5	NA

非常小程度 very little 1	较小程度 a little 2	一般程度 to an average extent 3	较大程度 much 4	非常大程度 a great 5	不适用 not applicable NA

第二部分： 影响零售知识转移的因素
Part B : Factors Affecting the Retail know-how Transfer

您在多大程度上同意下列说法? 请圈出代表您的意见的数字。
To what extent do you agree with the following? Please circle the appropriate number in each case**.**

B1 组织的适应能力 (Organizational adaptability)

AC1	本店的经营管理具有灵活性 The establishment is flexible	1	2	3	4	5	NA
AC2	本店的经营管理具有创造性 The establishment is creative in management	1	2	3	4	5	NA
AC3	本店注重员工的培训与发展 The establishment commits to management staff training and development	1	2	3	4	5	NA

B2 管理人员的学习能力 （Ability of management staff to learn）

AC4	本店高层/中层经理具有较强的外语能力 The majority of local managers are good at foreign language	1	2	3	4	5	NA
AC5	大多数本店经理具有零售企业工作经验 The majority of local managers has working experience in retail company	1	2	3	4	5	NA
AC6	大多数本地经理拥有大专或以上学历 The majority of local managers has a university (or even higher degree)	1	2	3	4	5	NA
AC7	本店员工工作积极性较高 The management staffs of this establishment are highly motivated	1	2	3	4	5	NA

非常小程度 very little 1	较小程度 a little 2	一般程度 to an average extent 3	较大程度 much 4	非常大程度 a great 5	不适用 not applicable NA

B3 外国母公司对本店的投入（Management involvement）

MI1	母公司定期对本店经理进行专门的培训 The foreign parent has regularly provided regular training for the store manager	1	2	3	4	5	NA
MI2	母公司定期对本店经理进行业绩评估 The foreign parent has regularly assessed the store manager's performance	1	2	3	4	5	NA
MI3	母公司为本店提供了足够的营销支持 The foreign parent has contributed enough marketing support	1	2	3	4	5	NA
MI4	母公司为本店提供了足够的行政支持 The foreign parent has contributed enough administrative support	1	2	3	4	5	NA
MI5	母公司为本店指派足够的外方管理人员 The foreign parent has assigned adequate no. of expatriate manager(s) to the establishment	1	2	3	4	5	NA

B4 外国母公司与本店的沟通本店（Communication）

C1	母公司与本店之间定期会议沟通很频繁 There has been frequent regular meeting between the foreign parent and the establishment	1	2	3	4	5	NA
C2	母公司与本店之间电话沟通很频繁 There has been frequent phone communication between the foreign parent and the establishment	1	2	3	4	5	NA
C3	母公司与本店之间电邮沟通很频繁 There has been frequent communication via email between the foreign parent and the establishment	1	2	3	4	5	NA
C4	母公司与本店经理利用传真沟通很频繁 There has been frequent communication via fax between the foreign parent and the establishment	1	2	3	4	5	NA

非常小程度 very little 1	较小程度 a little 2	一般程度 to an average extent 3	较大程度 much 4	非常大程度 a great 5	不适用 not applicable NA

第三部分： 业绩评价
Part C： Business Performance

您在多大程度上同意下列说法? 请圈出代表您的意见的数字。
To what extent do you agree with the following? Please circle the appropriate number in each case.

本店自成立以来是:
Since establishment, the store:

P1	销售额在增加 Sales volume has been increasing	1	2	3	4	5	NA
P2	市场占有率令人满意 Market share has been satisfactory	1	2	3	4	5	NA
P3	盈利水平正在达到预期目标 The establishment is making profit	1	2	3	4	5	NA
P4	消费者对本店的满意度在增加 Customer satisfaction has been improving	1	2	3	4	5	NA
P5	服务标准在不断提高 Services standards has been improving	1	2	3	4	5	NA
P6	在消费者心目中的形象在提高 Store image has been improving	1	2	3	4	5	NA
P7	本店的劳动生产率在提高 Labor productivity has been improving	1	2	3	4	5	NA
P8	本店的人力资源培训能力有了很大的提高 The human resource training skills has been improving	1	2	3	4	5	NA
P9	本店的管理技巧有了很大的提高 The management skills has been improving	1	2	3	4	5	NA
P10	本店的总体表现水平令人满意 The general performance of this establishment has been satisfactory	1	2	3	4	5	NA

第四部分:　公司背景
Part D:　Company Background

D1　本店成立于 19___年。

This establishment was set up in 19____。

D2　本店的初始投资额是_____万元（人民币）。

The initial investment of this establishment is RMB _____.

D3　本店的经营业态为(请选一项√):

The retail format of this establishment is (please √)：

a. 超级市场	❑	Supermarket
b. 专卖店	❑	Specialty store
c. 百货商店	❑	Department store
d. 其他业态 (请注明)	❑	Other format _____

D4　目前本店拥有的全职员工人数为(请选一项√)：

Currently the total number of full-time management staffs working in this establishment is (please√):

a. 1-25 ❑　b. 26-50 ❑　c. 51-75 ❑

d. 76-100 ❑　e. 100 以上 ❑　(above)

D5　本店是(请选一项√)：

The establishment is (please √) ：

a. 独资企业　❑ WOD　b. 合资企业　❑ JV

c. 其他 (请注明)　❑ Others (please specify)_____

D6　如果是合资企业，本店的中方母公司是:

If JV, the local parent is (please √)：

a. 零售企业　❑ Retailer　b. 非零售企业 ❑

D7　本店的外国母公司在中国的第一家店成立于_____年。

This first establishment set up by your foreign parent in China was in 19___.

D8 本店的外国母公司来自(请选一项√)

The foreign parent is from (please√)

a. 美国	❑	The USA
b. 日本	❑	Japan
c. 英国	❑	The UK
d. 法国	❑	France
e. 德国	❑	Germany
f. 香港/台湾	❑	HK/Taiwan
g. 泰国	❑	Thailand
h. 马来西亚	❑	Malaysia
i. 其他 (请注明)	Others (please specify) _____	

D9 本店所属外国母公司目前设在中国境内的分店数目为(请选一项√)：

The number of retail outlets set up by the foreign parent throughout China is (please√):

a. 1-5 ❑ b. 6-10 ❑ c. 11-15 ❑

d. 16-20 ❑ e. 20 以上 ❑

D10 本店 2004 年月均营业额（以人民币计算）(请选一项√)：

The Average Monthly Sales Revenue in 2003 of this establishment is (RMB) (请选一项√):

a. Below2.5m	❑	b. 2.5-5.0m	❑
c. 5,000,001-7.5m	❑	d. Over 7.5m	❑

第五部分： 个人资料
Part E: Personal Data

E1	您的性别： Sex：	❑男 ❑女	Male Female
E2	您的年龄： Age：	❑25 岁以下 ❑26-35 岁 ❑36-45 岁 ❑46-55 岁 ❑55 岁以上	Less than 25 years 26-35 years 36-45 years 46-55 years Over 56 years
E3	您的教育程度： Educational Level：	❑小学或以下 ❑中学 ❑大学/大专 ❑研究生	Primary or below Secondary University/Tertiary Post-graduate
E4	您在零售业的 工作年限： Working period in the retail sector：	❑五年以下 ❑6-10 年 ❑11-15 年 ❑16-20 年 ❑20 年以上	Less that 5 years 6-10 years 11-15 years 16-20 years Over 21 years
E5	您的职位： Position:	❑店长 ❑财务经理 ❑人力资源部经理 ❑其他（请注明）	Store manager Financial manager HR manager) Others _____

End of Questionnaire. Thank you for your participation!
全卷完。谢谢您的合作!

