Identification of Organization-Centric Intangible Capital in the Hospitality Industry

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Dissertation Submitted to the Faculty of
the Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy
In
Hospitality and Tourism Management

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June 16, 2011
Blacksburg, Virginia

Keywords: Organizational Capital, Intangible Assets, Intellectual Capital, Casual Dining Restaurant

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(ABSTRACT)

The pertinent investment in intangible assets is expected to lead to a firm's higher productivity and competitiveness. This study suggests that a restaurant firm should identify core intangible assets for its business, manage them systematically, and measure their value contribution. The essential thrust is to identify key intangible value resources and establish their measurement, which then helps measure the financial contribution of each intangible asset and make an investment decision on it. Thus, this study was purported to identify key organization-centric intangible value assets in the context of the casual dining restaurant industry, develop their measurement, and examine their contribution on a firm's market value. Findings will help improve understanding of what intangible assets are critical and apply the concept to a strategic and operational management.

Based on an in-depth literature review covering a wide range of areas, the following six of the most widely agreed upon domains of organizational capital were identified: innovation capital, organizational process capital, organizational culture capital, organizational learning capital, information system capital, and intellectual property capital. This structure of the six most important domains of organizational capital was verified through subsequent interviews with five experts, the pilot test with ten experts, and three rounds of the Delphi survey.

Seventeen sub-dimensions were identified through the literature review, interviews, the pilot test, and the Delphi study with professionals. This industry-specific categorical system helps a firm identify and manage various types of intangible resources more precisely and efficiently. Furthermore, it can enable restaurant management to clearly understand how to cope with different types of intangible resources and how to gather, create, use, share, and develop them more appropriately. The findings can be grouped into the following conclusions.

Seventy measurement indicators were developed to measure a firm's organizational capitals. Unlike using subjective perceptual measurement scales, the measured values using the objective measurement scales are consistent regardless of time or people. Therefore, the financial value (or contribution) of each of the six organizational capitals can be estimated more precisely along with the data of firms' market value.

DEDICATION

To my wife (Heewook Chung) and children (Hangyeol and Hansol) for their endless love and long wait during my long Ph.D. journey,

and to my beloved people, my parents (Jinhaeng Lee and Boksoo Yoo) and parents-in-law (Sangtae Chung and Minseok Hong), for their unconditional love and support.

AUTHOR'S ACKNOWLEDGEMENT

First and foremost, I would like to express my deepest and most sincere appreciation to Dr. Michael Olsen for his endless support, patience, and guidance for this dissertation. His tireless advices have truly helped me in many professional ways. I will never be able to express my deepest appreciation to him for what I have learned in the past six years. I would like to extend my deepest appreciation to my co-chair, Dr Suzanne Murrmann. Thanks to her guidance, I have been able to pursue and complete this research.

I would also like to show my thankfulness and respect to my committee members, Dr.Vincent Magnini and Dr. Soocheong (Shawn) Jang, for their valuable time, energy and contributions to my study. Their suggestions and comments allowed me to think critically and sharpened my research skills.

I would like to extend thanks to my brothers and sisters. Their constant support and understanding have made me possible to do all my scholarly efforts. I hope this dissertation makes them proud. Especially, I would like to acknowledge my brothers and sister, Hoajong Lee, Hoasun Lee, and Woohyun Lee, who have always supported and encouraged me.

Finally, I would like to thank all my fellows at the Department of Hospitality and Tourism Management at Virginia Tech. I would love to express special thanks to my Blacksburg brothers, Kunsoon Park, Seungwoo (John) Lee, Beomcheol (Peter) Kim, and Sangtak Lee for their warm-hearted support and friendship throughout all six years in Blacksburg.

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CHAPTER 1: INTRODUCTION

"What you can measure, you can manage and what you want to manage, you need to measure."(Roos, Roos, Edvinsson, & Dragonetti, 1998)

Problem Statement & Research Question

In today's knowledge economy, with the development of information technology, it is widely accepted that growth and wealth of a firm are driven primarily by a firm's intangible assets. The most critical components of a firm's resource endowment are considered to be intangible assets. Pertinent development of intangibles along with other types of tangible (or financial) assets will result in extraordinary profits, sustainable competitive advantage, and sometimes even temporary monopolies (Lev, 2001, p. 48; Marr, 2006; Roos, Roos, et al., 1998). According to the resource-based view, firms are described as 'heterogeneous bundles of idiosyncratic endowments of assets and capabilities whose characteristics affirm firm success' (Barney, 1991; Conner, 1991; Wernerfelt, 1984). The resource-based view attributes a firm's success to the accumulation of rare, valuable and non-imitable inputs for production and distribution (Conner, 1991) at a lower cost than the rents these resources will produce (Peteraf, 1993). Competitive advantage has been attributed to the importance of unique firm resources or core competencies (Prahalad, 1990), the causal ambiguity making firms difficult to imitate (Lippman & Rumelt, 1982), or distinctive competence (Hitt & Ireland, 1985). The intangible resources are valuable, scarce, imperfectly imitable and non-substitutable (Barney, 1991). Itami and Roehl (1987) argued that these intangible assets are the most critical resources in the firms' production processes.

Assuming that the gap between a firm's market value and its book value can be attributable to the contribution of its intangible resources, the growing market-to-book value ratio of a firm (that is, the ratio of a firm's market value to its book value as stated on its balance sheets) over time indicates the increasing importance of intangibles in the value creation of business. According to Lev (2001, p. 8), the average market-to-book value of the Standard and Poor (S&P) 500 companies has shown continuous increase from the value

of 1.0 in the early 1980s, up to the value of about 7.5 in 2000. Through a study of thousands of nonfinancial firms over a 20 year period, Blair and Wallman (2001) asserted a significant shift in the makeup of the market value of firms was made, from 20 percent of a firm's value attributable to the intangible assets in 1978 to 55 percent in 1988 and even 70 percent in 1998. Consequently, it has been emphasized that the successful management of intangible assets will result in the significant improvement of a firm's true value.

The continuously growing disparity between a firm's market value and its book value also indicates the traditional financial statements are becoming short of information in today's business for both investors and management. Traditional financial reporting systems have made a critical contribution in the business environment since they were introduced. Unfortunately, traditional accounting systems are intrinsically unable to provide sufficient information about a firm's true market value which reflects future value creation potential. Investors are required to examine not only the past and current performance of a company of interest, but also are forced to scrutinize how this performance will change (Daum, 2003). For example, the balance sheet only provides investors with partial information of the company's true market value, and the income statement is not enough to reflect the complicated value creation system of today's business (Arvidsson, 2011; Lagrost, Martin, Dubois, & Quazzotti, 2010; Lev & Daum, 2004).

Management has recognized that intangible resources drive the value of a firm and the pertinent investment in them leads to a firm's higher productivity and competitiveness. For the strategic investment decision in intangibles, management wants to know how the investment will contribute to a firm's future value creation. However, the traditional financial statement provides management with only a look at a firm's past performance. Although there is an increasing agreement that the firm's true value exists far beyond the figures on the traditional financial statements, management is still likely or forced to use these accounting figures for future strategic decisions. And all management can do is to look at the performance of tangible assets used by the firm in the past and hope this provides satisfactory information about whether a firm will perform well in the future. Therefore, there has been increasing demands by stakeholders for the ways to complement

the traditional financial reporting system.

This increasingly growing interest in intangibles and demand for complementary ways to the traditional financial system, as discussed so far, has stimulated both researchers and practitioners to search for the new methods to measure, manage, and value a firm's intangibles. From the mid 1990s, many researchers, primarily from the intellectual capital community, have proposed many new approaches to categorize, measure, and manage intangibles (Andriessen, 2004; Bontis, 1998; Brooking, 1996; Choong, 2008; Diefenbach, 2006; Edvinsson & Malone, 1997; Kaplan & Norton, 1996; Lev, 2001; Marr, 2004; Roos, Edvinsson, & Roos, 1998; Stewart, 1997; Sullivan, 2000). Both academic and practitioners alike have continued to study intangible resources primarily in terms of performance measurement or valuation, such as how to measure intangibles, how to manage them effectively and efficiently, and how to reflect their true value in financial statements. One of the most widely known approaches is the 'Balanced Scorecard' as a strategic performance management tool which is designed to measure a firm's non-financial (or intangible) performance complementing financial statements(Kaplan & Norton, 1996). While the concept of intangibles has received much attention for more than a decade, there is a lack of consensus in the terminology, classification, and components of intangible resources. There appears to be wider difference in motives (why) and methods (how) for measuring or valuing intangibles (Andriessen, 2004).

Many scholars have tried to identify dimensions and components of intangible assets because the identification of them helps to improve our understanding of what an intangible asset is, and also enables us to apply the concept at a strategic and even operational level (Roos, Edvinsson, et al., 1998). A diversity of ways for the dimensions of intangible assets has been proposed, ranging from two to six dimensions. The most widely accepted approach is a three way distinction: human-centric intangible assets (=human capital), organization-centric intangible assets (=organizational capital or structural capital), and relation-centric capital (=customer capital) (Bontis, 1998; O'Donnell, O'Regan, & Coates, 2000; Roos, Edvinsson, et al., 1998; Saint-Onge, 1996; Stewart, 1997; Sveiby, 1997). Human capital is the firm- or industry-specific knowledge imbedded in an employee

that can be used (but not owned) by the firm in the process of value creation (Dooley, 2000). It refers to the knowledge, skills, abilities, experience, and other attributes of the firm's human resources. Relational capital is considered as the nature of the organization's relationships with all its important stakeholders (Marr & Adams, 2004). In addition to the relationship with customers, it includes all relationships with constituent groups, such as strategic alliances, business partnerships, collaborative relationships, and industry associations which help reinforce the firm's reputation and industry position (Lev, 2001). Relational capital has been called in different terms, external structure (Sveiby, 1997), customer capital (Stewart, 1997), or market capital (Brooking, 1996). Finally, organizational capital (or structural capital) which is this study's main theme refers to the learning and knowledge enacted in day-to-day activities (Kong, 2007). The fundamental core of organizational capital is the stack of knowledge that remains in an organization at the end of the day after individuals within the organization have left (Grasenick & Low, 2004; Roos & Roos, 1997). It indicates all of the non-human repositories of knowledge in organizations – such as databases, process manuals, strategies, routines, organizational culture, publications and copyrights – which is expected to create value for organizations, thus adding to the organizations' material value (Bontis, Keow, & Richardson, 2000; Ordonez de Pablos, 2004).

While the concept of human capital and customer capital has been relatively widely examined in the areas of human resources management and marketing management, the concept of organizational capital remains under-examined and heterogeneous in terms of its primary components (Carmona-Lavado, Cuevas-Rodríguez, & Cabello-Medina, 2010). Additionally, there has been little effort made in the hospitality industry. The essential thrust of all intangible asset management and valuation models is to identify key intangible resources and establish their measurement. Therefore, the objective of this research is to identify the key intangible value resources of organizational capital and develop their measurements as a prerequisite for financial valuation of intangible value resources in the hospitality industry, more specifically, focusing on the casual dining restaurant industry. Thus, following research questions are established as follows:

- *What are the key intangible value resources of organizational capital in the context of casual dining restaurant industry?*

- *How can the key intangible value resources of organizational capital in the context of casual dining restaurant industry be measured?*

- *How can a firm's overall organizational capital be measured and compared with those of the other firms in the same industry?*

Context of Study – Casual Dining Restaurant Industry in Korea

It has been generally agreed among researchers that goods and services differ significantly in terms of four characteristics: intangibility, heterogeneity, perishability, and simultaneity (of production and consumption). In terms of these differences, it is likely that service industry constituents such as restaurants or lodging companies have to pay more attention to different intangible value resources from those of manufacturing companies. Different industries have different foci of value generation. However, most studies have been conducted in the context of manufacturing or high-technology industries. In services, contrary to the manufacturing industries, much of the value generation and transfer occurs at the interface between the consumer and the service provider (Namasivayam & Denizci, 2006).

The values of restaurant firms are very much dependent on their intangible assets, such as, brand power, human capital, franchise system, and reservation system etc. It can be argued that those unique characteristics of hospitality firms, to some extent, enable non-financial information to be more value-relevant than financial performance information. As casual dining restaurant companies are likely to view their employees as strategic human capital which possesses intangibles assets (knowledge, experience, skill, etc) that are valuable to the firm (Murphy, 2006; Murphy & Williams, 2010). The restaurant industry is characterized with high turnover and low retention of employees which cost the industry

billions for replacement costs, lost productivity, failure of quality service, employee know-how and experience (Pine, 2000).

The essential thrust of all intangible asset management and valuation models is to identify key intangible resources and establish their measurement. Given the extensive importance of intangible value resources and different foci of value creation process in the service industry, it is critical to understand what intangible resources exist, how they measured and managed, how much do they contribute on a firm's value, etc in the context of hospitality industry. However, there have been few studies done within the context of the hospitality industry.

The Korean food service industry has been expanding greatly since 1980s along with national economic development. As of 2008, about 530,000 restaurants were doing business in Korea reaching a ratio of almost 91 people per restaurant, which indicates a much higher saturation in comparison to those of USA (319 people a restaurant as of 2008) and Japan (174 people a restaurant as of 2004) (see Table 1.1). The expansion of food service industry was accelerated with the entry of multinational food service companies into the market.

<Table 1.1> Restaurants in Korea, USA, and Japan

	Korea (Year 2008)	USA (Year 2008)	Japan (Year 2004)
GNP ($)	19,690	46,040	37,670
Population (#)	48,000,000	300,000,000	127,000,000
Restaurants (#)	530,000	940,000	730,000
People per Restaurant	91	319	174

Source: Kim (2009)

Multinational fast-food restaurant companies started to rush into the Korean food service market in the early 1980s: Burger King (1980), KFC (1984), Pizza Hut (1985), McDonalds (1986), Hardees (1990), and Popeyes (1993). In the 1990s, with the rapid advancement of the standard of living in Korea, many multinational casual-dining

restaurant companies entered the Korean food service market: Cocos (1986), TGI Fridays (1991), Sizzler (1993), Bennigan's (1995), Marche (1996), and Outback Steakhouse (1997). With the change of life style to family-orientation and western-stylish food life, since 2000, the casual dining restaurant market segment has shown a clear increasing trend more than any other segment (Park, 2006).

However, the rapidly increased number of restaurants by both multinational franchising brands and local brands has intensified competition in a saturated market. As a result, it becomes more important for a restaurant firm to survive out of this fierce competition and maintain competitive advantage. They must increasingly rely upon intangible assets. Competitive advantage has been attributed to the importance of unique firm resources or core competencies (Prahalad, 1990), the causal ambiguity making firms difficult to imitate (Lippman & Rumelt, 1982), or distinctive competence (Hitt & Ireland, 1985). The intangible resources are valuable, scarce, imperfectly imitable and non-substitutable (Barney, 1991). Therefore, this study focuses on identifying the intangible value drivers, especially organization-centric ones, and developing their measurement in the context of casual dining restaurant industry in Korea.

Theoretical Frames

<*Intangibles in Co-alignment Theory*>

According to Olsen et al (Olsen, West, & Tse, 2008), "the concept of strategic management refers to the ability of the management of the firm to properly align the firm with the forces driving changes in the environment in which the firm competes". For this alignment, management of the firm must discover and invest in competitive methods that can generate the greatest overall financial value to the firm. After scanning of the environment and selection of competitive methods, management must create a firm structure which can facilitate consistent allocation of resources to the competitive methods that can generate the greatest value to the firm. To achieve this successfully, management has to develop a set of core competencies. According to Olsen, et al.(2008), "the greater the

integration among core competencies and competitive methods, the greater the likelihood that the firm can achieve competitive advantages that are not easily copied by other firms". The concept of core competencies in the co-alignment model provides a tool to identify intangible resources, distinguishes which ones are really important, and help understand their combined synergies.