Appendix IV Questionnaire

THE HONGKONG POLYTECHNIC UNIVERSITY
香港理工大學

绝对保密 Strictly Confidential

向中国转移外资零售管理知识的调查
A Survey of Retail management know-how Transfer to China

为了更好的了解外资零售知识对中国内地零售业的影响以及更好的传播外资零售知识，中国零售业门户网站联商网与香港理工大学管理及营销学系联合展开题为“外资零售知识对中国内地零售业的影响”的专题调查。此调查纯属学术目的，所有涉及个人和企业的信息都将严格保密。请根据您对所供职的零售店铺及其所属母公司的了解真实准确地回答问卷中的问题。对于参与调查的人士，我们会反馈最终的调查结果，并有小礼品赠送。非常感谢您对此项研究的参与。

Linkshop and the Department of Management and Marketing of The Hong Kong Polytechnic University currently conducts a research on **The Impact of Foreign Retailer's Retail Know-how Transfer to China**, which aims to investigate knowledge acquisition behavior of foreign-invested retailers in China. The research will be strictly used for academic purpose only and all information will be kept confidential. Neither you nor your company will be identified in the final report. Please answer the questions truly and accurately based on your understanding of your establishment and its parent(s). For those who will have participated the survey, a final report and a small gift will be provided. Your participation in this research will be highly appreciated.

联商网 www.linkshop.com.cn 王跃林(先生) 电话：0571－8701 传真：0571－87015503－813 Email：wangyl@	香港理工大学管理及营销学系 刘亚平（博士研究生） Tel:(00852)2766 7055 Fax:(00852)2765 0611 Emai:0290

非常小程度	较小程度	一般程度	较大程度	非常大程度	不适用
very little	a little	to an average extent	much	a great	not applicable
1	2	3	4	5	NA

第一部分： 知识转移
Part A: Retail management Know-how Transfer

您在多大程度上同意本店自成立以来向外国母公司学习吸收到下列零售管理知识? 请圈出代表您的意见的数字。

To what extent do you agree that this establishment has learned from your foreign parent the following retail management know-how since it established? Please circle the appropriate number in each case.

M1	零售业经营理念 (Retailing philosophy)	1	2	3	4	5	NA
M2	零售业经营政策 (Business policies)	1	2	3	4	5	NA
M3	零售企业的经营体系 (Business systems)	1	2	3	4	5	NA
M4	零售管理机制 (Management mechanisms)	1	2	3	4	5	NA
M5	零售企业文化 (Corporate culture)	1	2	3	4	5	NA
M6	零售战略管理 (Strategic planning)	1	2	3	4	5	NA
M7	零售经营控制 (Business controls)	1	2	3	4	5	NA
M8	零售营销计划 (Marketing planning)	1	2	3	4	5	NA
M9	零售广告管理 (Advertising planning)	1	2	3	4	5	NA
M10	零售促销管理 (Promotion planning)	1	2	3	4	5	NA
M11	零售价格管理 (Pricing strategy)	1	2	3	4	5	NA
M12	人力资源管理 (Human resources planning)	1	2	3	4	5	NA

非常小程度 very little 1	较小程度 a little 2	一般程度 to an average extent 3	较大程度 much 4	非常大程度 a great 5	不适用 not applicable NA

第二部分： 影响零售知识转移的因素
Part B ： Factors Affecting the Retail know-how Transfer

您在多大程度上同意下列说法? 请圈出代表您的意见的数字。
To what extent do you agree with the following? Please circle the appropriate number in each case**.**

B1 组织的适应能力 (Organizational adaptability)

AC1	本店的经营管理具有灵活性 The establishment is flexible	1	2	3	4	5	NA
AC2	本店的经营管理具有创造性 The establishment is creative in management	1	2	3	4	5	NA
AC3	本店注重员工的培训与发展 The establishment commits to management staff training and development	1	2	3	4	5	NA

B2 管理人员的学习能力 （Ability of management staff to learn）

AC4	本店高层/中层经理具有较强的外语能力 The majority of local managers are good at foreign language	1	2	3	4	5	NA
AC5	大多数本店经理具有零售企业工作经验 The majority of local managers has working experience in retail company	1	2	3	4	5	NA
AC6	大多数本地经理拥有大专或以上学历 The majority of local managers has a university (or even higher degree)	1	2	3	4	5	NA
AC7	本店员工工作积极性较高 The management staffs of this establishment are highly motivated	1	2	3	4	5	NA

非常小程度 very little 1	较小程度 a little 2	一般程度 to an average extent 3	较大程度 much 4	非常大程度 a great 5	不适用 not applicable NA

B3　　外国母公司对本店的投入（Management involvement）

MI1	母公司定期对本店经理进行专门的培训 The foreign parent has regularly provided regular training for the store manager	1	2	3	4	5	NA
MI2	母公司定期对本店经理进行业绩评估 The foreign parent has regularly assessed the store manager's performance	1	2	3	4	5	NA
MI3	母公司为本店提供了足够的营销支持 The foreign parent has contributed enough marketing support	1	2	3	4	5	NA
MI4	母公司为本店提供了足够的行政支持 The foreign parent has contributed enough administrative support	1	2	3	4	5	NA

B4　　外国母公司与本店的沟通本店（Communication）

C1	母公司与本店之间定期会议沟通很频繁 There has been frequent regular meeting between the foreign parent and the establishment.	1	2	3	4	5	NA
C2	母公司与本店之间电话沟通很频繁 There has been frequent phone communication between the foreign parent and the establishment	1	2	3	4	5	NA
C3	母公司与本店之间电邮沟通很频繁 There has been frequent communication via email between the foreign parent and the establishment	1	2	3	4	5	NA

非常小程度 very little 1	较小程度 a little 2	一般程度 to an average extent 3	较大程度 much 4	非常大程度 a great 5	不适用 not applicable NA

第三部分： 业绩评价
Part C： Business Performance

您在多大程度上同意下列说法? 请圈出代表您的意见的数字。
To what extent do you agree with the following? Please circle the appropriate number in each case.

本店自成立以来是:
Since establishment, the store:

P1	销售额在增加 Sales volume has been increasing	1	2	3	4	5	NA
P2	市场占有率令人满意 Market share has been satisfactory	1	2	3	4	5	NA
P3	盈利水平正在达到预期目标 The establishment is making profit	1	2	3	4	5	NA
P4	消费者对本店的满意度在增加 Customer satisfaction has been improving	1	2	3	4	5	NA
P5	服务标准在不断提高 Services standards has been improving	1	2	3	4	5	NA
P6	在消费者心目中的形象在提高 Store image has been improving	1	2	3	4	5	NA
P7	自成立以来本店的劳动生产率在提高 Labor productivity has been improving	1	2	3	4	5	NA

第四部分:　公司背景
Part D:　Company Background

D1　本店成立于 19___年。

This establishment was set up in 19____。

D2　本店的初始投资额是_____万元（人民币）。

The initial investment of this establishment is RMB _____.

D3　本店的经营业态为(请选一项√):

The retail format of this establishment is (please √)：

a. 超级市场	❑	Supermarket
b. 专卖店	❑	Specialty store
c. 百货商店	❑	Department store
d. 其他业态 (请注明)	❑	Other format _____

D4　目前本店拥有的全职员工人数为(请选一项√)：

Currently the total number of full-time management staffs working in this establishment is (please√):

a. 1-25 ❑　b. 26-50 ❑　c. 51-75 ❑

d. 76-100 ❑　e. 100 以上 ❑　(above)

D5　本店是(请选一项√)：

The establishment is (please √) ：

a. 独资企业　❑ WOD　b. 合资企业　❑ JV

c. 其他 (请注明)　❑ Others (please specify)_____

D6　如果是合资企业，本店的中方母公司是:

If JV, the local parent is (please √)：

a. 零售企业　❑ Retailer　b. 非零售企业 ❑

D7　本店的外国母公司在中国的第一家店成立于_____年。

This first establishment set up by your foreign parent in China was in 19___.

D8 本店的外国母公司来自(请选一项√)

The foreign parent is from (please√)

a. 美国	❑	The USA
b. 日本	❑	Japan
c. 英国	❑	The UK
d. 法国	❑	France
e. 德国	❑	Germany
f. 香港/台湾	❑	HK/Taiwan
g. 泰国	❑	Thailand
h. 马来西亚	❑	Malaysia
i. 其他 (请注明)	Others (please specify) _____	

D9 本店所属外国母公司目前设在中国境内的分店数目为(请选一项√)：

The number of retail outlets set up by the foreign parent throughout China is (please√):

a. 1-5 ❑ b. 6-10 ❑ c. 11-15 ❑

d. 16-20 ❑ e. 20 以上 ❑

D10 本店 2004 年月均营业额（以人民币计算）(请选一项√)：

The Average Monthly Sales Revenue in 2003 of this establishment is (RMB) (请选一项√):

a. Below2.5m	❑	b. 2.5-5.0m	❑
c. 5,000,001-7.5m	❑	d. Over 7.5m	❑

第五部分： 个人资料
Part E: Personal Data

E1	您的性别： Sex：	❑男 ❑女	Male Female
E2	您的年龄： Age：	❑25 岁以下 ❑26-35 岁 ❑36-45 岁 ❑46-55 岁 ❑55 岁以上	Less than 25 years 26-35 years 36-45 years 46-55 years Over 56 years
E3	您的教育程度： Educational Level：	❑小学或以下 ❑中学 ❑大学/大专 ❑研究生	Primary or below Secondary University/Tertiary Post-graduate
E4	您在零售业的 工作年限： Working period in the retail sector：	❑五年以下 ❑6-10 年 ❑11-15 年 ❑16-20 年 ❑20 年以上	Less that 5 years 6-10 years 11-15 years 16-20 years Over 21 years
E5	您的职位： Position:	❑店长 ❑财务经理 ❑人力资源部经理 ❑其他（请注明）	Store manager Financial manager HR manager) Others _____

End of Questionnaire. Thank you for your participation!
全卷完。谢谢您的合作!

Appendix V Correlation Matrix of Questionnaire Items

Retail management know-how

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
M1	1.000											
M2	0.567	1.000										
M3	0.563	0.755	1.000									
M4	0.476	0.517	0.577	1.000								
M5	0.295	0.432	0.378	0.351	1.000							
M6	0.558	0.710	0.646	0.418	0.427	1.000						
M7	0.398	0.557	0.556	0.413	0.377	0.668	1.000					
M8	0.519	0.549	0.492	0.505	0.246	0.488	0.527	1.000				
M9	0.428	0.334	0.250	0.454	0.273	0.243	0.382	0.555	1.000			
M10	0.516	0.455	0.367	0.495	0.267	0.360	0.441	0.690	0.630	1.000		
M11	0.571	0.498	0.430	0.427	0.215	0.474	0.411	0.498	0.489	0.558	1.000	
M12	0.445	0.449	0.410	0.561	0.428	0.522	0.459	0.482	0.562	0.419	0.407	1.000

* All significant at 0.00 levels

Legends:

M1= Retailing philosophy
M2= Business policies
M3= Business systems
M4= Management mechanisms
M5= Corporate culture
M6= Strategic planning
M7= Business controls
M8= Marketing planning
M9= Advertising planning
M10= Promotion planning
M11= Pricing program
M12= Human resources planning

Absorptive capacity (AC)

	AC1	AC2	AC3	AC4	AC5	AC6	AC7
AC1	1.000						
AC2	0.644	1.000					
AC3	0.296	0.581	1.000				
AC4	0.136	0.386	0.526	1.000			
AC5	0.201	0.332	0.390	0.599	1.000		
AC6	0.157	0.297	0.493	0.509	0.506	1.000	
AC7	0.394	0.482	0.546	0.406	0.446	0.544	1.000

* All significant at 0.00 levels

Legends:

AC1= This establishment is flexible

AC2= This establishment is creative in its management

AC3= This establishment commits to management staff training and development

AC4= The majority of local managers are good at foreign language.

AC5= The majority of local managers has working experience in retail company.

AC6= The majority of local managers has a university (or even higher) degree.

AC7= The management staffs are highly motivated

Commitment (CMMT)

	CMMT1	CMMT2	CMMT3	CMMT4	CMMT5	CMMT6	CMMT7
CMMT1	1.000	.826	.804	.667	.637	.589	.550
CMMT2	.826	1.000	.831	.628	.696	.625	.607
CMMT3	.804	.831	1.000	.583	.670	.595	.565
CMMT4	.667	.628	.583	1.000	.621	.563	.557
CMMT5	.637	.696	.670	.621	1.000	.821	.839
CMMT6	.589	.625	.595	.563	.821	1.000	.885
CMMT7	.550	.607	.565	.557	.839	.885	1.000

* All significant at 0.00 levels

Legends:

CMMT1= The foreign parent provides regular training for store manager

CMMT2= The foreign parent evaluates store manager's performance regularly

CMMT3= The foreign parent contributes marketing support to this establishment

CMMT4= The foreign parent contributes administrative support

CMMT5= Regular meeting

CMMT6= Phone communication

CMMT7= communication via e-mail

Performance

	P1	P2	P3	P4	P5	P6	P7
P1	1.000						
P2	0.588	1.000					
P3	0.613	0.779	1.000				
P4	0.723	0.507	0.558	1.000			
P5	0.534	0.475	0.486	0.653	1.000		
P6	0.674	0.519	0.505	0.733	0.770	1.000	
P7	0.673	0.599	0.487	0.640	0.629	0.679	1.000

*All significant at 0.00 levels

Legends:
P1= Sales volume
P2= Market share
P3= Profit
P4= Customer satisfaction
P5= Services standards
P6= Store image
P7= Labor productivity

Appendix VI ANOVA by Survey Methods

Measured Variables	Group	N	Mean	Std. Deviation	Std. Error	F	Sig.
Retailing philosophy	Face-to-face	19	3.86	.834	.178	.264	.610
	Web-based	70	4.00	.926	.197		
	Total	89	3.93	.873	.132		
Business policy	Face-to-face	19	3.23	1.232	.263	1.295	.262
	Web-based	70	3.59	.854	.182		
	Total	89	3.41	1.064	.160		
Business system	Face-to-face	19	3.45	1.101	.235	2.313	.136
	Web-based	70	3.91	.868	.185		
	Total	89	3.68	1.006	.152		
Management mechanisms	Face-to-face	19	3.45	1.011	.215	2.413	.128
	Web-based	70	3.86	.710	.151		
	Total	89	3.66	.888	.134		
Corporate culture	Face-to-face	19	3.50	1.263	.269	1.507	.226
	Web-based	70	3.91	.921	.196		
	Total	89	3.70	1.112	.168		
Strategic planning	Face-to-face	19	3.59	1.182	.252	.076	.784
	Web-based	70	3.68	.995	.212		
	Total	89	3.64	1.080	.163		
Business control	Face-to-face	19	3.41	1.333	.284	1.320	.257
	Web-based	70	3.82	1.006	.215		
	Total	89	3.61	1.185	.179		
Marketing planning	Face-to-face	19	3.95	.999	.213	.326	.571
	Web-based	70	3.77	1.110	.237		
	Total	89	3.86	1.047	.158		
Advertising planning	Face-to-face	19	3.45	.912	.194	.090	.766
	Web-based	70	3.36	1.093	.233		