A core competency is considered to be composed of a stack of various types of intangible resources. Hamel and Prahalad (1994) define a core competence as "a bundle of skills and technologies that enables a company to provide a particular benefit to customers" (p. 199). On the other hand, tangible assets, such as properties or capital, support the core competencies, but do not constitute the critical part of them (Andriessen, Frijlink, Van Gisbergen, & Blom, 1999). The ability to distinguish core from noncore enables us to identify those intangible resources that are of strategic importance for companies. These strategically important intangibles will somehow be part of core competencies. Andriessen (2004) argued that the weightless wealth of companies is composed of a diversity of intangible resources. However, it is not enough for management to merely list all its intangible resources. Management should develop the ability to distinguish between strategically relevant and irrelevant intangible resources. The relevant intangible resources, referred to as core competencies in the co-alignment model, are those resources that can be integrated well with competitive methods and that can generate substantial additional value to the firm. Roos et al (1998, p. 25) also insisted that intellectual capital is much broader in scope than core competencies. While core competencies are certainly part of intellectual capital, they are more restricted in their focus than is intellectual capital. The differentiation of the core versus non-core competencies is dependent on a firm's strategy and left to its management. And non-core intangible assets or competencies also need to be managed.

Olsen, et al. (2008) assert that, in the hospitality industry, each competitive method should be properly implemented and executed at the point of transaction between the customer and the firm which is referred to as the exchange process where all the products and services are directly presented to the customer by a customer contact employee. To accomplish this successfully, the firm must establish a bundle of core

competencies. These core competencies must receive the bulk of the firm's resources. And peripheral competencies support the continuing development and maintenance of the core competencies. Leonard-Barton (1995) suggests that core capabilities, as bodies of knowledge, are composed of four interdependent dimensions; employees' skill and knowledge, firms' physical systems (technologies & technical systems), managerial systems, and values and norms of behavior. Physical systems provide a firm with dynamic knowledge reservoirs. Managerial systems construct the channels through which knowledge is accessed and flows. Values and norms of behavior serve as control mechanisms and knowledge-screening. All firms must innovate on these core capabilities to keep a competitive advantage. However, these capabilities can operate as "core rigidities" if they are not constantly assessed and innovated. Management must design core capabilities as evolving, organic reservoirs.

<Intangible Assets>

There are a number of definitions of intangible assets, intangible resources, intellectual capital, and knowledge assets. In general, these definitions tend to be very broad and focus on the intangible aspect of corresponding assets. According to the *Longman's Dictionary of Contemporary English*, the term 'intangible' is described as "which is hidden or not material, but known to be real," "which by its nature cannot be known by the senses, though it can be felt", and "which is difficult to understand". Researchers described it using the following words, "not have a physical or financial embodiment (Lev, 2001), "non-physical features" (Blair & Wallman, 2001), "the personal asset of individuals and a combination of genetic inheritance" (Hudson, 1993) or "knowledge, experience, expertise, and associated soft assets" (Klein, 1998)".

The accounting, valuation and performance measurement communities use the term 'intangible assets'. The management and legal communities primarily use the term 'intellectual capital'. The human resource community uses the terms 'human capital or human assets'. Some other communities use 'know-how capital or knowledge-based assets'. The terms intangible assets, knowledge assets, and intellectual capital will be used

interchangeably throughout the research.

When it comes to the dimensionality of intangible assets, there is disagreement among researchers. Many scholars have tried to identify components and dimensions of intangible assets because the identification of them helps to improve our understanding of what an intangible asset is, and also enables us to take the concept down to a strategic and even operational level (Roos, Roos, et al., 1998). The number of dimensions typically proposed in the literature has ranged from two to four. The variation is due to categorization of the assets that comprise intangible assets. These assets include human capital (human-resources-centric intangible assets), organizational capital (organization-centric intangible assets), and customer capital (relationship with external stakeholders, such as customers and suppliers).

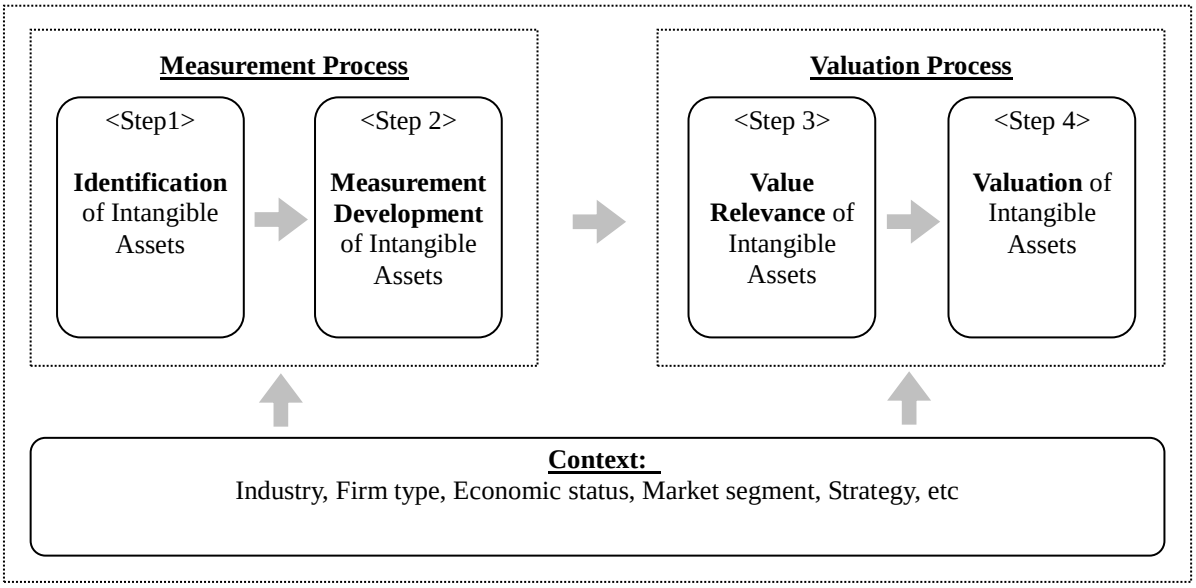
Human capital is referred as the individual knowledge stock of an organization as represented by its employees (Bontis, 2001). Roos et al. (1997) argue that employees generate intellectual capital through their competence, their attitude, and their intellectual agility. Customer capital is the knowledge embedded in the marketing channel and customer relationships that an organization develops through the course of conducting business (Bontis, 1999). Organizational capital is defined as "what remains in the company when employees go home for the night" (Roos & Roos, 1997, p. 42). Organizational capital arises from processes and organizational value, reflecting the external and internal focuses of the company, plus renewal and development value for the future (Bontis, et al., 2000).

<Intangible Assets Management System>

Measurement or valuation methods were grouped into one of four methods; financial valuation method, value measurement method, value assessment method, and measurement method. Andriessen and Tissen (2000) argued that they are differentiated into two broader categories, valuation method and measurement method. For valuation method, implicit and explicit criteria or yardsticks for usefulness or desirability should be created. Rescher (1969) describes valuation as "a comparative assessment or measurement of something with respect to its embodiment of a certain value". Using money as the

denominator of value is advantageous because it creates a value scale at the ratio level that allows for mathematical transformations. A measurement method is not a method for valuation, yet this type of method is often used within the intellectual capital community. Many of the measurement methods use indicators to pinpoint areas of attention. Many of these indicators are similar to those used for measuring production or quality levels. As such, many of the measurement methods result in tools for internal management rather than for external reporting.

<Figure 1.1> Intangible Assets Management System



For successful management of intangible assets, both measurement and valuation methods should be taken into consideration together. Therefore, 'Intangible Assets Management System' of <Figure 1.1> is suggested for this study. First of all, companies should identify their intangible assets which are considered to be important for business and develop appropriate measurements for the respective intangible value attributes. The market value of intangible assets varies according to contextual factors, such as industry, economic status, market conditions, type of industries and so on. Therefore, the valuation process made at some specific point of time should take into consideration the contextual factors. In the process of valuation, it is important to understand and define the

context for intangible assets to improve the understanding of the potential value of intangible assets to the organization. Marr (2006, p. 46) asserted that even though most organizations possess a wide stock of intangible resources, not all of those are critical value drivers. The reason for this is that the value of resources is context specific and that resources are not just static – they dynamically interact with each other to be transformed into capabilities and core competencies (Marr, 2006, p. 46). For the successful valuation, companies should also confirm the value-relevance of intangible assets.

This study is limited in the measurement process, step 1 (identification of components for intangible assets) and step 2 (measurement development for intangible assets) in <Figure 2.14>. The first stage is processed to establish the salient dimensions of organization capital and identify industry-specific contexts for each respective dimension. The focus of the second step is deriving consensus among industry professionals and academics on the industry-specific contexts identified to measure organizational capital and the optimal measurement indicators developed based on these industry-specific contexts.

This study does focus on the development of objective measurement indicators, not subjective perceptual measurement items which are generally used. These measurement indicators are developed taking primarily three criteria into consideration: cost, quality, and time (Kaplan & Norton, 1996). The objective measurement indicators enable a firm to measure and manage intangible value resources more precisely and efficiently. In addition, objective measurement indicators are more applicable across time and easier to be monitored by stakeholders, such as CEO, investors, owners, or customers.

Additionally, this study focused on the development of index equation, called as ‘Organizational Capital Index (OCI)’, to help a firm’s internal management and to enable a firm to compare its organizational capital more effectively with those of the other firms in the same industry. It can provide a more reliable, more comprehensive way of evaluating a firm's organization-centric intangible capital. This kind of index serves as a yardstick when computing the impact of intangible value resources or testing their contribution on a firm’s market value (Kalafut & Low, 2001).

<Definition of Constructs>

The definition of primary constructs is provided as follows,

- *Intangible assets*: It is defined as "non-physical factors that contribute to, or are used in, the production of goods or provision of services or that are expected to generate future productive benefits for individuals or firms that control the use of those factors" (Blair & Wallman, 2001, p. 9).
- *Intellectual capital*: It is defined as "a firm's knowledge, experience, expertise, and associated soft assets, rather than their hard physical and financial capital that increasingly determines their competitive positions" (Klein, 1998, p. 246)
- *Human capital (or Human resources-centric intangible assets)*: It is simply refers to individual employee's knowledge, skills, and abilities (Becker, 1964; Schultz, 1961).
- *Organizational capital (or Organization-centric intangible assets)*: It represents institutionalized knowledge and codified experience stored in databases, routines, patents, manuals, structures, and the like (Hall, 1992; Itami & Roehl, 1987; Walsh & Ungson, 1991).
- *Relational capital (or Relation-centric intangible assets)*: It is considered as the nature of the organization's relationships with all its important stakeholders, such as customers, suppliers, strategic alliances, shareholders, etc (Marr & Adams, 2004).
- *Innovation*: It is defined as the creation of new knowledge and ideas to facilitate new business outcomes, aimed at improving internal business processes and structures and to create market driven products and services (Du Plessis, 2007).
- *Organizational Process*: It is defined as patterns of interaction, coordination, communication, and decision making that an organization uses to transform resources into customer value (Afuah, 2004).
- *Organizational Culture:* It is defined as patterns of shared values and beliefs over time which produce behavioral norms that are adopted in solving problems (Owens, 1987; Schein, 1990).
- *Organizational learning*: It is defined as ''a continuous testing of experience and its transformation into knowledge available to whole organization and relevant to their mission" (Senge, 1990, p. 6).

- *Information system*: It is an integrated and cooperating set of software directed information technologies supporting individual, group, organizational, or societal goals (Rainer, Turban, & Potter, 2007, p. 9; Watson, Boudreau, Chen, & Huber, 2008).
- *Intellectual property*: Intellectual property is referred to as the sum of knowledge assets such as patents, copyrights, trademarks, brands, registered design, trade secrets and processes whose ownership is granted to the company by law (Brooking, 1999, p. 48; Marr, 2006; Roos, Roos, et al., 1998).
- *Market value*: The market value in this research is defined as the market price of the stock times the number of shares outstanding (Chen, Ho, Hsiao, & Wu, 2010; Lee, Liu, & Zhu, 2008; Mackey, Mackey, & Barney, 2007; Meoli, Paleari, & Urga, 2008)

Methodology Summary

<Unit of Analysis & Research Boundary>

Even though the Delphi survey employed for this study was administered to individual professional practitioners, the unit of analysis for this study was an individual firm. This study investigated what intangible value resources of organizational capital at a firm's level are considered to significantly contribute to a firm's sustainable competitive advantage and create firm value in the casual dining restaurant industry.

Based on the discussion of Bacharach (1989) and Dubin (1969), this study's spatial and temporal boundaries are constrained to the current casual dining industry in Korea. Except multi-national casual dining restaurant brands (such as, TGI Fridays, Bennigan's, or Outback Steakhouse), most Korean local casual dining restaurant brands in Korea are small sized. Accordingly, the restaurant firms chosen for this study are local casual dining restaurant firms operating and/or managing at least five units as well as all multi-national dining restaurant brands doing business in Korea.

<Research Process>

This study was administered following the four stages of process: identification

of organization-centric intangible value drivers, questionnaire development for the 1st Delphi survey, three rounds of Delphi surveys, and analysis of survey results.

First of all, it was required to identify what specific value drivers were considered to be critical in terms of organization-centric intangible assets. With the focus on knowledge management or intellectual capital, an in-depth literature review of a variety of areas, such as strategic management, human resources management, industrial engineering, accounting, finance, etc, provided six key organization-centric intangible value drivers: innovation, organizational process, organizational culture, organizational learning, information system, and intellectual property.

Secondly, a list of measurement indicators for these intangible value drivers was initially developed based on a number of relevant empirical studies. Then, specific measurement items needed for the first round of the Delphi survey were decided through filtering and modifying by interviews with five professional practitioners. Before moving to the Delphi surveys, a pilot test with ten different panelists was administered to refine and test the final instrument.

Thirdly, the Delphi surveys were administered to casual dining restaurant practitioners, such as company executives, consultants, managerial level experts. Three rounds of iterations are expected to drive consensus on which intangible value drivers in terms of organization are critical for a firm's sustainable success and what items are optimal for their measurement. At each round, panels were asked to score how important each intangible value driver was for a firm's success and how appropriate each measurement item for the relevant intangible value driver.

Finally, in addition to the analysis at each round of survey, in-depth analysis and discussion over the driven consensus from survey participants were provided.

<The Delphi Research Method>

The Delphi method has been regarded as a procedure to "obtain the most reliable consensus of opinion of a group of experts… by a series of intensive questionnaires interspersed with controlled opinion feedback" (Dalkey & Helmer, 1963). For the Delphi

method, a group of experts are employed to investigate a problem or an important issue anonymously, without knowledge about who the other members are and without a direct interaction among the panel members (Dalkey & Helmer, 1963). In particular, it is intended to allow the Delphi survey participants to assess the positive attributes of interacting groups (knowledge from a variety of sources, creative synthesis etc.), while pre-empting their negative aspects (attributable to social, personal and political conflicts, etc) (Rowe & Wright, 1999).

<Selection of Expert Panels>

For the best results in a Delphi study, the mixture of participants is considered critical to the process (Jones & Twiss, 1978). The expert group can consist of practitioners, academics and even outside industry experts to achieve the greatest breadth of results and agreement between scholars and industry leaders. The participants for this study were obtained from the population of the restaurant industry in Korea, focusing on the casual dining restaurant market segment. This helped control for compounding effects of country, industry, and market segment environments. In addition, a wide range of restaurant industry experts were recruited, which included high-level company managers, executives, academics, or consultants.