	Total	89	3.41	.996	.150		
Promotion planning	Face-to-face	19	3.64	.953	.203	.025	.875
	Web-based	70	3.59	.959	.204		
	Total	89	3.61	.945	.143		
Pricing strategy	Face-to-face	19	3.23	.813	.173	1.132	.293
	Web-based	70	3.55	1.143	.244		
	Total	89	3.39	.993	.150		
HR planning	Face-to-face	19	3.23	1.110	.237	.669	.418
	Web-based	70	3.50	1.102	.235		
	Total	89	3.36	1.102	.166		
	Total	89	2.73	.973	.147		
This establishment is flexible	Face-to-face	19	3.41	.796	.170	1.008	.321
	Web-based	70	3.68	.995	.212		
	Total	89	3.55	.901	.136		
This establishment is creative in its management	Face-to-face	19	3.18	.795	.169	6.740	.013
	Web-based	70	3.86	.941	.201		
	Total	89	3.52	.927	.140		
This establishment commits to management staff training and development	Face-to-face	19	3.36	1.217	.259	.732	.397
	Web-based	70	3.68	1.249	.266		
	Total	89	3.52	1.229	.185		
Senior managers are good at foreign language	Face-to-face	19	2.86	1.207	.257	3.735	.060
	Web-based	70	3.50	.964	.205		
	Total	89	3.18	1.126	.170		
The majority of local managers has working experience in retail company	Face-to-face	19	3.05	1.362	.290	.269	.607
	Web-based	70	3.23	.922	.197		
	Total	89	3.14	1.153	.174		
The majority of local managers has a university (or even higher) degree.	Face-to-face	19	3.45	1.184	.252	3.163	.083
	Web-based	70	4.00	.816	.174		
	Total	89	3.73	1.042	.157		
The management staffs are highly motivated	Face-to-face	19	3.36	1.002	.214	5.654	.022
	Web-based	70	4.00	.756	.161		

	Total	89	3.68	.934	.141		
The foreign parent provides regular training for store manager	Face-to-face	19	2.95	1.253	.267	4.091	.050
	Web-based	70	3.68	1.129	.241		
	Total	89	3.32	1.235	.186		
The foreign parent evaluates store manager's performance regularly	Face-to-face	19	3.41	1.333	.284	2.074	.157
	Web-based	70	3.95	1.174	.250		
	Total	89	3.68	1.272	.192		
The foreign parent contributes marketing support to this establishment	Face-to-face	19	3.00	1.234	.263	3.918	.054
	Web-based	70	3.73	1.202	.256		
	Total	89	3.36	1.259	.190		
The foreign parent has contributed enough administrative support	Face-to-face	19	3.32	1.211	.258	.060	.808
	Web-based	70	3.41	1.260	.269		
	Total	89	3.36	1.222	.184		
Frequent regular meeting	Face-to-face	19	2.82	1.500	.320	.977	.329
	Web-based	70	3.23	1.232	.263		
	Total	89	3.02	1.372	.207		
Frequent phone communication	Face-to-face	19	2.68	1.323	.282	1.417	.241
	Web-based	70	3.14	1.207	.257		
	Total	89	2.91	1.273	.192		
Frequent email communication	Face-to-face	19	2.95	1.495	.319	1.220	.276
	Web-based	70	3.41	1.221	.260		
	Total	89	3.18	1.369	.206		
Increased sales volume	Face-to-face	19	3.50	.802	.171	1.693	.200
	Web-based	70	3.86	1.037	.221		
	Total	89	3.68	.934	.141		
Market share satisfactory	Face-to-face	19	3.55	.912	.194	.186	.669
	Web-based	70	3.68	1.171	.250		
	Total	89	3.61	1.039	.157		
Making profit	Face-to-face	19	3.32	.894	.191	.715	.403
	Web-based	70	3.59	1.221	.260		
	Total	89	3.45	1.066	.161		

Better customer satisfaction	Face-to-face	19	3.50	.673	.143	.856	.360
	Web-based	70	3.73	.935	.199		
	Total	89	3.61	.813	.123		
Better services standards	Face-to-face	19	3.45	.739	.157	1.493	.228
	Web-based	70	3.77	.973	.207		
	Total	89	3.61	.868	.131		
Better store image	Face-to-face	19	3.68	.945	.202	.204	.654
	Web-based	70	3.82	1.053	.224		
	Total	89	3.75	.991	.149		
Improved labor productivity	Face-to-face	19	3.32	.780	.166	2.201	.145
	Web-based	70	3.73	1.032	.220		
	Total	89	3.52	.927	.140		

Appendix VII Harman's One-Factor Test

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.373	36.052	36.052	9.373	36.052	36.052	5.978	22.992	22.992
2	3.868	14.877	50.929	3.868	14.877	50.929	3.759	14.457	37.449
3	2.151	8.273	59.202	2.151	8.273	59.202	3.054	11.746	49.195
4	1.448	5.571	64.773	1.448	5.571	64.773	2.607	10.028	59.223
5	1.367	5.258	70.031	1.367	5.258	70.031	2.434	9.362	68.585
6	1.081	4.157	74.188	1.081	4.157	74.188	1.457	5.602	74.188
7	.902	3.467	77.655						
8	.834	3.207	80.862						
9	.601	2.310	83.173						
10	.572	2.199	85.372						
11	.524	2.015	87.388						
12	.458	1.762	89.150						
13	.418	1.606	90.756						
14	.338	1.300	92.056						
15	.309	1.188	93.243						
16	.273	1.051	94.294						
17	.256	.984	95.279						
18	.223	.856	96.135						
19	.198	.762	96.897						
20	.180	.691	97.588						

21	.140	.537	98.125						
22	.116	.447	98.572						
23	.113	.434	99.007						
24	.103	.395	99.402						
25	.087	.335	99.737						
26	.068	.263	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix(a)

	Component					
	1	2	3	4	5	6
Business policy		.804				
Business control		.704				
Strategic planning		.851				
Corporate culture						-.546
Business system		.835				
Marketing planning		.470		.662		
Advertising planning				.843		
Promotion planning				.799		
Pricing strategy		.481		.626		
This establishment is flexible					.810	
This establishment is creative in its management					.741	
Senior managers are good at foreign language	.578					.449
The majority of local managers has working experience in foreign invested company	.515					.642
The majority of local managers has a university (or even higher) degree.	.481					.483
The foreign investor provides regular training for store manager	.761					
The foreign investor contributes marketing support to this establishment	.774					

The foreign investor evaluates store manager's performance regularly	.792					
The foreign parent has contributed enough administrative support	.673					
Frequent regular meeting	.855					
Frequent phone communication	.884					
Frequent email communication	.874					
Sales volume has been increasing			.692			
Market share satisfactory			.886			
Making profit			.858			
Customer satisfaction improving			.610		.405	
Store image been improving			.530		.508	

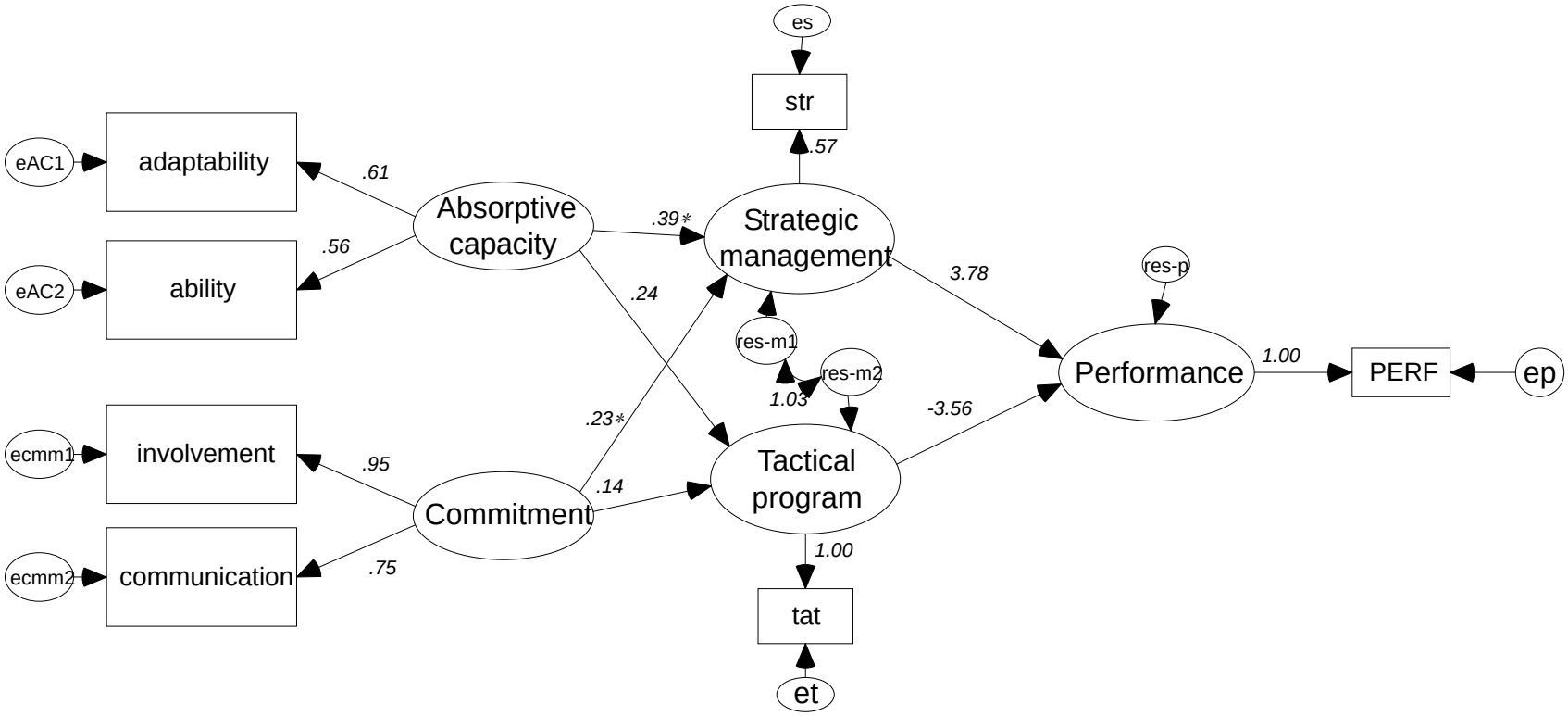
Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 6 iterations.

Appendix VIII Assessment of Data Normality

Measured Variables	*Mean*	*SD*	*Skewness*	*Kurtosis*
Retail management know-how (12 items)				
Retailing philosophy	4.079	.944	-1.154	2.503
Business policies	3.607	1.183	-1.124	1.861
Business systems	3.865	1.110	-1.258	2.047
Management mechanisms	3.888	.944	-.938	1.313
Corporate cultures	3.787	1.123	-1.154	.016
Strategic planning	3.865	1.099	-1.301	2.224
Business controls	3.865	1.057	-.846	.933
Marketing planning	3.865	1.089	-1.022	1.126
Advertising planning	3.528	1.078	-.409	.089
Promotion planning	3.697	.958	-.620	1.203
Pricing strategy	3.753	1.048	-.759	.816
HR planning	3.506	1.149	-.910	1.268
Organizational capacity to learn (3 items)				
This establishment is flexible	3.461	.989	-.033	-.407
This establishment is creative in its management	3.348	1.012	-.213	-.407
This establishment commits to management staff training and development	3.461	1.198	-.609	-.081
Management staff's ability (4 items)				
The majority of local managers are good at foreign language.	3.157	1.313	-.390	-.361
The majority of local managers has working experience in retail company.	3.067	1.214	-.033	.091
The majority of local managers has a university (or even higher) degree.	3.685	1.164	-1.171	1.435
The management staffs are highly motivated	3.348	1.216	-1.013	1.026
Management involvement (4 items)				

The foreign parent provides regular training for store manager	3.258	1.336	-.723	.153
The foreign parent evaluates store manager's performance regularly	3.618	1.336	-1.195	1.175
The foreign parent contributes marketing support to this establishment	3.270	1.363	-.808	.320
The foreign parent contributes administrative support to this establishment	3.169	1.408	-.731	-.018
Communication (3 items)				
There has been frequent regular meeting between the foreign parent and the establishment	3.124	1.445	-.660	-.287
There has been frequent phone communication between the foreign parent and the establishment	3.067	1.421	-.559	-.254
There has been frequent email communication between the foreign parent and the establishment	3.348	1.455	-.881	.126
Performance (7 items)				
Sales volume has been increasing	3.764	1.012	-.585	-.137
Market share satisfactory	3.551	1.118	-.678	.260
Making profit	3.528	1.045	-.351	-.396
Customer satisfaction improving	3.652	.943	-.576	.545
Services standards been improving	3.539	.954	-.235	.192
Store image been improving	3.685	1.007	-.627	.150
Labor productivity been improving	3.472	1.067	-.700	.498

Appendix IX Structural paths in full model



* p < 0.1; ** p < 0.05; *** p < 0.01.

Appendix X Parameter estimations of full model

Structural paths/Item loadings			***Std. Estimate***	***S.E.***	***C.R.***	***P***
Absorptive capacity	→	Strategic Management	.387	.198	1.892	.059
Absorptive capacity	→	Tactical program	.241	.257	1.567	.117
commitment	→	Strategic Management	.229	.099	1.750	.080
commitment	→	Tactical program	.145	.143	1.319	.187
Strategic management	→	Performance	3.781	5.235	1.215	.224
Tactical program	→	Performance	-3.561	3.092	-1.118	.264
Absorptive capacity						
Organizational adaptability			.610			
Ability of management staff to learn			.561			
Commitment						
Management involvement			.952	.590	2.690	***
Communication			.752			
Strategic/control management know-how						
Strategic know-how			.574			
Tactical program management know-how						
Tactical know-how			.997			
Performance						
Performance			.997			
χ2	***df***	***χ2/df***	***RMSEA***	***IFI***	***NFI***	***CFI***
69.257	11	6.296	.245	.741	.707	.729

* p < 0.1; ** p < 0.05; *** p < 0.01.