<***Number of Panelist*** >

It is recommended that the researcher should use a controllable number of experts in the Delphi panel since the technique is a labor-intensive and time-consuming research method. Even though there is no clear standard for the best number of panelists, a group ranging from ten to thirty experts is expected to accomplish the desired results (Delbecq, Van de Ven, & Gustafson, 1975). Even though there is no guideline to specify the optimal number of panel members to use, it is recommended to include more group members in order to compensate for those who may drop out between rounds. In addition, the larger the number of group members, the greater the information load. Thus, it is critical to involve enough number of participants. For this Delphi study, about 50 panel members of

high-level company managers, executives, academics, or consultants were included at the initial point.

<Number of Rounds >

Other important concerns related to the Delphi method are the optimal number of rounds. Researchers are advised to pay attention to what happens between rounds of the Delphi study, following up whether the experts change their opinion to agree with the other majority or whether agreement occurs constructively as a result of experts refining their opinion. For this study, all participating panel members were requested to respond to three rounds of surveys. The Delphi surveys were completely anonymous. Although panel members were not known to each other in this study, the participants knew that they were restaurant industry experts.

Contribution of Study

There have been few studies on organization-centric intangible assets in the hospitality industry. This systematic measurement framework for the entire organization-centric intellectual capital of an organization contributes to the intellectual capital literature.

The findings from this study will provide foundations for further studies. Above all, unlike using subjective perceptual measurement scales, the measured values using the objective measurement scales are consistent regardless of time or people. Therefore, the financial value (or contribution) of each of the six organizational capitals can be estimated more precisely along with the data of firms' market value.

Management has recognized that intangible resources drive the value of a firm and the pertinent investment in them leads to higher productivity and competitiveness. The measurement framework for organization-centric intellectual capital enables a firm to manage intangible value resources more precisely and efficiently.

CHAPTER 2: LITERATURE REVIEW

The present study aims to identify the key intangible value drivers as the components of organization-centric intangible assets (organizational capital) and their measurements in the context of the casual dining restaurant industry in Korea. This chapter reviews and synthesizes previous literature focusing on firms' intangible value attributes across the industries. This chapter is organized as follows: (1) an introduction of assorted definitions with regard to intangible assets; (2) an overview of intangible assets from the resource-based view; (3) intangible assets as firms' core competencies in the co-alignment theory; (4) an introduction of the categorizing dimensions of intangible assets along with research of primary scholars; (5) a measurement of intangible value attributes used across the industries; (6) the intangible assets management system proposed in this study; and (7) a synthesis and summary of the literature review.

Many researchers have used different terms in place of 'intangible assets'. According to Lev (2001), those different terms are widely used interchangeably: 'intangible assets' in the accounting literature, 'knowledge assets' by economists, and 'intellectual capital' in the management and legal literature. They refer essentially to the same thing: a nonphysical claim to future benefits. Throughout this research, intangible assets, intellectual capital, knowledge assets, and weightless wealth were used interchangeably.

Definitions of Intangible Assets

There are a number of definitions of intangible assets, intellectual capital, and knowledge assets. These definitions are listed in <Table 2.1> below. In general, these definitions tend to be very broad and focus on the intangible aspect of corresponding assets.

<Table 2.1 > Definitions of Intangible Assets

Reference	Definition
Lev (2001, p. 5)	Intangible asset is "a claim to future benefits that does not have a physical or financial (a stock or a bond) embodiment. In other words, Intangible assets are nonphysical sources of value (claims to future benefits) generated by innovation (discovery), unique organizational designs, or human source practices. Intangibles often interact with tangible and financial assets to create corporate value and economic growth."
Sveiby (1997, p. 10)	Intangible asset are "classified as employee competence, internal structure, and external structure."
Daum (2003, p. 16)	Intangible asset is "everything that is not physical or investment, but is of value to the company. Typically they are long term, and just as typically they cannot be accurately valued until the company is sold, being then converted to and lumped under the title 'good will', which is calculated as the difference between purchase price and book value."
Klein (1998, p. 246)	Intellectual capital is "a firm's knowledge, experience, expertise, and associated soft assets, rather than their hard physical and financial capital that increasingly determines their competitive positions."
Edvinsson & Malone (1997, p. 34)	Intellectual capital is the "possession of knowledge, applied experience, organizational technology, customer relationships and professional skills that provide a competitive edge in the market."
Roos, Edvinsson, & Roos (1998)	Intellectual capital is "all the processes and the assets which are not normally shown on the balance sheet, as well as all the intangible assets which modern accounting methods consider (mainly trademarks, patents and brands.)"
Stewart (1997)	Intellectual capital is "the sum of everything everybody in a company knows that gives it a competitive edge."
Brooking (1996, p. 16)	Intellectual capital is "the term given to the combined intangible assets which enable the company to function."
Youndt (1998)	Intellectual capital is "the aggregate stocks and flows of its potentially useful skills, knowledge and information."
Bontis (1996)	Intellectual capital is elusive, but once it is discovered and exploited, it may provide an organization with a new resource-base from which to compete and win.
Sullivan (2000, p. 4)	Intellectual capital brings to the foreground the brainpower assets of the organization, recognizing them as having a degree of importance comparable to the traditional land, labor, and tangible assets.
Blair & Wallman (2001, p. 9)	Intangibles are defined as "non-physical factors that contribute to, or are used in, the production of goods or provision of services or that are expected to generate future productive benefits for individuals or firms that control the use of those factors."

From the variety of definitions presented in <Table 2.1>, it is found that each definition has focused primarily on the intangible characteristics, dimensions of intangible assets, or potential of future value generation. According to *Longman's Dictionary of Contemporary English*, the term 'intangible' is described as that "which is hidden or not material, but known to be real"; that "which by its nature cannot be known by the senses, though it can be felt"; and that "which is difficult to understand". Researchers have described it to "not have a physical or financial embodiment (Lev, 2001); as having "non-physical features" (Blair & Wallman, 2001); being "the personal asset of individuals and a combination of genetic inheritance" (Hudson, 1993); or as "knowledge, experience, expertise, and associated soft assets" (Klein, 1998). When it comes to the dimensionality of intangible assets, there is disagreement among researchers. The number of dimensions typically proposed in the literature has ranged from two to four. This variation is due to the categorization of the assets that comprise intangible assets. These assets include human capital, intellectual property, structural capital (organizational structure, information systems, etc.), and relationships with external stakeholders. With regard to the potential of future value generation, most researchers emphasized the contribution of intangible assets on a firm's competitive advantage. For example, they are "expected to generate future productive benefits for individuals or companies" (Blair & Wallman, 2001); it "gives it a competitive edge" (Stewart, 1997); and they "provide an organization with a new resource-base from which to compete and win" (Bontis, 1996) or "a claim to future benefits" (Lev, 2001).

The accounting, valuation and performance measurement communities use the term 'intangible assets'. The management and legal communities primarily use the term 'intellectual capital'. The human resource community uses the terms 'human capital' or 'human assets'. Some other communities use 'know-how capital' or 'knowledge-based assets'. As mentioned early in this chapter, the terms intangible assets, knowledge assets, and intellectual capital will be used interchangeably throughout the research.

Intangible Assets in the Resource-Based View

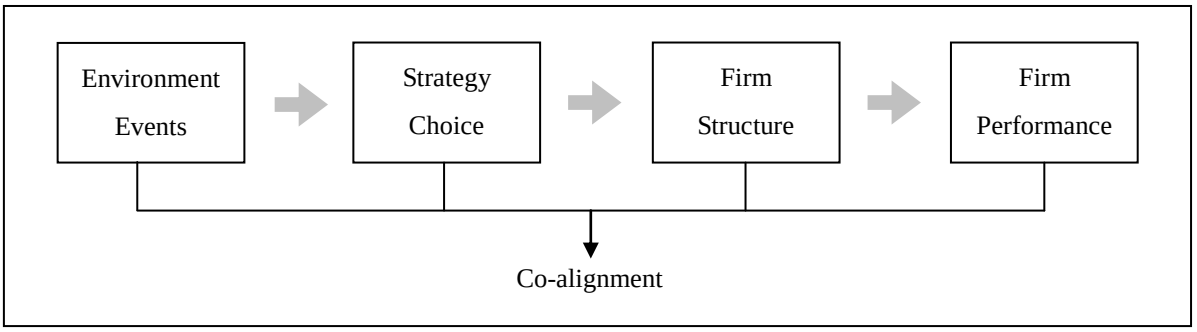
In today's economy, it is widely accepted that the growth and wealth of a firm is driven primarily by a firm's intangible assets, and there has been a considerable amount of research about a firm's intangible assets. However, until the 1980s, management theory concentrated on a firm's environment as the basis for understanding its competitive advantage (Roos & Roos, 1997). According to the resource-based view, by contrast, firms are described as "heterogeneous bundles of idiosyncratic endowments of assets and capabilities whose characteristics predicate firm success" (Barney, 1991; Conner, 1991; Wernerfelt, 1984). The resource-based view attributes a firm's success on the accumulation of rare, valuable, and non-imitable inputs for production and distribution (Conner, 1991) at a lower cost than the rents these resources will produce (Peteraf, 1993). A firm's success may be the result of luck or of foresight in acquiring undervalued resources through a firm's better understanding of its own existing capabilities (Barney, 1986). Yet, the accumulation of undervalued assets is not enough; the firm must also be able to appropriate the resultant rents accruing to such valuable resources.

The most critical components of a firm's resource endowment are not tangible, such as physical or financial assets, but intangible, and those intangible resources are valuable, scarce, imperfectly imitable, and non-substitutable (Barney, 1986). Itami and Roehl (1987) argued that these intangible assets are the most critical resource in a firm's production processes. According to the resource-based view, competitive advantage has been attributed to the importance of unique firm resources or core competencies (Prahalad, 1990), to a causal ambiguity that makes a firm difficult to imitate (Lippman & Rumelt, 1982), or to distinctive competence (Hitt & Ireland, 1985). Barney (1991) further explained sustainable competitive advantage as occurring through a firm's resources that were rare, valuable, imperfectly imitable, and non-substitutable. Lev (2001) also argued that the sound deployment of intangibles along with other types of assets results in abnormal profits, dominant competitive positions, and sometimes even temporary monopolies.

Intangible Assets in Co-alignment Theory

According to Olsen et al. (2008), "the concept of strategic management refers to the ability of the management of the firm to properly align the firm with the forces driving changes in the environment in which the firm competes." For this alignment, the management of the firm must discover and invest in competitive methods that can generate the greatest overall financial value to the firm. Then, management must form a firm structure that can consistently allocate resources to these competitive methods.

<Figure 2.1> The Co-alignment Model



As shown in Figure 2.1, when the management of a firm is able to identify opportunities that exist in the business environment that are filled with forces driving change (Environment Events), that generate competitive methods that facilitate the firm to achieve competitive advantage through these opportunities (Strategy Choice), and that assign appropriate resources to the competitive methods that will create the best value over time (Firm Structure), the firm will have a much greater chance to achieve the desired financial results (Firm performance). This relationship is referred to as the co-alignment model (Olsen, et al., 2008). After scanning the environment and selecting competitive methods, management must create a firm structure which can facilitate the consistent allocation of resources to the competitive methods that can generate the greatest value to the firm. To achieve this successfully, management has to develop a set of core competencies. According to (Olsen, et al., 2008, p. 260), "the greater the integration among core competencies and competitive methods, the greater the likelihood that the firm can

achieve competitive advantages that are not easily copied by other firms." The concept of core competencies in the co-alignment model provides a tool to identify intangible resources, distinguishes which ones are really important, and helps in understanding their combined synergies.

A core competence is considered to be composed of a stack of various types of intangible resources. Hamel and Prahalad (1994, p. 199) define core competence as "a bundle of skills and technologies that enables a company to provide a particular benefit to customers." On the other hand, tangible assets, such as properties or capital, support the core competencies, but do not constitute the critical part of them (Andriessen, Frijlink, Van Gisbergen, & Blom, 1999). The ability to distinguish core from noncore enables the identification of those intangible resources that are strategically important for companies. These strategically important intangibles will somehow be part of core competencies. In addition, Andriessen (2004) argued that the weightless wealth of companies is composed of the diversity of intangible resources.

However, it is not enough for a firm's management to merely list all its intangible resources; they should develop the ability to distinguish between strategically relevant and irrelevant intangible resources. The relevant intangible resources, referred to as core competencies in the co-alignment model, are those resources that can be well integrated with competitive methods and that can generate substantial additional value to the firm. Roos et al. (1998, p. 25) also insisted that intellectual capital is much broader in the scope than core competencies are. While core competencies are certainly part of intellectual capital, they are more restricted in their focus than is intellectual capital. The differentiation of the core versus non-core competencies is dependent on a firm's strategy and left to its management. Meanwhile, non-core invisible assets or competencies also need to be managed.

Olsen et al. (2008) assert that, in the hospitality industry, each competitive method should be properly implemented and executed at the point of transaction between the customer and the firm, which is referred to as the exchange process where all the products and services are directly presented to the customer by a customer contact

employee. To accomplish this successfully, the firm must establish a bundle of core competencies. These core competencies must receive the bulk of the firm's resources, and peripheral competencies support the continuing development and maintenance of the core competencies. Leonard-Barton (1995) suggests that core capabilities, as bodies of knowledge, are composed of four interdependent dimensions: employees' skills and knowledge, the firms' physical systems (technologies & technical systems), managerial systems, and values and norms of behavior. Physical systems provide a firm with dynamic knowledge reservoirs. Managerial systems construct the channels through which knowledge is accessed and flows. Values and norms of behavior serve as control mechanisms and knowledge-screening. All firms must innovate on these core capabilities to keep the competitive advantage. However, these capabilities can operate as "core rigidities" if they are not constantly assessed and innovated. Management must design core capabilities to be evolving, organic reservoirs.

Dimensions and Components of Intangible Assets

Many scholars have tried to identify components and dimensions of intangible assets because the identification of them helps to improve our understanding of what an intangible asset is, and it also enables us to take the concept down to a strategic and even operational level (Roos, et al., 1998). As shown in <Table 2.2>, many researchers have provided several dimensions of intangible assets, ranging from two to six dimensions. In the following section, each specific categorical model of intangible assets will be discussed respectively.