Appendix XI ANOVA by Ownership Type

Measured variables	Group	N	Mean	Std. Deviation	Std. Error	F	Sig.
Retailing philosophy	JV	48	4.09	.969	.111	.105	.747
	WOE	32	4.00	.816	.226		
	Total	79	4.08	.944	.100		
Business policy	JV	48	3.53	1.205	.138	2.443	.122
	WOE	32	4.08	.954	.265		
	Total	79	3.61	1.183	.125		
Business system	JV	48	3.83	1.148	.132	.551	.460
	WOE	32	4.08	.862	.239		
	Total	79	3.87	1.110	.118		
Management mechanisms	JV	48	3.88	1.019	.117	.019	.891
	WOE	32	3.92	.954	.265		
	Total	79	3.89	1.005	.107		
Corporate culture	JV	48	3.76	1.130	.130	.223	.638
	WOE	32	3.92	1.115	.309		
	Total	79	3.79	1.123	.119		
Strategic planning	JV	48	3.84	1.132	.130	.227	.635
	WOE	32	4.00	.913	.253		
	Total	79	3.87	1.099	.117		
Business control	JV	48	3.79	1.087	.125	2.719	.103
	WOE	32	4.31	.751	.208		
	Total	79	3.87	1.057	.112		
Marketing planning	JV	48	3.83	1.136	.130	.573	.451
	WOE	32	4.08	.760	.211		
	Total	79	3.87	1.089	.115		

Advertising planning	JV	48	3.47	1.089	.125	1.331	.252
	WOE	32	3.85	.987	.274		
	Total	79	3.53	1.078	.114		
Promotion planning	JV	48	3.66	.974	.112	.849	.359
	WOE	32	3.92	.862	.239		
	Total	79	3.70	.958	.102		
Pricing strategy	JV	48	3.72	1.053	.121	.399	.529
	WOE	32	3.92	1.038	.288		
	Total	79	3.75	1.048	.111		
HR planning	JV	48	3.53	1.172	.134	.167	.684
	WOE	32	3.38	1.044	.290		
	Total	79	3.51	1.149	.122		
This establishment is creative in its management	JV	48	3.33	1.025	.118	.189	.665
	WOE	32	3.46	.967	.268		
	Total	79	3.35	1.012	.107		
This establishment commits to management staff training and development	JV	48	3.57	1.193	.137	.867	.354
	WOE	32	3.23	1.235	.343		
	Total	79	3.52	1.198	.127		
Senior managers are good at foreign language	JV	48	3.20	1.317	.151	.481	.490
	WOE	32	2.92	1.320	.366		
	Total	79	3.16	1.313	.139		
The majority of local managers has working experience in retail company	JV	48	3.12	1.200	.138	.918	.341
	WOE	32	2.77	1.301	.361		
	Total	79	3.07	1.214	.129		
The majority of local managers has a university (or even higher) degree.	JV	48	3.76	1.118	.128	2.359	.128
	WOE	32	3.23	1.363	.378		
	Total	79	3.69	1.164	.123		
The management staffs are highly motivated	JV	48	3.41	1.202	.138	1.252	.266
	WOE	32	3.00	1.291	.358		

	Total	79	3.35	1.216	.129		
The foreign parent provides regular training for store manager	JV	48	3.29	1.335	.153	.279	.599
	WOE	32	3.08	1.382	.383		
	Total	79	3.26	1.336	.142		
The foreign parent evaluates store manager's performance regularly	JV	48	3.66	1.332	.153	.462	.499
	WOE	32	3.38	1.387	.385		
	Total	79	3.62	1.336	.142		
The foreign parent contributes marketing support to this establishment	JV	48	3.25	1.367	.157	.107	.744
	WOE	32	3.38	1.387	.385		
	Total	79	3.27	1.363	.144		
The foreign parent has contributed enough administrative support	JV	48	3.36	1.344	.154	.479	.491
	WOE	32	3.08	1.320	.366		
	Total	79	3.31	1.337	.142		
Frequent regular meeting	JV	48	3.12	1.451	.166	.007	.935
	WOE	32	3.15	1.463	.406		
	Total	79	3.12	1.445	.153		
Frequent phone communication	JV	48	3.08	1.440	.165	.034	.854
	WOE	32	3.00	1.354	.376		
	Total	79	3.07	1.421	.151		
Frequent email communication	JV	48	3.36	1.476	.169	.012	.914
	WOE	32	3.31	1.377	.382		
	Total	79	3.35	1.455	.154		
Increased sales volume	JV	48	3.80	.994	.114	.755	.387
	WOE	32	3.54	1.127	.312		
	Total	79	3.76	1.012	.107		
Market share satisfactory	JV	48	3.64	1.116	.128	3.809	.054
	WOE	32	3.00	1.000	.277		
	Total	79	3.55	1.118	.119		
Making profit	JV	48	3.57	1.024	.117	.674	.414

	WOE	32	3.31	1.182	.328		
	Total	79	3.53	1.045	.111		
Better customer satisfaction	JV	48	3.67	.958	.110	.218	.642
	WOE	32	3.54	.877	.243		
	Total	79	3.65	.943	.100		
Better services standards	JV	48	3.54	.986	.113	.000	.997
	WOE	32	3.54	.776	.215		
	Total	79	3.54	.954	.101		
Better store image	JV	48	3.70	1.020	.117	.073	.788
	WOE	32	3.62	.961	.266		
	Total	79	3.69	1.007	.107		
Improved labor productivity	JV	48	3.53	1.089	.125	1.358	.247
	WOE	32	3.15	.899	.249		
	Total	79	3.47	1.067	.113		

Appendix XII ANOVA by retail format (1)

Measured variables	Group	N	Mean	Std. Deviation	Std. Error	F	Sig.
Retailing philosophy	supermarket	45	4.22	.997	.149	2.116	.151
	department store	22	3.86	.834	.178		
	Total	67	4.10	.956	.117		
Business policy	supermarket	45	3.80	1.272	.190	3.057	.085
	department store	22	3.23	1.232	.263		
	Total	67	3.61	1.279	.156		
Business system	supermarket	45	4.04	1.186	.177	3.826	.055
	department store	22	3.45	1.101	.235		
	Total	67	3.85	1.184	.145		
Management mechanisms	supermarket	45	4.11	1.071	.160	5.758	.019
	department store	22	3.45	1.011	.215		
	Total	67	3.90	1.089	.133		
Corporate culture	supermarket	45	3.87	1.140	.170	1.424	.237
	department store	22	3.50	1.263	.269		
	Total	67	3.75	1.185	.145		
Strategic planning	supermarket	45	4.09	1.083	.162	2.942	.091
	department store	22	3.59	1.182	.252		
	Total	67	3.93	1.132	.138		
Business control	supermarket	45	4.11	.859	.128	6.785	.011
	department store	22	3.41	1.333	.284		
	Total	67	3.88	1.080	.132		
Marketing planning	supermarket	45	3.87	1.140	.170	.095	.759
	department store	22	3.95	.999	.213		
	Total	67	3.90	1.089	.133		

Advertising planning	supermarket	45	3.64	1.151	.172	.457	.501
	department store	22	3.45	.912	.194		
	Total	67	3.58	1.075	.131		
Promotion planning	supermarket	45	3.78	.974	.145	.316	.576
	department store	22	3.64	.953	.203		
	Total	67	3.73	.963	.118		
Pricing strategy	supermarket	45	4.11	.982	.146	13.324	.001
	department store	22	3.23	.813	.173		
	Total	67	3.82	1.014	.124		
HR planning	supermarket	45	3.64	1.190	.177	1.896	.173
	department store	22	3.23	1.110	.237		
	Total	67	3.51	1.173	.143		
This establishment is flexible	supermarket	45	3.38	1.072	.160	.015	.904
	department store	22	3.41	.796	.170		
	Total	67	3.39	.984	.120		
This establishment is creative in its management	supermarket	45	3.18	1.072	.160	.000	.988
	department store	22	3.18	.795	.169		
	Total	67	3.18	.984	.120		
This establishment commits to management staff training and development	supermarket	45	3.51	1.180	.176	.226	.636
	department store	22	3.36	1.217	.259		
	Total	67	3.46	1.185	.145		
Senior managers are good at foreign language	supermarket	45	3.13	1.486	.222	.547	.462
	department store	22	2.86	1.207	.257		
	Total	67	3.04	1.397	.171		
The majority of local managers has working experience in retail company	supermarket	45	3.00	1.279	.191	.018	.894
	department store	22	3.05	1.362	.290		
	Total	67	3.01	1.297	.158		
The majority of local managers has a university (or even higher) degree.	supermarket	45	3.64	1.282	.191	.340	.562
	department store	22	3.45	1.184	.252		
	Total	67	3.58	1.245	.152		

The management staffs are highly motivated	supermarket	45	3.02	1.373	.205	1.076	.303
	department store	22	3.36	1.002	.214		
	Total	67	3.13	1.266	.155		
The foreign parent provides regular training for store manager	supermarket	45	3.20	1.440	.215	.466	.497
	department store	22	2.95	1.253	.267		
	Total	67	3.12	1.376	.168		
The foreign parent evaluates store manager's performance regularly	supermarket	45	3.56	1.407	.210	.166	.685
	department store	22	3.41	1.333	.284		
	Total	67	3.51	1.375	.168		
The foreign parent contributes marketing support to this establishment	supermarket	45	3.18	1.466	.219	.240	.626
	department store	22	3.00	1.234	.263		
	Total	67	3.12	1.387	.169		
The foreign parent has contributed enough administrative support	supermarket	45	3.27	1.452	.216	.021	.886
	department store	22	3.32	1.211	.258		
	Total	67	3.28	1.369	.167		
Frequent regular meeting	supermarket	45	3.22	1.521	.227	1.052	.309
	department store	22	2.82	1.500	.320		
	Total	67	3.09	1.515	.185		
Frequent phone communication	supermarket	45	3.22	1.550	.231	1.968	.165
	department store	22	2.68	1.323	.282		
	Total	67	3.04	1.492	.182		
Frequent email communication	supermarket	45	3.51	1.532	.228	1.981	.164
	department store	22	2.95	1.495	.319		
	Total	67	3.33	1.531	.187		
Increased sales volume	supermarket	45	3.84	1.086	.162	1.742	.192
	department store	22	3.50	.802	.171		
	Total	67	3.73	1.009	.123		
Market share satisfactory	supermarket	45	3.49	1.199	.179	.038	.846
	department store	22	3.55	.912	.194		
	Total	67	3.51	1.106	.135		

Making profit	supermarket	45	3.60	1.031	.154	1.200	.277
	department store	22	3.32	.894	.191		
	Total	67	3.51	.990	.121		
Better customer satisfaction	supermarket	45	3.69	1.062	.158	.579	.449
	department store	22	3.50	.673	.143		
	Total	67	3.63	.951	.116		
Better services standards	supermarket	45	3.47	1.036	.154	.002	.961
	department store	22	3.45	.739	.157		
	Total	67	3.46	.943	.115		
Better store image	supermarket	45	3.62	1.029	.153	.052	.820
	department store	22	3.68	.945	.202		
	Total	67	3.64	.995	.122		
Improved labor productivity	supermarket	45	3.42	1.196	.178	.137	.712
	department store	22	3.32	.780	.166		
	Total	67	3.39	1.072	.131		

Appendix XIII ANOVA by retail format (2)

Measured variables	Group	N	Mean	Std. Deviation	Std. Error	F	Sig.
Retailing philosophy	supermarket	45	4.22	.997	.149	.768	.384
	specialty store	22	4.00	.926	.197		
	Total	67	4.15	.973	.119		
Business policy	supermarket	45	3.80	1.272	.190	.485	.489
	specialty store	22	3.59	.854	.182		
	Total	67	3.73	1.149	.140		
Business system	supermarket	45	4.04	1.186	.177	.226	.636
	specialty store	22	3.91	.868	.185		
	Total	67	4.00	1.087	.133		
Management mechanisms	supermarket	45	4.11	1.071	.160	.964	.330
	specialty store	22	3.86	.710	.151		
	Total	67	4.03	.969	.118		
Corporate culture	supermarket	45	3.87	1.140	.170	.023	.880
	specialty store	22	3.91	.921	.196		
	Total	67	3.88	1.066	.130		
Strategic planning	supermarket	45	4.09	1.083	.162	2.198	.143
	specialty store	22	3.68	.995	.212		
	Total	67	3.96	1.065	.130		
Business control	supermarket	45	4.11	.859	.128	1.534	.220
	specialty store	22	3.82	1.006	.215		
	Total	67	4.01	.913	.112		
Marketing planning	supermarket	45	3.87	1.140	.170	.102	.750
	specialty store	22	3.77	1.110	.237		

	Total	67	3.84	1.123	.137		
Advertising planning	supermarket	45	3.64	1.151	.172	.908	.344
	specialty store	22	3.36	1.093	.233		
	Total	67	3.55	1.132	.138		
Promotion planning	supermarket	45	3.78	.974	.145	.549	.461
	specialty store	22	3.59	.959	.204		
	Total	67	3.72	.966	.118		
Pricing strategy	supermarket	45	4.11	.982	.146	4.397	.040
	specialty store	22	3.55	1.143	.244		
	Total	67	3.93	1.063	.130		
HR planning	supermarket	45	3.64	1.190	.177	.228	.634
	specialty store	22	3.50	1.102	.235		
	Total	67	3.60	1.155	.141		
This establishment is creative in its management	supermarket	45	3.18	1.072	.160	6.532	.013
	specialty store	22	3.86	.941	.201		
	Total	67	3.40	1.074	.131		
This establishment commits to management staff training and development	supermarket	45	3.51	1.180	.176	.298	.587
	specialty store	22	3.68	1.249	.266		
	Total	67	3.57	1.196	.146		
Senior managers are good at foreign language	supermarket	45	3.13	1.486	.222	1.106	.297
	specialty store	22	3.50	.964	.205		
	Total	67	3.25	1.341	.164		
The majority of local managers has working experience in retail company	supermarket	45	3.00	1.279	.191	.552	.460
	specialty store	22	3.23	.922	.197		
	Total	67	3.07	1.172	.143		
The majority of local managers has a university (or even higher) degree.	supermarket	45	3.64	1.282	.191	1.407	.240
	specialty store	22	4.00	.816	.174		
	Total	67	3.76	1.156	.141		
The management staffs are highly motivated	supermarket	45	3.02	1.373	.205	9.668	.003

	specialty store	22	4.00	.756	.161		
	Total	67	3.34	1.286	.157		
The foreign parent provides regular training for store manager	supermarket	45	3.20	1.440	.215	1.890	.174
	specialty store	22	3.68	1.129	.241		
	Total	67	3.36	1.356	.166		
The foreign parent evaluates store manager's performance regularly	supermarket	45	3.56	1.407	.210	1.317	.255
	specialty store	22	3.95	1.174	.250		
	Total	67	3.69	1.339	.164		
The foreign parent contributes marketing support to this establishment	supermarket	45	3.18	1.466	.219	2.321	.132
	specialty store	22	3.73	1.202	.256		
	Total	67	3.36	1.400	.171		
The foreign parent has contributed enough administrative support	supermarket	45	3.27	1.452	.216	.154	.696
	specialty store	22	3.41	1.260	.269		
	Total	67	3.31	1.384	.169		
Frequent regular meeting	supermarket	45	3.22	1.521	.227	.000	.989
	specialty store	22	3.23	1.232	.263		
	Total	67	3.22	1.423	.174		
Frequent phone communication	supermarket	45	3.22	1.550	.231	.052	.820
	specialty store	22	3.14	1.207	.257		
	Total	67	3.19	1.438	.176		
Frequent email communication	supermarket	45	3.51	1.532	.228	.074	.786
	specialty store	22	3.41	1.221	.260		
	Total	67	3.48	1.429	.175		
Increased sales volume	supermarket	45	3.84	1.086	.162	.005	.945
	specialty store	22	3.86	1.037	.221		
	Total	67	3.85	1.062	.130		
Market share satisfactory	supermarket	45	3.49	1.199	.179	.389	.535
	specialty store	22	3.68	1.171	.250		
	Total	67	3.55	1.184	.145		