<Table 2.2> Dimensions of Intangible Assets

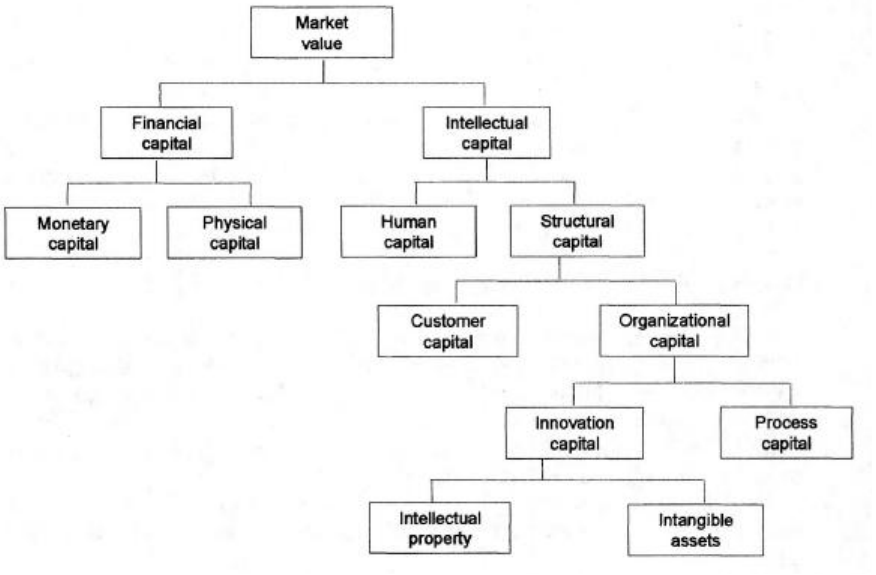
Researchers	Terms	# of Dimensions	Dimensions
Edvinsson & Malone (1997)	Intellectual Capital	Four dimensions	Human capital Customer capital Innovation capital Process capital
Roos, Edvinsson, & Roos (1998)	Intellectual Capital	Six dimensions	Human Capital Structural Capital

Lev (2001)	Intangible Assets	Three dimensions	Innovation-related intangibles Human resource intangibles Organizational intangibles
Brooking (1999)	Intellectual Capital	Four dimensions	Market assets Human-centered assets Intellectual property assets Infra-structure assets
Sveiby (1997)	Intangible Assets	Three dimensions	External structure Internal structure Individual competence
Bontis (1996)	Intellectual Capital	Three dimensions	Human capital Structural capital Relational capital
Sullivan (2000)	Intellectual Capital	Two dimensions	Human capital Intellectual assets
Andriessen & Tissen (2000)	Intangible Assets	Five dimensions	Assets and endowments Skills and tacit knowledge Primary and management processes Technology and explicit knowledge Collective values and norms
Stewart (1995)	Intellectual Capital	Three dimensions	Human capital Structural capital Customer capital
Kaplan & Norton (1994)			Internal business process perspective Learning & Growth perspective Customer perspective
Marr & Schiuma (2001)	Knowledge Assets	Six dimensions	Stakeholder resources Structural resources

Edvinsson (1997): Skandia Value Scheme

Skandia, an insurance and financial services company, concentrated on what people consider as intellectual capital and, in the model known as the 'Skandia Business Navigator', suggested four focus areas: human focus, customer focus, process focus, and renewal & development focus (Skandia, 1994). Edvinsson (1997) further developed the structure in the Skandia Value Scheme shown in above <Figure 2.2>. He posits that a firm's market value is generated by two different types of capital: financial capital and intellectual capital.

<Figure 2.2> Skandia Value Scheme



Source: Adapted from Edvinsson and Malone (1997)

Intellectual capital is further divided into human capital and structural capital. Human capital includes personal attributes such as knowledge, experience, and skills. Structural capital is defined as what remains in the company when the employees go home: trademarks, brands, written procedures for processes, and so on. Structural capital is again divided into customer and organizational capital, representing the external and internal focus, respectively, of structural capital. Organizational capital is composed of both organizational processes that apply existing knowledge to the creation of value for investors and customers, and innovations that produce new knowledge for value creation. Finally, innovation capital includes intellectual property (intellectual capital that is legally protected) and intangible assets (intellectual capital that may be quantified and disclosed in financial reports). The primary components suggested in each dimension of intellectual capital are shown in <Table 2.3>.

<Table 2.3> Dimensions and Components of Intellectual Capital by Edvinsson (1997)

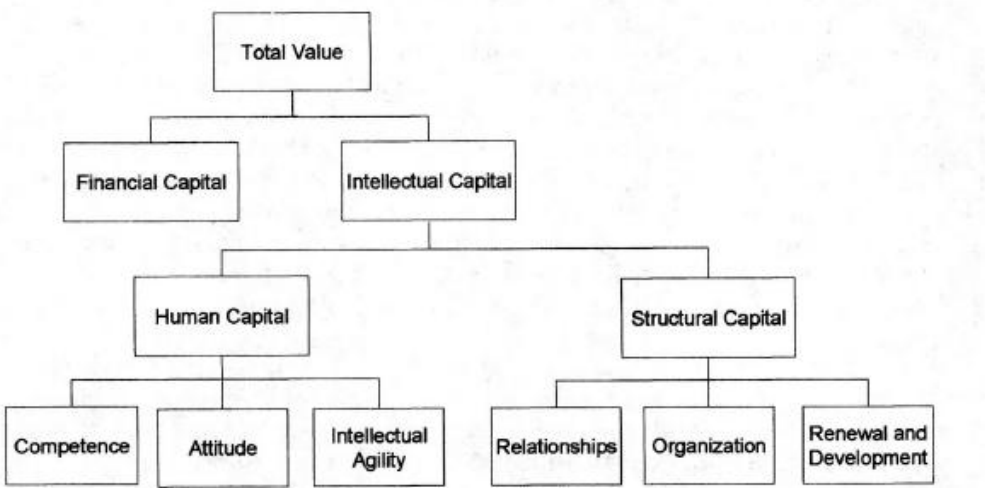
Categories	**Components**

Human Capital	Knowledge Skill Experience
Customer Capital	Relationships with customers, suppliers, and alliance partners Customer files
Innovation Capital (Intellectual property + Intangible assets)	Intellectual property Intangible assets in financial reports
Process Capital	Manuals Best practices Intranet resources Project libraries

Roos, Roos, Edvinson, & Dragonetti (1998): Intellectual Capital Distinction Tree

Roos et al. (1998) have further refined the 'Skandivia Value Scheme' to the framework of the 'Intellectual Capital Distinction Tree'. This framework involves a more detailed breakdown of human capital and structural capital, the two principal determinants of a firm's intellectual capital, as shown in <Figure 2.3>. They suggested that Intellectual capital is generated by a thinking part (the human capital) and a non-thinking part (the structural capital).

<Figure 2.3> Intellectual Capital Distinction Tree



Source: Adapted from Roos et al. (1998)

Human capital, which includes a wide range of individual factors, is divided into

three areas: competence, attitude, and intellectual agility. Competence contributes to value creation through the knowledge, skills, talents and know-how of employees. Attitude includes the value generated by the behavior of the employees and depends generally on personality characteristics. Intellectual agility covers the ability to shift knowledge from one context to another, the ability to link with common factors in two distinct pieces of information, and the ability to improve both knowledge and company performance through adaptation and innovation.

Structural capital can usually be owned by the company, as opposed to human capital that is owned by people. Structural capital is also divided into three areas – relationships, organization, and renewal & development – which together capture a wide range of variables at the organizational and market levels (e.g., customers, alliances, infrastructure, and culture). The relationships do not include single individuals inside the company, but the company as a whole. It includes the relationships with customers, suppliers, alliance partners, shareholders, and other stakeholders. The relationships are established through long-term exchanges of information and goods, not through spot transactions. This stronger effort will be rewarded as considerable cost-savings or higher quality output resulting from higher quality components. Organizational value includes all the physical and non-physical manifestations of intellectual capital in the context of internal structure or daily operations. Database, process manuals, invisible assets, culture, and management styles are all sources of organizational value. Also, organizational value is usually driven by the effort of a company to turn human capital into proprietary information and to share that information among all employees. Renewal & development covers the intangible side that can generate value in the future through an improvement of financial and intellectual capital. Thus, investments in new plants and machines are part of the renewal & development value when in the planning phase, but become financial assets when they are realized. The primary components and example indicators suggested in each dimension of intellectual capital are shown in <Table 2.4>.

<Table 2.4> Dimensions and Components of Intellectual Capital by Roos et al. (1998)

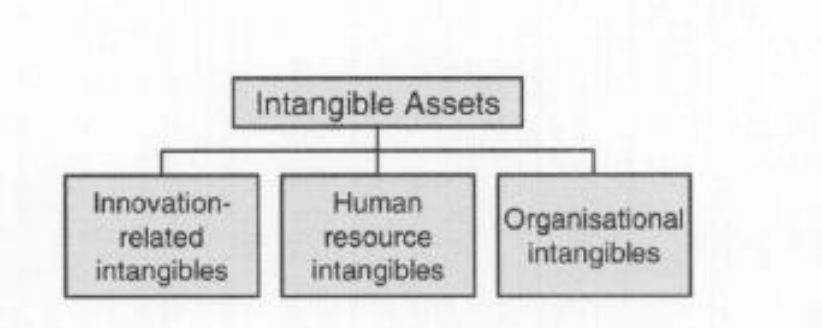
	Dimensions	Components	Examples of Indicators
Human Capital	Competence	Knowledge Skills	Percentage of company employees holding an advanced degree IT literacy Hours of training per employee Average duration of employment
	Attitude	Motivation Behavior Conduct	Hours spent in debriefing Hours spent by senior staff to explain strategy and actions Leadership index Motivation index
	Intellectual Agility	Innovation Imitation Adaptation Packaging	Savings from implemented suggestions of employees New solutions/products/processes suggested Background variety index (individual and group level) Company diversification index
Structural Capital	Relationships	Customers Suppliers Alliance partners Shareholders Other stakeholders	Percentage of supplier/customer business the company accounts for Length of relationship Partner satisfaction index Customer retention
	Organization	Infrastructure Processes Culture	Administrative expenses/total revenues Revenues from patents Processes completed without error Cycle/process time
	Renewal & Development	All the items that have been built or created and that will have an impact on future value	Percentage of business from new products Training efforts (both in expense per employee and hours per employee) Renewal expenses/operating expenses New patents filed

Lev (2001): The Ascendancy of Intangibles

Investors not only need to investigate a stock's current performance, but also are required to identify how this performance will develop during the time the investors want to keep the stock (Lev & Daum, 2004). However, the traditional information system, the published financial statements, only provides investors with limited information in regard to the future performance of a company. Lev (2001) has focused on the optimal use of information in investment decisions and recently has focused on intangible assets and intellectual capital, particularly their measurement, valuation, and reporting issues

concerning intangible investments. Lev (2001) argued that there are three major nexuses of intangibles, distinguished by their relation to the generator of the assets: innovation-related intangibles, human resource intangibles, and organizational intangibles. Intangible assets are viewed as nonphysical sources of value generated by innovation, unique organizational designs, or human resource practices.

<Figure 2.4> Intangible Assets



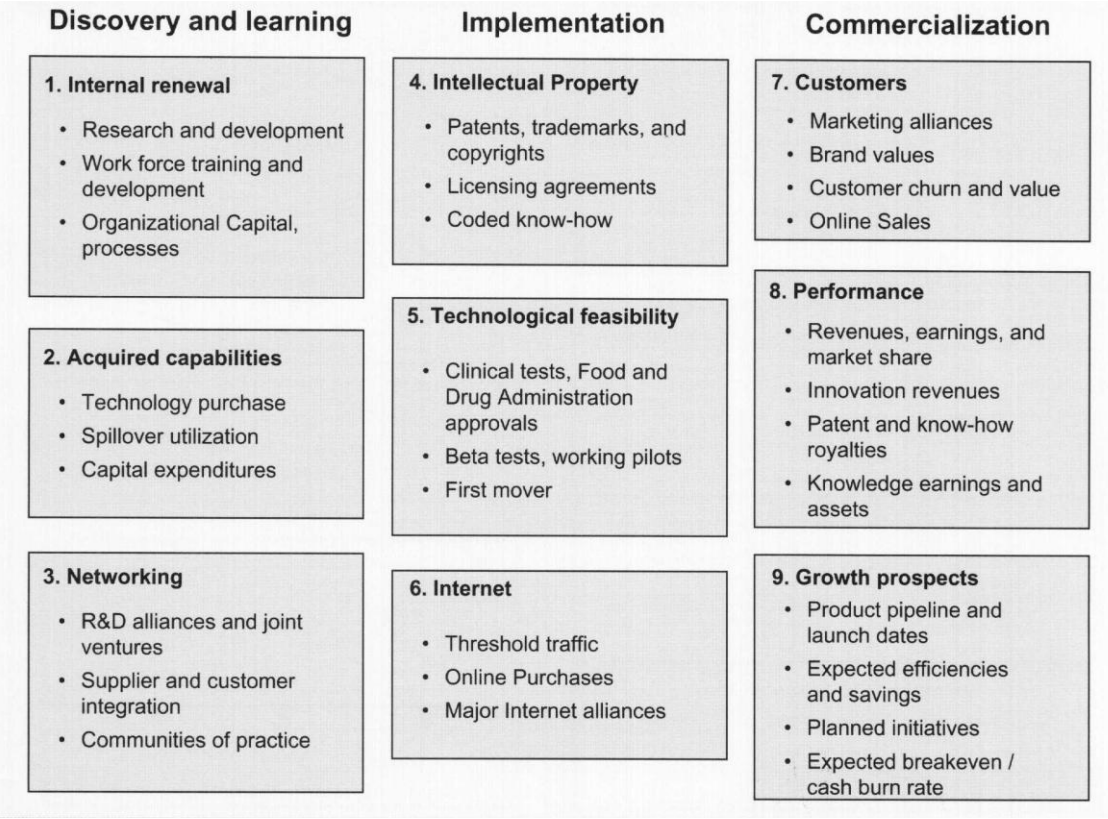
Source: Adapted from Lev (2001)

By providing the value chain model, called the 'Value Chain Blueprint', Lev (2001) argued that the fundamental economic process of innovation is vital to the survival and success of business enterprises. In addition, the economic process of innovation begins with the discovery of new products or services or processes, proceeds through the development stage of those discoveries and the implementation and establishment of technological feasibility, and concludes with the commercialization of the new products or services. Successful knowledge-based companies, operating in high-tech, science-based, internet and service sectors, but also in traditional industries, engage in systematic, carefully planned and executed processes of innovation (Daum, 2003). The 'Value Chain Blueprint', focuses on the lifeline of innovative and successful business enterprises, and is depicted in <Figure 2.5>.

The nine detailed information boxes of the figure above are aimed at providing a comprehensive and in-depth portrayal of the enterprise's capabilities and success in creating economic value. However, specific companies or industries are represented by a

subset of items. For example, information box 4 is irrelevant for companies without patents, and the Internet-related information in boxes 6 and 7 will be useless for companies without online activities.

<Figure 2.5> Value Chain Blueprint



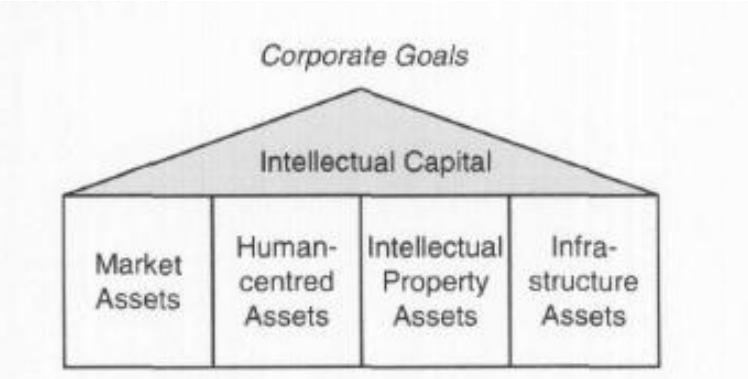
Source: Adapted from Lev (2001)

Brooking (1999): Corporate Memory

Brooking (1999) defined intellectual capital as the combined intangible assets which enable a company to function. Tangible assets are now outweighed by intangible assets in their importance for some organizations, especially service organizations and those that are information technology-oriented. Brooking et al. (1998) argue that the ownership of tangible assets, such as buildings, machinery, and plants, is only leveraged according to the nature and quality of intellectual capital in the organization. Brooking

(1999) showed, through the 'Intellectual Capital Method' developed to assist in strategic planning, how to identify key intangible value assets required to achieve corporate goals and determine their relative strength or weakness.

<Figure 2.6> Intellectual Capital by Brooking (1999)



Source: Adapted from Brooking (1999)

According to Brooking (1999), intellectual capital, as shown in the above figure, is split into four categories of intangible assets: market assets, human centered assets, infrastructure assets, and intellectual property asset. First, market assets are those which give a company a competitive advantage and power in the marketplace. They belong to a company and include brands, customer base, distribution channels, franchise agreements, and so on. Second, human-centered assets are the qualities which belong to people. Unlike the other assets, human-centered assets cannot be owned by the company. They include the collective expertise, creative and problem solving capability, leadership, and entrepreneurial and managerial skills possessed by the people in the organization. Third, intellectual property is the legal mechanism developed to protect corporate assets. They include patents, copyright, trademarks, design rights, and so on. Fourth, infrastructure assets represent a wide range of assets which enable the organization to function. They include management philosophy, corporate culture, management and business processes, financial relations, and so on. They are critical because they provide order, safety, correctness, and quality for the organization. They also enable the employees of the

organization to work and communicate with each other. The primary components of each categorical intangible asset are suggested in <Table 2.5>.

<Table 2.5> Dimensions and Components of Intellectual Capital by Brooking (1999)

Categories	Components
Market Assets	Service brands Product brands Corporate brands Champions Customs Evangelists Customer loyalty Repeat business Company name Backlog Distribution channels Business collaborations Franchise agreements Licensing agreements Favorable contracts
Human Centered Assets	Education Vocational qualifications Work related knowledge Occupational potential Personality Work related competencies
Infrastructure Assets	Management philosophy Corporate culture Management processes Information technology systems Financial relations Required standards
Intellectual Property Assets	Patents Copyright Design rights Semiconductor topography rights Trade secrets Trade marks Service marks

Sveiby (1997)

In a new economy where the most valuable assets are generated from

information, technology, expertise, and skill, the conventional financial reporting system is losing relevance (Sveiby, 1998). From a management information perspective, the critical issue is that the present standards can not reflect the real market value of the assets, therefore, they provide a skewed picture for a company which has no traditional assets. This will endanger all stakeholders in the high-technology industries and the industries where people are crucial for business success, such as knowledge companies and service companies (Sveiby, 1998). The invisible part of the conventional financial reporting system, that of intangible assets, is split into three categorical dimensions, as shown in the following figure: individual competence, internal structure, and external structure (Sveiby, 1997).

<Figure 2.7> Intangible Assets by Sveiby (1997)

Equity (Book value: Tangible assets minus visible debt)	Intangible Assets (Stock price premium)		
	External Structure (Brands, customer and supplier relations)	Internal Structure (The organization: management, legal structure, manual systems, attitudes, R&D, software)	Individual Competence (Education, experience)

Source: Adapted from Sveiby (1997, p. 12)

In Sveiby's (1997) discussion, people are viewed as the only true players in business. All tangible physical products and assets as well as the intangible relations are generated by human action and depend ultimately on people for their sustained existence. Sveiby (1997) suggests that people in an organization can make use of their competence to create value externally or internally. When the efforts of people are directed internally, they may create tangible assets such as machinery and tools and intangible assets such as better

processes and new designs for products (Sveiby, 1997, p. 9). When people direct their attention outwards, they can create, in addition to tangible things such as cars or soap, intangible structures such as customer relationships and new experiences (Sveiby, 2001).

First, the external structure represents the relationships with customers and suppliers. It also includes brand names, trademarks, and the company's reputation or image because some of those relationships can be improved through a company's legal properties. The value of such assets is primarily dependent on how well the company solves the problems with customers and suppliers. Second, people create an internal structure when they work internally. The internal structure encompasses patents, concepts, models, and computer and administrative systems. These are created by the employees and thus generally belong to the organization. This structure is relatively less dependent on employees and can remain in a company even though a large number of the employees leave. Sometimes they can be brought in from outside sources, such as through M&A. Decisions to develop or invest in such assets can be made with some degree of confidence. Third, individual competence represents the capacity of employees to create both tangible and intangible assets in a wide variety of situations. It is composed of the competence of all those who have direct contact with customers and whose work is within the business idea: the professional/technical staff, the experts, the R&D personnel, the factory workers, and sales and marketing personnel.

Sveiby (1997) also suggested three key measurement indicators for the intangibles assets: growth and renewal, efficiency, and stability. <Table 2.6> displays the components and measurement indicators in each categorical intangible asset, provided by Sveiby (1997).

<Table 2.6> Components and Indicators of Intellectual Capital by Sveiby (1997)

Categories	**Components**	**Measurement Indicators**
External Structure	Brands, Customers Supplier relations	Indicators of Growth/Renewal -profitability per customer -organic growth Indicators of Efficiency

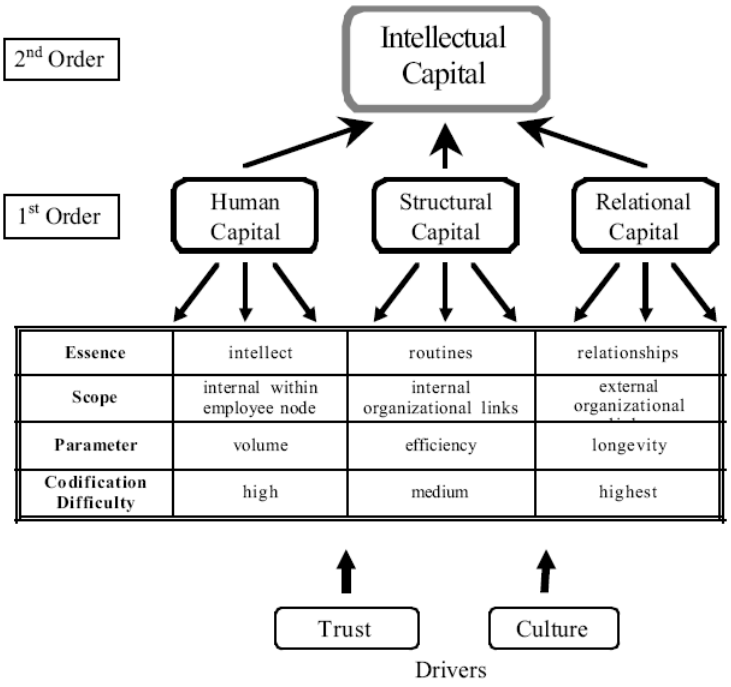
		-the satisfied customers index -win/loss index -sales per customer Indicators of Stability -proportion of big customers -age structure -devoted customers ratio -frequency of repeat orders
Internal Structure	Management Legal structure Manual systems Attitudes R&D Software	Indicators of Growth/Renewal -investment in the internal structure -investment in information procession systems -customers contributing to internal structure Indicators of Efficiency -proportion of support staff -sales per support person -values and attitude measurements Indicators of Stability -age of the organization -support staff turnover -the rookie ratio
Individual Competence	Education Experience	Indicators of Growth/Renewal -number of years in the profession -level of education -training and education costs -grading -turnover -competence-enhancing customers Indicators of Efficiency -the leverage effect -value added per professional Indicators of Stability -average age -seniority -relative pay position -professional turnover rate

Bontis (1996)

Bontis (1996) proposed the conceptualization of intellectual capital using the higher-order organizing principles based on the perspective of Kogut and Zander (1992). As shown in the following figure, Bontis (1996) argued that intellectual capital is a second order multi-dimensional construct. Intellectual capital is composed of three sub-domains: Human Capital – the tacit knowledge embedded in the minds of the employees; Structural Capital – the organizational routines of the business; and Relational Capital – the

knowledge embedded in the relationships established with the outside environment.

<Figure 2.8> Intellectual Capital by Bontis (1996)



Source: Adapted from Bontis (1996)

First, human capital represents "the combined knowledge, skill, innovativeness, and ability of the company's individual employees to meet the task at hand" (Bontis, 2001). Human capital has also been defined on an individual level as the combination of these four factors: individual's genetic inheritance; individual's education; individual's experience; and individual's attitudes about life and business (Hudson, 1993). Human capital is important because it is a source of innovation and strategic renewal. The essence of human capital is the sheer intelligence of the organizational members (Bontis & Fitz-enz, 2002).

Second, the essence of structural capital is the knowledge embedded within the routines of an organization (Bontis, 1998). This structural construct deals with structures and mechanisms of the organization that can enable employees to reach the optimum intellectual performance and, therefore, overall business performance (Bontis, 2001). In an organization with poor systems and procedures, even if each individual has a high level of

intellect, the overall intellectual capital will not reach its fullest potential (Bontis, 1998).

Third, relational capital represents the potential an organization has due to its ex-firm intangibles which include the knowledge embedded in the relationships with external players, such as customers, suppliers, the government, or related industry associations (Bontis, 2001). Due to its external nature, knowledge embedded in relational capital is the most difficult to codify.

<Table 2.7> Intellectual Capital by Bontis

Categories	Samples of Measures (Bontis, Keow, & Richardson, 2000)
Human Capital	Competence idea level Succession training program Planners on schedule
Structural capital	Lowest cost per transaction Improving cost per revenue Develops most ideas in industry
Relational capital	Customers generally satisfied Reduce time to resolve problem Market share improving Market share is highest Longevity of relationships

The trust and culture of an organization were proposed to be the two supporting drivers for the development of intellectual capital. However, (Bontis, 2001) argued that intellectual capital does not include intellectual property assets which are usually considered from the legal perspective, such as copyrights, patents, semiconductor topography rights, and various design rights. Intellectual property assets and intellectual capital are considered as mutually exclusive but the former can be considered to be an output of the latter.

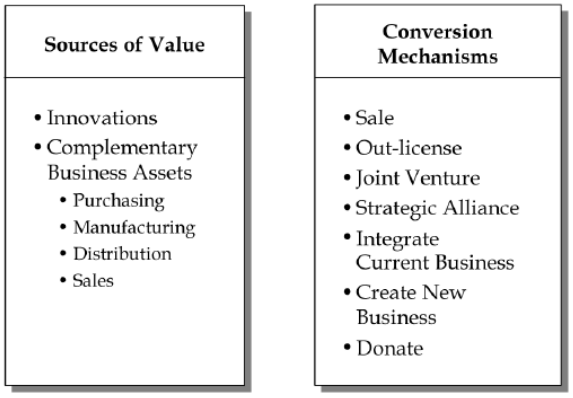
Sullivan (2000)

Sullivan (2000) proposed three factors to explain why a significantly greater portion of corporate value is now driven from intangible assets: i) the changing legal environment in favor of the holders of intellectual property rights (patents, trademark,

etc); ii) the effects of the rapid rise of the Internet as well as the exponentially growing capabilities of information technology; iii) the leveraging effect of intellectual capital for the profitability of the firm.

According to (Sullivan, 2000), companies whose profits come primarily from the commercialization of its ideas and innovations are called knowledge companies. As shown in <Figure 2.9>, for a knowledge company, there are two fundamental sources of value: the firm's innovations and its complementary business assets that are applicable to the commercialization of those innovations. There are seven ways for firms to convert innovations into profits: direct sales, out-licensing, joint ventures to obtain and use the needed complementary business assets, strategic alliances to obtain and exploit markets, integration, creating a new business, and donations (Sullivan, 2000).

<Figure 2.9> Sources of value and conversion mechanisms in a knowledge company

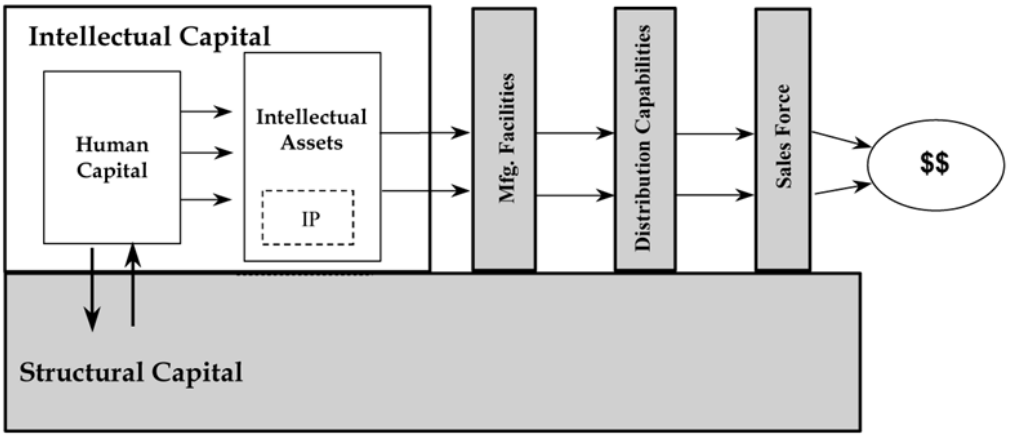


Source: Adapted from Sullivan (2000)

The following graphical representation of intellectual capital, <Figure 2.10>, was provided by Sullivan & Sullivan (2000) to show the primary components of intellectual capital and their relationships to other structural capitals. According to Sullivan (2000), a knowledge company consists of three primary elements: intellectual capital and two different forms of structural capital. One form of structural capital, the generic structural capital, encompasses tangible assets that may be found generally in the market place. The other structural capital is the firm's complementary business assets, previously

mentioned as one of the sources of value. They are typically found in companies within the same industry, though the form and capabilities of a firm's complementary business assets differentiate it from other firms in the industry (Sullivan, 2000). Those three components of a knowledge company – intellectual capital (IC), generic structural capital, and complementary business assets – represent the three sources from which all companies create the value that subsequently is reflected in their income streams (Sullivan, 2000).

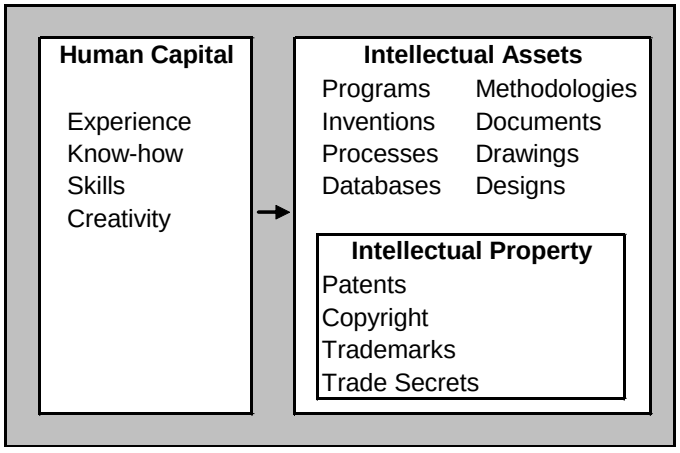
<Figure 2.10> Component of Intellectual Capital (Sullivan & Sullivan, 2000)



Source: Adapted from Sullivan & Sullivan (2000)

The following figure, <Figure 2.11>, proposed by Sullivan (Sullivan, 2000), shows the elements of intellectual capital and their relationships to one another. Intellectual capital is composed of two primary components: humans (with their embedded tacit knowledge) and codified knowledge. When someone's tacit knowledge is carried out to paper, electronic media, or any other medium, it becomes a codified asset of the firm. This codified knowledge is known as the firm's 'Intellectual Assets'. Some of these codified assets are legally protected, through patents, copyrights, trademarks, trade secrets, or semiconductor masks etc. Intellectual assets that are legally protected are termed as 'Intellectual Property'

<Figure 2.11>: Intellectual Capital and Its Major Components



Source: Adapted from (Sullivan, 2000)

In this conceptual structure, Sullivan (2000) limited intellectual capital as the knowledge that can be converted into profits.