Making profit	supermarket	45	3.60	1.031	.154	.001	.975
	specialty store	22	3.59	1.221	.260		
	Total	67	3.60	1.088	.133		
Better customer satisfaction	supermarket	45	3.69	1.062	.158	.021	.886
	specialty store	22	3.73	.935	.199		
	Total	67	3.70	1.015	.124		
Better services standards	supermarket	45	3.47	1.036	.154	1.342	.251
	specialty store	22	3.77	.973	.207		
	Total	67	3.57	1.018	.124		
Better store image	supermarket	45	3.62	1.029	.153	.528	.470
	specialty store	22	3.82	1.053	.224		
	Total	67	3.69	1.033	.126		
Improved labor productivity	supermarket	45	3.42	1.196	.178	1.047	.310
	specialty store	22	3.73	1.032	.220		
	Total	67	3.52	1.146	.140		

Appendix XIV ANOVA by Retail Format (3)

Measured variables	Group	N	Mean	Std. Deviation	Std. Error	F	Sig.
Retailing philosophy	department store	22	3.86	.834	.178	.264	.610
	specialty store	22	4.00	.926	.197		
	Total	44	3.93	.873	.132		
Business policy	department store	22	3.23	1.232	.263	1.295	.262
	specialty store	22	3.59	.854	.182		
	Total	44	3.41	1.064	.160		
Business system	department store	22	3.45	1.101	.235	2.313	.136
	specialty store	22	3.91	.868	.185		
	Total	44	3.68	1.006	.152		
Management mechanisms	department store	22	3.45	1.011	.215	2.413	.128
	specialty store	22	3.86	.710	.151		
	Total	44	3.66	.888	.134		
Corporate culture	department store	22	3.50	1.263	.269	1.507	.226
	specialty store	22	3.91	.921	.196		
	Total	44	3.70	1.112	.168		
Strategic planning	department store	22	3.59	1.182	.252	.076	.784
	specialty store	22	3.68	.995	.212		
	Total	44	3.64	1.080	.163		
Business control	department store	22	3.41	1.333	.284	1.320	.257
	specialty store	22	3.82	1.006	.215		
	Total	44	3.61	1.185	.179		
Marketing planning	department store	22	3.95	.999	.213	.326	.571
	specialty store	22	3.77	1.110	.237		

	Total	44	3.86	1.047	.158		
Advertising planning	department store	22	3.45	.912	.194	.090	.766
	specialty store	22	3.36	1.093	.233		
	Total	44	3.41	.996	.150		
Promotion planning	department store	22	3.64	.953	.203	.025	.875
	specialty store	22	3.59	.959	.204		
	Total	44	3.61	.945	.143		
Pricing strategy	department store	22	3.23	.813	.173	1.132	.293
	specialty store	22	3.55	1.143	.244		
	Total	44	3.39	.993	.150		
HR planning	department store	22	3.23	1.110	.237	.669	.418
	specialty store	22	3.50	1.102	.235		
	Total	44	3.36	1.102	.166		
This establishment is flexible	department store	22	3.41	.796	.170	1.008	.321
	specialty store	22	3.68	.995	.212		
	Total	44	3.55	.901	.136		
This establishment is creative in its management	department store	22	3.18	.795	.169	6.740	.013
	specialty store	22	3.86	.941	.201		
	Total	44	3.52	.927	.140		
This establishment commits to management staff training and development	department store	22	3.36	1.217	.259	.732	.397
	specialty store	22	3.68	1.249	.266		
	Total	44	3.52	1.229	.185		
Senior managers are good at foreign language	department store	22	2.86	1.207	.257	3.735	.060
	specialty store	22	3.50	.964	.205		
	Total	44	3.18	1.126	.170		
The majority of local managers has working experience in retail company	department store	22	3.05	1.362	.290	.269	.607
	specialty store	22	3.23	.922	.197		
	Total	44	3.14	1.153	.174		
The majority of local managers has a university	department store	22	3.45	1.184	.252	3.163	.083

(or even higher) degree.	specialty store	22	4.00	.816	.174		
	Total	44	3.73	1.042	.157		
The management staffs are highly motivated	department store	22	3.36	1.002	.214	5.654	.022
	specialty store	22	4.00	.756	.161		
	Total	44	3.68	.934	.141		
The foreign parent provides regular training for store manager	department store	22	2.95	1.253	.267	4.091	.050
	specialty store	22	3.68	1.129	.241		
	Total	44	3.32	1.235	.186		
The foreign parent evaluates store manager's performance regularly	department store	22	3.41	1.333	.284	2.074	.157
	specialty store	22	3.95	1.174	.250		
	Total	44	3.68	1.272	.192		
The foreign parent contributes marketing support to this establishment	department store	22	3.00	1.234	.263	3.918	.054
	specialty store	22	3.73	1.202	.256		
	Total	44	3.36	1.259	.190		
The foreign parent has contributed enough administrative support	department store	22	3.32	1.211	.258	.060	.808
	specialty store	22	3.41	1.260	.269		
	Total	44	3.36	1.222	.184		
Frequent regular meeting	department store	22	2.82	1.500	.320	.977	.329
	specialty store	22	3.23	1.232	.263		
	Total	44	3.02	1.372	.207		
Frequent phone communication	department store	22	2.68	1.323	.282	1.417	.241
	specialty store	22	3.14	1.207	.257		
	Total	44	2.91	1.273	.192		
Frequent email communication	department store	22	2.95	1.495	.319	1.220	.276
	specialty store	22	3.41	1.221	.260		
	Total	44	3.18	1.369	.206		
Increased sales volume	department store	22	3.50	.802	.171	1.693	.200
	specialty store	22	3.86	1.037	.221		
	Total	44	3.68	.934	.141		

Market share satisfactory	department store	22	3.55	.912	.194	.186	.669
	specialty store	22	3.68	1.171	.250		
	Total	44	3.61	1.039	.157		
Making profit	department store	22	3.32	.894	.191	.715	.403
	specialty store	22	3.59	1.221	.260		
	Total	44	3.45	1.066	.161		
Better customer satisfaction	department store	22	3.50	.673	.143	.856	.360
	specialty store	22	3.73	.935	.199		
	Total	44	3.61	.813	.123		
Better services standards	department store	22	3.45	.739	.157	1.493	.228
	specialty store	22	3.77	.973	.207		
	Total	44	3.61	.868	.131		
Better store image	department store	22	3.68	.945	.202	.204	.654
	specialty store	22	3.82	1.053	.224		
	Total	44	3.75	.991	.149		
Improved labor productivity	department store	22	3.32	.780	.166	2.201	.145
	specialty store	22	3.73	1.032	.220		
	Total	44	3.52	.927	.140		