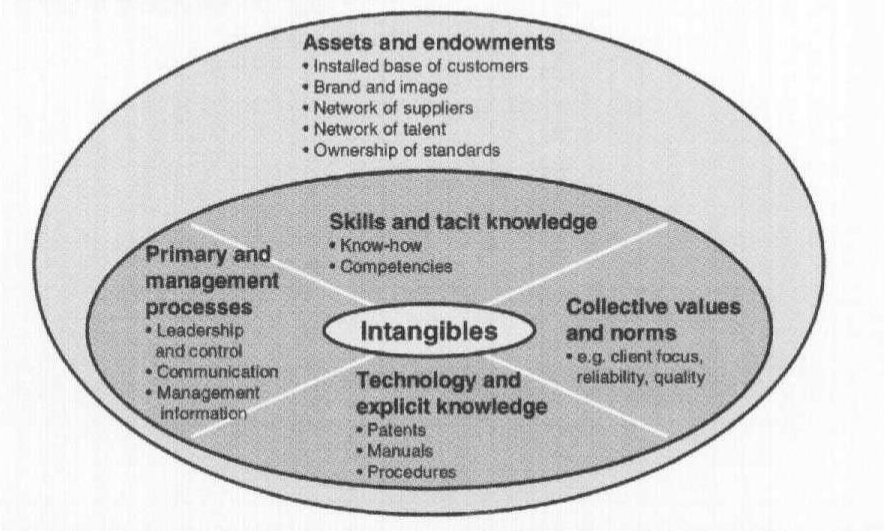
Andriessen & Tissen (2000)

Andriessen and Tissen (2000), in their book 'Weightless Wealth', proposed five types of intangible assets: skills and tacit knowledge, collective values and norms, technology and explicit knowledge, primary and management processes, and assets and endowments. They distinguished those five categories of intangible assets as shown in the figure below.

First, skills and tacit knowledge represent the talent embedded in people, including their know-how and competencies. Second, collective values and norms represent the corporate culture of an organization that is reflected in "the way people do things in an organization". They affect what things should be considered as important in an organization (e.g., quality, client focus, and reliability) and what are critical factors for success. Third, technology and explicit knowledge encompass manuals, procedures, and intellectual property such as patents and trade secrets. Fourth, primary and management processes represent the knowledge embedded within the primary processes of the organization as well as the processes used for management. Finally, assets and endowments refer to the assets a

company has inherited from the past, including brand and image, networks of suppliers, the installed base of customers, the network of talent, and the ownership of standards.

<Figure 2.12> Five Types of Intangibles by Andriessen & Tissen (2000)



Source: Adapted from Andriessen & Tissen (2000)

Measurement and Valuation of Intangible Assets

In the past fifteen years, the intellectual capital community has presented a number of methods for measuring intangible assets. Andriessen (2004) categorized these methods with respect to two primary questions: 'why?' and 'how?' 'Why' clarifies the researchers' motives for measuring intangible assets. 'How' clarifies their approaches for measuring intangible assets. The analysis of 'why' shows what types of problems these methods are based on and what they intend to solve. Andriessen (2004) categorized the measurement methods into three primary motives: improving internal management, improving external reporting, and statutory and transactional issues. Table 2.8 provides an overview of the specific problems dominant in these three motives. When it comes to improving internal management, many different problems were identified. They ranged from the general problems of 'what gets measured gets managed' or managing intangible assets to the specific problem of matching costs with revenues. With regard to improving external reporting, researchers basically assumed that there is no transparency in reporting intangible assets. Within the accounting community, the problem of intangible assets is often discussed from the perspective of relevance loss (Johnson & Kaplan, 1987). This includes a loss in the relevance of financial reporting to external stakeholders. When it comes to statutory and transactional issues, the valuation of intangible assets has been dealt with for the purpose of transaction pricing, financing securitization, taxation, bankruptcy, litigation, or impairment testing of goodwill.

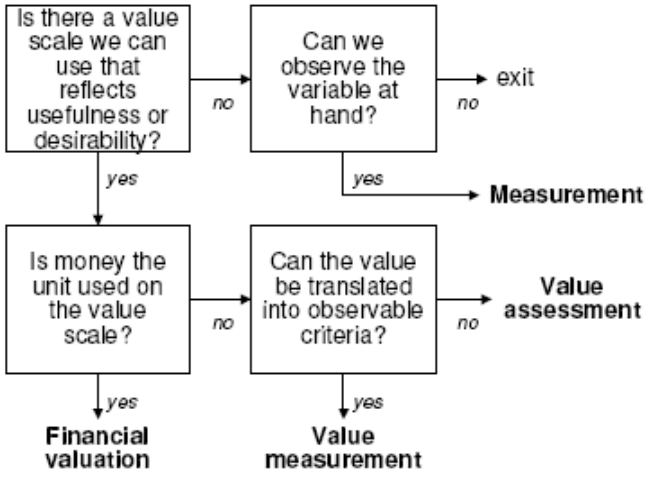
<Table 2.8> Specific Problem Definitions for Measurement/Valuation of Intangible Asset

Improving internal management	Improving external reporting	Statutory & transactional issues
● What gets measured gets managed ● Improving the management of intangible resources ● Creating resource-based strategies ● Monitoring effects from actions	● Closing the value gap between book and market value ● Improving information to stakeholders about the real value and future performance of the enterprise ● Reducing information	● Transaction pricing and structuring for the sale, purchase, or license of an intangible asset ● Financing securitization and collateralization for both cash flow-based and asset-based financing ● Taxation planning and compliance with regard to all sorts of possible deductions, tax compliance, and

● Translating business strategy into action ● Weighing possible courses of action ● Enhancing the management of the business as a whole	asymmetry ● Increasing the ability to raise capital ● Enhancing corporate reputation and affecting stock price	estate planning ● Bankruptcy and reorganization, including the value of the estate in bankruptcy and the assessment of the impact of proposed reorganization plans ● Litigation support and dispute resolution, including infringement of intellectual property rights and breach of contract ● Impairment testing of goodwill as required by FASB statement no.142

The analysis of the 'how' shows what approaches these methods use to solve problems. Andriessen (2004) presented four primary approaches for measuring intangible assets: financial valuation method, value measurement method, value assessment method, and measurement method. <Figure 2.13> shows the relationship between these four approaches. The decisive factors are the use of money as the denominator of value, the use of values as criteria, and the observability of the criteria or measured variables.

<Figure 2.13> Four Approaches to Measure Value of Intangible Assets



Source: Adapted from Andriessen (2004)

According to the above figure, these four valuation/measurement methods can be

explained as follows (Andriessen, 2004):

- Financial valuation method: the criterion of value is defined in monetary terms.
- Value measurement method: the non-monetary criterion of value is used and translated into observable phenomena.
- Value assessment method: the criterion cannot be translated into directly observable phenomena. Instead, the method depends on personal judgment by the evaluator.
- Measurement method: it does not include a criterion for value but does involve a metrical scale that relates to an observable phenomenon.

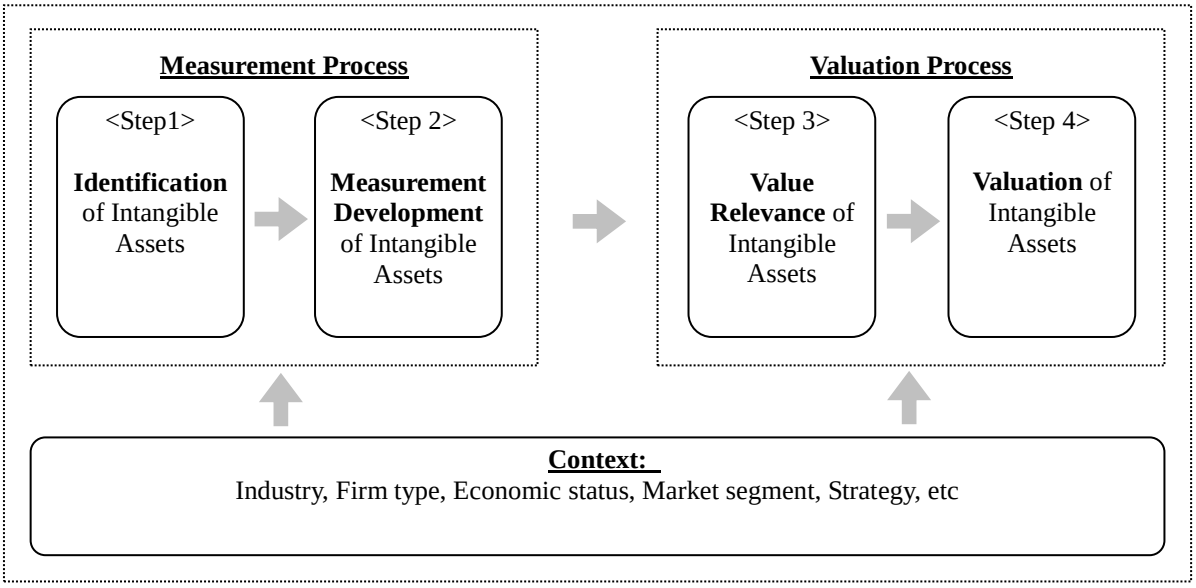
Intangible Assets Management System

As discussed above, measurement or valuation methods were grouped into one of four methods: financial valuation method, value measurement method, value assessment method, and measurement method. Andriessen and Tissen (2000) argued that these can be differentiated into two broader categories of valuation method and measurement method. For valuation method, implicit and explicit criteria or yardsticks for usefulness or desirability should be created. Rescher (1969) describes valuation as "a comparative assessment or measurement of something with respect to its embodiment of a certain value." Certain value scales are based on ordinal levels which represent the varying degrees of value but do not show the interval between the positions on the scale. Using money as the denominator of value is advantageous because it creates a value scale at a ratio level that allows for mathematical transformations. A measurement method is not a method for valuation, yet this type of method is often used within the intellectual capital community. Many of the measurement methods use indicators for pinpointing areas that need attention. Many of these indicators are similar to those used for measuring production or quality levels. As such, many of the measurement methods result in tools for internal management rather than for external reporting.

The previous figure represents how the valuation method is different from the measurement method. However, it is worthy to note that researchers have been more

interested in their unique characteristics against each other than their complementary characteristics for each other. For the successful management of intangible assets, both measurement and valuation methods should be taken into consideration together. Based on the current discussion, the 'Intangible Assets Management System' in <Figure 2.14> is suggested.

<Figure 2.14> Intangible Assets Management System



First of all, companies should identify their intangible assets that are considered to be important for business and develop appropriate measurements for the respective intangible value attributes. The market value of intangible assets varies according to contextual factors, such as industry, economic status, market conditions, types of industries, and so on. Therefore, the valuation process made at some specific point of time should take into consideration the contextual factors.

In the process of valuation, it is important to understand and define the context for intangible assets in order to improve the understanding of the potential that the value of intangible assets has for the organization. Marr (2006, p. 46) asserted that even though most organizations posses a wide stock of intangible resources, not all of those are critical value drivers. The reason for this is that the value of resources is context specific and resources

are not just static – they dynamically interact with each other to be transformed into capabilities and core competencies (Marr, 2006, p. 46). For a successful valuation, companies should also confirm the value-relevance of intangible assets.

Measurement Development for Organization-Centric Capital

While the concept of relation capital (or social capital) and human capital is being widely researched (Adler & Kwon, 2002), the concept of organizational capital has been studied very little and remains under-explored. Therefore, as presented in Chapter 1, the purpose of this research is to identify the intangible value drivers of organization-centric capital in the hospitality industry and develops its comprehensive measurement in the context of casual dining restaurant industry.

This study was limited in its measurement process to two steps: step 1 is the identification of components for intangible assets and step 2 is the measurement development for intangible assets (see <Figure 2.14>). The first stage is meant to establish the salient dimensions of organization capital and identify industry-specific contexts for each respective dimension. The focus of the second step is to derive a consensus among industry professionals and academics on the industry-specific contexts identified to measure organizational capital and the optimal measurement indicators developed based on these industry-specific contexts.

This study focused on the development of objective measurement indicators instead of on the subjective perceptual measurement items which are generally used. Objective measurement indicators are developed taking three primary criteria into consideration: cost, quality, and time (Kaplan & Norton, 1996). These indicators enable a firm to measure and manage intangible value resources more precisely and efficiently. In addition, objective measurement indicators are more applicable across time and easier to be monitored by stakeholders such as CEOs, investors, owners, or customers.

Additionally, most studies have been conducted in the context of manufacturing or high-technology industries. Since much of the value generation and transfer in the service industry, contrary to the manufacturing industry, occurs at the interface between the

consumer and the service provider (Namasivayam & Denizci, 2006), details of critical intangible assets in the hospitality industry are also thought to be different from those in the manufacturing or high-technology industry (Namasivayam & Denizci, 2006). However, there has been little effort to establish a measurement system for intangible assets in the hospitality industry, especially in terms of intellectual capital or strategic management. Therefore, examining intangible assets and developing their measurement in the context of the hospitality industry, as purposed for this study, will be more meaningful and applicable.

The well-established categorical system helps a firm identify and manage various types of intangible resources more precisely and efficiently. Furthermore, it can enable management to clearly understand how to cope with different types of intangible resources and how to gather, create, use, share, and develop them more appropriately (Diefenbach, 2006). The value of classification depends on its ability to function as a heuristic device, which is useful for the management of a substance (Rudner, 1954). Researchers have proposed several models to improve the measuring of each category of intellectual capital (human, customer, and structural capitals) and facilitate the comparison of intangibles measured with other firms. However, there is no widely accepted model because most are too qualitative, broad, or general (Kaufmann & Schneider, 2004).

In the following section, dimensions of organizational-centric capital are provided and discussed focusing on their critical roles for maintaining a firm's competitive advantage. In addition, a list of measurement indicators initially developed in terms of casual dining restaurant industry-specific contexts is suggested.

<Table 2.9> Key Dimensions of Organization-centric Capital

Model or Scholars	Innovation	Organizational Process	Organizational Culture	Organizational Learning	Information System	Intellectual Property
(Number of Frequency)	**(12)**	**(9)**	**(9)**	**(7)**	**(6)**	**(5)**
Intangible Asset Monitor (Sveiby, 1997)	✓					
The Technology Broker (Brooking, 1999)		✓	✓	✓	✓	✓
Skandia Value Scheme (Edvinsson & Malone, 1997)	✓	✓		✓		
The Balanced Scorecard (Kaplan & Norton, 1996)	✓	✓	✓	✓	✓	
Value Chain Scoreboard (Lev, 2001)	✓				✓	✓
The Process Model (Roos, et al., 1998)	✓	✓	✓			
The IC-Index (Roos & Roos, 1997)	✓			✓		
Value Creation Index (Low & Kalafut, 2002)	✓	✓	✓			
IC Value Chain (Sullivan, 2000)	✓	✓	✓		✓	✓
IAbM (Japanese Ministry of Economy) (Johanson, Koga, Skoog, & Henningsson, 2006)	✓		✓	✓		
Bontis (1998)	✓	✓	✓		✓	
IFAC (International Federation of Accountants) (Dzinkowski, 2000)	✓	✓				✓
The Meritum Project (Meritum, 2002)				✓		✓
The Danish Guideline (Mouritsen, et al., 2000)		✓				
Spanish Knowledge Society Research Center (Martín-de-Castro, Navas-López, López-Sáez, & Alama-Salazar, 2006)			✓	✓		
PIP (Putting intellectual capital into practices) (Claessen, 2005)	✓		✓		✓	

Note: Number of frequency is the number of scholars (or models) who (or which) place a premium on each intangible value driver.

Dimensions and Measurement Indicators for Organizational Capital

Organizational capital is defined as the knowledge that is institutionalized within an organization's processes and databases, documents, patents, and manuals that the organization uses to store and retain knowledge (Youndt, Subramaniam, & Snell, 2004). Creating organizational capital requires that information and skills acquired from the innovation activities are formally integrated. This represents knowledge integration as a formal process through which information and skills become an integral component of the routines that guide a firm's future actions (Zahra, Ireland, & Hitt, 2000).

Based on an in-depth literature review on a wide range of areas (e.g., knowledge management, strategic management, accounting, finance, industrial engineering, and so on), it was identified that organizational capital is primarily composed of six dimensions: innovation capital, organizational process capital, organizational culture capital, organizational learning capital, information system capital, and intellectual property capital. Each dimension of organizational capital is discussed in this section, focusing on the capabilities of a firm which are considered to reinforce its competitive advantage. In addition, a list of measurement indicators for each dimension is provided.

Innovation capital

Innovation is considered as one of the most important core competencies for business success and wealth creation. The prospects of abnormal profits or monopoly rents that are protected for a certain period by patents or "first-mover advantages" have always provided strong incentives for innovation (Lev, 2001, p. 14). According to Drucker (2001, p. 106), even though every organization differs in its core competencies, innovation is the only competency that every organization requires at any cost. Innovation strategist Gary Hamel (2001) asserted, "In our hyper-transparent world, competitive advantage will increasingly rest on an ability to create products, services and business models that are unique and utterly compelling." Therefore, innovation has been continuously studied by both practitioners and academics in terms of an organization's competitive advantage and sustainable success (Brown & Duguid, 2001; Corso, 2002; Delgado-Verde, Martín-de

Castro, & Navas-López, 2011).

Many scholars are more likely to see innovation as novelty in capabilities and knowledge which enables a firm to maintain sustainable competitive advantage. Even though innovation may sometimes be considered as the imitation or recombination of old knowledge, it is defined as the development and implementation of knowledge perceived to be new by the people involved (Dewar & Dutton, 1986; Van de Ven, 1999). Put simply, innovation is referred to as the ability to build on previous knowledge and create new knowledge (Drucker & Ferdinand, 1994, p. 40; Roos, et al., 1998). Basically, innovation is expected to be employed in two aspects of an organization: products and process innovations (Dosi, 1988; Teece, 1989; Utterback & Abernathy, 1975). It is also accepted that the innovation process, the resulting tangible innovations themselves, and the adoption and diffusion of those innovations have all been referred to at various points in the literature simply as innovation.

A number of studies have highlighted that innovation enables an organization to renew itself (Brown & Ulgiati, 1997; Delgado-Verde, et al., 2011; Dougherty, 1992; Mezias & Glynn, 1993), adapt to rapidly changing environments (Adger, Huq, Brown, Conway, & Hulme, 2003; McGrath, 2001), and ensure its survival and long term growth (Eisenhardt & Tabrizi, 1995; Tilton & Landsberg, 1999). Innovation provides an important underpinning for an organization's dynamic capabilities that guide its development and evolution (Eisenhardt & Martin, 2000) and is a cornerstone for its competitiveness (Christensen & Overdorf, 2000). Numerous empirical studies examined the significant linkage between innovation and market performance outcomes such as sales growth, market share, and profitability (Artz, Norman, Hatfield, & Cardinal, 2010; Hage & Hollingsworth, 2000; Kenney, 2001; Martin, 1991).

In the hospitality industry, innovation has been studied primarily focusing on service and product innovation. It is evident that as the technological innovation advance, new categories of services are emerging. With the development of technology, services are delivered in a more indirect rather than direct mode (Khan & Khan, 2009). Service innovation has a large influence on a customer's choice of hotel. Especially, leisure

travelers were found to be more influenced by innovative amenities such as childcare programs and in-room kitchenettes than business travelers (Victorino, Verma, Plaschka, & Dev, 2005). For new menu innovations, quick service restaurant firms follow a structured approach to reduce the likelihood of failure due to issues such as poor consumer demand or implementation. They screen new food innovations approximately five times during the development process (Ottenbacher, Harrington, & Parsa, 2009).

As can be seen in <Table 2.10>, for the measurement of innovation capital, three industry contextual sub-dimensions are suggested: innovation of product and service and R&D. Today, many organizations achieve a competitive advantage through a continued stream of innovative products and services (Olsen, et al., 2008). Even for companies in industries with relatively long product-life cycles, continuous improvement in product capabilities is critical for long-term success (Kaplan & Norton, 1996). The R&D process has become a more important element of the business' value chain because a firm's competitive advantage comes from innovative products and services and competitive methods (Kaplan & Norton, 1996; Olsen, et al., 2008). Thus, under the dimension of innovation of product, casual dining restaurant industry-specific measurement indicators are provided in terms of menus and services. For the dimension of R&D, measurement items in terms of projects and investments are suggested.

<Table 2.10> Measurement Indicators for Innovation Capital

Industry-Contextual Dimensions	Industry-Specific Measurement Indicators	Reference
Innovativeness of Menu	• No of new menus (#) • Ratio of new menus out of total menus (%) • Sales increase attributable to new menus ($) • Ratio of sales attributable to new menus (%) • Average time required to introduce a new menu (#) • Sales increase attributable to new menus ($) • No. of new ideas suggested for product (#) • No. of new ideas adopted for product (#)	Bontis et al.(2000) Bontis, Hulland, & Crossan (2002) Edvinsson & Malone (1997) Engstrˆm, Westnes, & Westnes (2003) Moon & Kym (2006) Roos & Roos (1997) Stewart (1997) Thorleifsdottir & Claessen (2006) Pablos (2002)
Innovativeness of Service Operation	• No. of new services (#) • Sales attributable to new services ($) • Average time required to introduce a new service (#) • Sales increase attributable to new services ($) • No. of new ideas suggested for service (#)	

	• No. of new ideas adopted for service (#)	
R&D Management	• No. of projects conducted in R&D related departments (#) • No. of projects adopted (#) • Ratio of adoption out of total projects conducted (%) • Ratio of R&D investment to revenue (%) • Ratio of R&D investment to administrative expense (%) • No. of employees in R&D-related departments (#)	Lev (Lev, 2001) Johanson, Koga, Almqvist, & Skoog (2009) Dzinkowski (2000) Kong (2010) Pablos (2002)

Organizational Process Capital

An Organizational Process is defined as patterns of interaction, coordination, communication, and decision making that an organization uses to transform resources into customer value (Afuah, 2004). Bontis et al. (2000) refers to organizational process as the "non-human storehouses of knowledge" which are embedded in its technological, information and communication systems, as represented by its hardware, software, databases, laboratories, and organizational structures which sustain and externalize the output of human capital. Processes are what make everything in an organization to come together. Any activity inside the company is a process and contributes to the creation of organization capital (Roos, et al., 1998, p. 48).

Edvinsson and Malone (1997, p. 36) propose that corporate intellectual capital is the combination of human capital, customer capital, innovation capital, and process capital. Process capital is those work processes, techniques (such as ISO 9000), and employee programs that augment and enhance the efficiency of manufacturing or delivery services. In the components of intellectual capital, human capital is the core and most important basis of value realization and value increase; process capital provides environmental supports for creating knowledge and wealth created by knowledge, while relational capital ensures the value realization of knowledge created by effective interaction and matching (Edvinsson & Malone, 1997, p. 36).

Process capital refers to the procedures and routines of the company's internal processes. Intangible assets such as highly skilled employees or sophisticated organizational processes contribute to achieving a high level of efficiency. Huang et al. (2007) demonstrated that a company's implementation of ERP (Enterprise Resource

Planning) has a positive effect on the process capital of its Intellectual Capital (IC); the process capital then affects the customer capital, which ultimately translates into business performance.

Organization is sometimes considered as a process. Sveiby reminds us that organizations are not real entities, they are constructed as a constant process preformed by people (Sveiby, 1997, 2001). If the infrastructure is the hardware, processes are the software that makes the organization tick (Roos, et al., 1998, p. 48). Even perfect structures would be absolutely useless if nobody knew how to put them to work. Processes and procedures are normally transmitted through oral tradition, but there have been numerous cases of companies formalizing them into documents and manuals (Roos, et al., 1998, p. 48). Shang and Huang (Shang & Huang, 2008) proposed three methods of measuring organizational processes: measuring the investment in processes, measuring the results of the processes, and measuring the management capability of the processes.

As shown in <Table 2.11>, for the measurement of organizational process capital, four industry contextual sub-dimensions are identified: service operation management process, procurement management process, marketing & sales management process, and human resource management process. Multiple measurement indicators considered to reflect the corresponding industry contextual sub-dimension are provided.

<Table 2.11> Measurement Indicators for Organizational Process Capital

Industry-Contextual Dimensions	Industry-Contextual Measurement Indicators	Reference
Service Operation Management Process	• No. of complaints on food (#) • No. of compliments on food (#) • Avg. score of random internal inspection on food (#) • No. of complaints on service (#) • No. of compliments on service (#) • Avg. score of random internal inspection on service (#) • Average cooking time required (#) • Average cooking preparation time required (#) • Average time required from order to service (#) • No. of customers served per employee (#)	Susskind (Susskind, 2010) Ottenbacher & Harrington (2009) Brown (2008) Pettijohn, Pettijohn, & Luke (1997)
Procurement & Inventory Management Process	• In-time rate of delivery (%) • Average time required for delivery (#) • Average contract years with external distributers (#)	Withiam (1996) Poulston (2008) Lamming (1996)

	• Ratio of margin (%) • Food cost ratio (%) • Inventory turnover rate (%) • Leftover rate (%) • Theft rate (%)	
Sales & Marketing Management Process	• Achievement ratio of sales plan (%) • Average sales performance per an employee ($) • Revenue increase attributable to sales promotions ($) • Ratio of promotion expenditure to the increased revenue (%) • Cannibalization effect of new promotions	Green & Weaver (2007) Jang & Mattila (2005) Kendrick (1998) Go & Haywood (2003)
HR Management Process	**Recruiting** • Competition rate (%) • Percentage of job offer acceptance (%) • Days required from job-posting to recruiting (#) • Recruiting cost ($)Average training score (#) • Average No. of industry-relevant certificates per person (#) • Average expenditure for training per person ($) • Average time required for supplementing needs (#) • Average No. of customers per employee (#) • Labor cost ratio (%) • No. of reward programs (#) • No. of performance-recognition activities (#) • Investment on reward programs or activities ($)	Tepeci & Bartlett (2002) Brown (2008) Wu & Caraher (2009) Lee & Chon (2000) Kelliher & Perrett (2001) DiPietro & MIlman (2004)

Organizational Culture Capital

Organizational culture has been defined as patterns of shared values and beliefs over time which produce behavioral norms that are adopted in solving problems (Owens, 1987; Schein, 1990). Schein (1985) also noted that culture is a body of solutions to problems which have worked consistently and are therefore taught to new members as the appropriate way to perceive, think about, and feel in relation to those problems. In fact, these shared philosophies, assumptions, values, expectations, attitudes, and norms bind an organization together (Kilmann, Saxton, & Serpa, 1985). Jaques (1952) claimed that organizational culture is the customary and traditional way of doing things, which is shared to a greater or lesser degree by all members and which the new members must learn and at least partially accept in order to be accepted. Harrison (1972) focused more on culture itself rather than on its effects and defined it as ideologies, beliefs, and deep-set values that occur in all firms and are prescriptions for the ways in which people should work in these organizations.

Wiener (1988) claimed that ‘‘most researchers of organizational culture agree that shared values are a key element in the definition of culture.”

Culture embraces categories such as corporate culture, organizational values, networking behavior of employees, and management philosophies (Marr, Schiuma, & Neely, 2004). An organization’s culture represents the way things are done. Organizational culture is the core factor, but it must also fit with the structure of the organization, the management of the employees, the leadership style, and the knowledge strategy systems (Forcadell & Guadamillas, 2002).

Organizational culture is of fundamental importance for effectiveness and efficiency since it provides people with a shared framework to interpret events; a framework that encourages individuals to operate both as an autonomous entity and as a team in order to achieve the company’s goals (Gregory, Harris, Armenakis, & Shook, 2009; Marr, et al., 2004; Nazari, Herremans, Isaac, Manassian, & Kline, 2011). A common hypothesis about this role suggests that if an organization possesses ‘strong culture’ by exhibiting a well-integrated and effective set of specific values, beliefs, and behavior patterns, then it will perform at a higher level of productivity (Denison, 1984). Culture is important in providing organizational members with a framework in which to interpret events (Roos, et al., 1998, p. 48). Culture can influence management styles (creating a social norm for managers to follow) and the motivation of its employees through continuous encouragement to strive for the organizational goals (Roos, et al., 1998, p. 48). Whatever the culture’s characteristics, studies increasingly stress organizational culture as a key to managing innovation (Jassawalla & Sashittal, 2002; Khazanchi, Lewis, & Boyer, 2007; Sánchez-Cañizares, Muñoz, & López-Guzmán, 2007).

As shown in <Table 2.12>, for the measurement of organizational culture capital, four industry contextual sub-dimensions are identified: leadership, membership, customer orientation, and teamwork. Multiple measurement indicators that are considered to reflect the corresponding industry contextual sub-dimension are provided.

<Table 2.12> Measurement Indicators for Organizational Culture Capital

Industry-Contextual Dimensions	Industry-Contextual Measurement Indicators	References
Leadership Culture	• No. of leadership programs provided or supported (#) • No. of leadership campaign activities (#) • No. of leadership program participants (#) • Investment on leadership-related programs or activities ($)	Johanson, et al. (2009) Thorleifsdottir & Claessen (2006) Benevene & Cortini (2010)
Employees' Membership Culture	**Employee Retention** • Avg. years of tenure (#) • Annual employee turnover rate (%) • No. of reward programs (#) • No. of performance-recognition activities (#) • Investment on reward programs or activities ($) • No. of award-winners (#)	Tepeci & Bartlett (2002) Iverson & Deery (1997) Ogbonna & Harris (2002)
Service-oriented Culture	**Quality Food** • No. of complaints on food (#) • No. of compliments on food (#) • Avg. score of random internal inspection on food (#) • No. of complaints on service (#) • No. of compliments on service (#) • Avg. score of random internal inspection on service (#) • Length of years since CRM system establishment (#) • No. of customers in CRM system (#) • Average No. of visits per customer a year: annual email survey (#)	Tepeci & Bartlett (2002) Davidson (2003) Susskind (2010)
Teamwork Culture	**Collaboration** • Number of inter-department meetings (#) • Number of collaborative projects (#) • Ratio of working time used in another department (%) **Teamwork Programs and Activities** • Frequency of teamwork-orientation programs (#) • Frequency of teamwork-orientation activities (#) • Investment on teamwork-related programs or activities ($)	Wu (2005) Moon & Kym (2006) Johanson, et al. (2009) Jarboe (2007) Thorleifsdottir & Claessen (2006) Tepeci & Bartlett (2002)

Organizational Learning Capital

Like organizational culture, organizational learning is also a very elusive concept due to the variety of perspectives that come under scrutiny in the academic literature. There have been numerous attempts to define organizational learning and its various aspects. Jones (1998) emphasizes the importance of organizational learning for organizational

performance. He defines it as ‘‘a process through which managers try to increase organizational members’ capabilities in order to better understand and manage the organization and its environment” (Jones & Farner, 2004, p. 472). Senge (1990) defined organizational learning as ‘‘a continuous testing of experience and its transformation into knowledge available to the whole organization and relevant to its mission” (p. 6), while Huber (1991) saw it as a combination of four processes: information acquisition, information distribution, information interpretation, and organizational memory. Argyris and Schön (1996) were even less restrictive in their definition, declaring that organizational learning emerges when organizations acquire information (knowledge, understandings, know-how, techniques, and procedures) of any kind, by any means. Although researchers have defined organizational learning in different ways, the core of most definitions is that organizational learning is the changes in an organization that occur as the organization acquires experience.

The Balanced Scorecard applies four perspectives of strategic planning and management of which the final perspective is ‘organizational learning and growth’. This supports the other three perspectives, financial, customer, and process, in achieving excellent outcomes by improving organizational capabilities (Kaplan & Norton, 1996). In addition, Dimovski (1994) identified four varying perspectives on organizational learning. His model managed to merge informational, interpretational, strategic, and behavioral approaches to organizational learning and defined it as a process of information acquisition, information interpretation, and resulting behavioral and cognitive changes which should, in turn, have an impact on innovativeness. Organizational learning is a complex process that refers to the development of new knowledge and has the potential to change behavior (Huber, 1991; Slater & Narver, 1995); it is a time-honored process that involves changing individual and organizational behaviors (Murray & Donegan, 2003).

The body of literature that has studied the relationship between organizational learning and innovation is growing and suggests that organizational learning can enhance the innovative capacities organizations; firms can only innovate if they develop an efficient learning system for their resources, competencies, and capabilities (Akgün, Keskin, Byrne,

& Aren, 2007; Alegre & Chiva, 2008; Argyris & Schon, 1978; Calantone, Cavusgil, & Zhao, 2002; Chipika & Wilson, 2006; Helfat & Raubitschek, 2000; Lennon & Wollin, 2001; Sinkula, Baker, & Noordewier, 1997; Stata, 1994). A firm's success also depends on the development of a strong learning culture that is good at creating, acquiring, and transferring knowledge, as well as at modifying behavior to reflect new knowledge and insights (Garvin, 1993; Huber, 1991). Hence, organizations stressing organizational learning culture must first acquire information, interpret it to fully understand its meaning, and transform it into knowledge. At the same time, they must not forget the most important part – to implement behavioral and cognitive changes – in order to convert words into action.

As shown in <Table 2.13>, for the measurement of organizational learning capital, two industry contextual sub-dimensions are identified: knowledge sharing and adaptation (or flexibility). Multiple measurement indicators considered to reflect the corresponding industry contextual sub-dimension are provided.

<Table 2.13> Measurement Indicators for Organizational Learning Capital

Industry-Contextual Dimensions	Industry-Contextual Measurement Indicators	Reference
Knowledge Sharing	• No. of shared (knowledge) documents in the intranet (#) • No. of shared knowledge database (gigabytes) (#) • No. of educational programs available (#) • No. of virtual courses available (#) • No. of employees who have taken education programs (#) • No. of employees who have taken virtual courses (#) • Investment on education programs ($) • Investment on online educational courses ($) • No. of forums on the discussion board of intranet (#) • No. of participants on the discussion board of intranet (#) • No. of replies on the discussion board of intranet (#) • No. of interdepartmental meetings (#) • No. of intradepartmental meetings (#)	Shrivastava (1983) Sorenson & Sørensen (2001) Bontis, et al.(2002) Pablos (2002) Bontis, et al. (2000) Mouritsen, et al. (2000) Thorleifsdottir & Claessen (2006) Kyriakidou & Gore (2005) Lennon & Wollin (2001)
Flexible Adaptability	• Difference between the forecast and the actual value of key external value drivers (#) • Difference between the forecast and the actual value of key internal value drivers (#) • Ratio of project success (%)	Shrivastava (1983) Carmona-Lavado, Cuevas-Rodríguez, & Cabello-Medina (2010) Zangoueinezhad &

	• Achievement ratio of objectives (%) • No. of success cases shared on the intranet (#) • No. of failure cases shared on the intranet (#) • No. of views of the success and failure cases on the intranet (#) • No. of updated knowledge documents (#) • Proportion of updated knowledge documents (%)	Moshabaki (2009) Dooley (2000)

Information System Capital

An information system (IS) is likely to be considered as any combination of information technology that supports an organization's knowledge management. The advancement of information technology improves the internal structure of an organization. In many industries, an investment in information systems is also regarded as a measure of progress toward accomplishing corporate goals (Sveiby, 1997, p. 175). An information system is defined as an integrated set of software directed information technologies supporting organizational goals (Rainer, Turban, & Potter, 2007, p. 393; Watson, Boudreau, Chen, & Huber, 2008). With too much emphasis on the technology aspect of information management, the actors in information systems as an integral part are likely to be overlooked. Therefore, an information system is also considered as an organized set of resources: employees, technology, material, software, and procedures in order to acquire, to process, to store, and to disseminate information (data, documents, image, sound, etc.) within organization (Reix & Helfer, 1995).

Organizations view investments in information technology as a way to combat competition by improving the productivity, profitability, and quality of operations (Devaraj & Kohli, 2003). Companies with systems for information retrieval and distribution have a powerful structure that supports the organization (Sveiby, 1997). For example, an insurance company with more a advanced information system can solve its customers' problems more efficiently or an airline with a sophisticated ticket booking system enjoys a competitive advantage over other airlines.

Information system investments can be expressed as percentages of sales or in absolute figures and provide valuable clues as to how the internal structure is developing.

However, merely examining the dollars invested in IT may not be an accurate reflection of the effectiveness of an information system because the extent of its usage may vary across industries, firms, or processes. Past studies have generally utilized self-reported usage as an indicator of effectiveness; self-reported usage can provide an important indicator in assessing how well IT is used within an organization. It can also identify IT that is helpful to decision makers and can assist in decisions to expand or curtail future IT investments. However, self-reported usage measures have several limitations (Devaraj & Kohli, 2003). Therefore, it is believed that technology impacts can be assessed both by examining actual and self-reported information technology usage (Devaraj & Kohli, 2003). Additionally, as companies continue to make large investments in information technology, questions have gained importance concerning how and in what contexts such investments pay off. Chari, Devaraj, and David's (2008) findings provide that information technology investments can pay off in the economically significant context of strategic management.

Approaches to information system integration, such as Enterprise Resource Planning systems, which integrates and draws data from a common database, are fundamentally bound with organizational processes. In a study focusing on restaurant chains, Ahrens and Chapman (2004) find that an enabling approach to control systems helped committed employees to do their jobs more effectively offering managers the chance to contribute to objectives for both flexibility and efficiency. While developing the implications of enabling control in the context of management control systems through their analysis of a longitudinal field study, they suggest the potential of the framework to inform future questionnaire-based research looking at the role of management control systems.

As shown in <Table 2.14>, information system capital is analyzed from the viewpoint of information system infrastructure. Measurement indicators are developed in terms of three different aspects: benefits of information system, investment & expenditure on information system infrastructure, and maintenance.

<Table 2.14> Measurement Indicators for Information System Capital

Industry-Contextual Dimensions	Industry-Contextual Measurement Indicators	Reference
Investment & Expenditure on IS	• Investment on IS. infrastructure ($) • Residual value of investment in IS ($) • Expenditure on IS infrastructure ($) • Wages of staff involved in IS planning and development ($)	Sigala (2004) Green & Weaver (2008) Ansel & Dyer (1999) Chari, et al. (2008) Tan & Takakuwa (2008) Chapman & Kihn (2009) Alter (2008) Rosenthal-Sabroux & Grundstein (2008) Ray, Muhanna, & Barney (2005) Devaraj & Kohli (2003) Léger (2010)
Maintenance of IS	• No. of calls (or requests) due to troubles (#) • Average problem solution time (#) • No. of employees who have taken training on IS (#)	

Intellectual Property Capital

Intellectual property provides firms with a wide array of growth opportunities and competitive edge and is a crucial asset for a company to remain competitive (Chang, Hung, & Tsai, 2005; Smith & Hansen, 2002). For example, patents can legally exclude potential entrants from manufacturing and selling the company's patented products (Chang, et al., 2005). In a comprehensive strategy, reasons for patenting have been shown to extend beyond direct profits to blocking, cross licensing, and prevention of law suits (Cohen, Nelson, & Walsh, 2000). Marr (2006, p. 46) addressed that, "intellectual property is an element of organizational knowledge that is owned by the organization and can't walk out at night when everyone goes home. It represents the tools and enablers that help to define and differentiate an organization's unique offering to the markets in which it operates." Intellectual property is referred to as the sum of knowledge assets such as patents, copyrights, trademarks, brands, registered design, trade secrets, and processes for which ownership is granted by law to a company (Brooking, 1999, p. 48; Marr, 2006, p. 46; Roos, et al., 1998, p. 48).

Beside these traditional elements, in recent years, companies have seen more unconventional ones, such as mailing lists, customer databases, and process manuals (Roos,

et al., 1998, p. 48). Intellectual property creation, protection, and utilization is hard to achieve and is a kind of intellectual asset for an organization (Namvar, Fathian, Akhavan, & Gholamian, 2010). In a knowledge economy, intellectual property moves from a legal matter to a strategic issue. When embedded in the core capabilities of a firm, managing intellectual property becomes part of the firm's strategy for how it is going to achieve and sustain an overall rate or return that is attractive to investors (Smith & Hansen, 2002). Bollen, Vergauwen, and Schnieders (2005) asserted that intellectual capital is an important source of an organization's economic wealth and is therefore to be taken into serious consideration when formulating the firm's strategy. This strategy formulation process can be enhanced by fully integrating intellectual property and intellectual capital into management models. Smith and Hansen (2002) argue that intellectual property is strategic only to the extent that it links to the firm's core capabilities and that not all intellectual capital is core to business strategy (Smith & Hansen, 2002).

Bollen et al. (2005) clarified the role of intellectual property as a more tangible part of intellectual capital which is an intermediate link between three other factors of intellectual capital (human, relational, and structural capital) and company performance. This analysis concludes that intellectual property centric strategy, which creates, protects, and utilizes intellectual property, makes an innovative organization and its human capital, relational capital, and structural capital are completely supportive of the three intellectual property centric functions: creation, protection, and utilization. Navar et al. (2010) provided empirical evidence that increasing a firm's performance is positively related to the three elements of intellectual capital (human capital, organizational capital, and customer capital). Gaining more competitive advantages from intellectual property requires more concern for intellectual property rights and characteristics of products. To utilize intellectual property, a product must be unique and difficult to reproduce, and intellectual property rights should prevent the illegal use of the firm's intellectual property. Intellectual property management is every work related to intellectual property creation, protection, and utilization. To manage intellectual property thoroughly, having a true understanding of intellectual property and its changes regarding new technology is important; Knowledge could be tacit

or codified, observable in use or not observable in use, and negative or positive.

As shown in <Table 2.15>, for the measurement of intellectual property capital, two industry contextual sub-dimensions are identified: patents and franchising. Multiple measurement indicators considered to reflect the corresponding industry contextual sub-dimension are provided.

<Table 2.15> Measurement Indicators for Intellectual Property Capital

Industry-Contextual Dimensions	Industry Contextual Measurement Indicators	Reference
Patent Assets	• Total number of patents legally protected (#) • Number of new patents filed (#) • Average periods legally protected (#) • Market value of IPs ($) • Revenue from IPs ($) • Percentage of revenue from IPs (%)	Brooking (1999) Johanson, et al. (2006) Lagrost, Martin, Dubois, & Quazzotti (2010) Lev (2001) Meritum (2002) Moon & Kym (2006) Mouritsen, et al. (2000)
Franchising Assets	• Total number of franchising contracts (#) • Number of new franchising contracts (#) • Average periods contracted (#) • Cash flow from franchising ($) • Percentage of cash flow from franchising (%) • Revenue from franchising ($) • Percentage of revenue from franchising (%)	Grünhagen & Dorsch (2003) Khan (1992) Michael (2000) Parsa (1999) Sen (1998) Srinivasan (2006)

CHAPTER 3: METHODOLOGY

This chapter discusses the methodology and research process employed for this study. The research purpose, unit of analysis, definition of constructs, and research design are discussed in order.

Research Purpose

An organization's intangible assets are generally considered to consist of three dimensions: human resources-centric intangible assets (human capital), relation-centric intangible assets (customer capital), and organization-centric intangible assets (organizational capital). The essential thrust of all intangible asset management and valuation models is to identify key intangible resources and establish their measurement. Many scholars have tried to identify dimensions and components of intangible assets because identifying them helps improve our understanding of what an intangible asset is, and also enables us to apply the concept to a strategic and even operational level (Roos, Roos, Edvinsson, & Dragonetti, 1998).

While the concept of human capital and customer capital has been relatively widely examined in the areas of human resources management and marketing management, the concept of organizational capital remains under-explored and heterogeneous in terms of its primary components (Carmona-Lavado, Cuevas-Rodríguez, & Cabello-Medina, 2010). Additionally, there has been little effort made in the hospitality industry. Therefore, the objective of this research is to identify the key intangible value resources of organizational capital and develop their measurements as a prerequisite for financial valuation of intangible value resources in the hospitality industry, more specifically, focusing on the casual dining restaurant industry. Thus, research questions are as follows:

- *What are the key intangible value resources of organizational capital in the context of the casual dining restaurant industry?*
- *How can one measure the key intangible value resources of organizational capital*

in the context of the casual dining restaurant industry?

• How can a firm's overall organizational capital be measured and compared with those of the other firms in the same industry?

Unit of Analysis

The unit of analysis means the main entity that is being examined for analysis; it is referred to as the "what" or "whom" that is being studied. Defining the problem requires that the researcher determine and specify the unit of analysis for study (Zikmund, 2003).

Even though the Delphi survey employed for this study was administered to individual professional practitioners, the unit of analysis for this study was an individual firm. This study investigated what intangible value resources of organizational capital at a firm's level were considered to significantly contribute to a firm's sustainable competitive advantage and create firm value in the casual dining restaurant industry.

Research Boundary

Bacharach (1989) defined a theory as a statement of relations among concepts within a set of boundary assumptions and constraints which sets the limitation in applying the theory. Dubin (1969) asserted all theories are limited according to their specific boundary assumptions, which include the implicit values of the theorist and the often explicit restrictions regarding space and time. Bacharach (1989) stated that "values are implicit assumptions by which a theory is bounded." Spatial and temporal boundaries are conditions restricting the use of the theory to specific units of analysis (e.g., specific types of organizations) and historical applicability of a theoretical system respectively (Bacharach, 1989). These spatial and temporal boundaries restrain the empirical generalizability of the theory.

As an underlying implicit assumption, it is provided that with the development of information technology, pertinent development of intangibles along with other types of tangible (or financial) assets will result in extraordinary profits, sustainable competitive advantage, and sometimes even temporary monopolies (Conner, 1991; Hitt & Ireland,

1985; Lev, 2001; Prahalad, 1990). Growth and wealth of a firm are driven primarily by a firm's intangible assets.

Based on the discussion of Bacharach (1989) and Dubin (1969), this study's spatial and temporal boundaries were constrained to the current casual dining restaurant industry in Korea. Except multi-national dining restaurant brands (such as TGI Fridays, Bennigan's, or Outback Steakhouse), most Korean local casual dining restaurant brands are small sized. Accordingly, the restaurant firms chosen for this study were local casual dining restaurant firms operating and/or managing at least five units as well as all multi-national dining restaurant brands doing business in Korea.

Definition of Constructs

The definition of primary constructs is provided as follows,

- *Intangible assets*: Defined as "non-physical factors that contribute to, or are used in, the production of goods or provision of services or that are expected to generate future productive benefits for individuals or firms that control the use of those factors" (Blair & Wallman, 2001, p. 9).
- *Intellectual capital*: Defined as "a firm's knowledge, experience, expertise, and associated soft assets, rather than their hard physical and financial capital that increasingly determines their competitive positions" (Klein, 1998, p. 246).
- *Human capital (or Human resources-centric intangible assets)*: This simply refers to individual employees' knowledge, skills, and abilities (Becker, 1964; Schultz, 1961).
- *Organizational capital (or Organization-centric intangible assets)*: It represents institutionalized knowledge and codified experience stored in databases, routines, patents, manuals, structures, and the like (Hall, 1992; Itami & Roehl, 1987; Walsh & Ungson, 1991).
- *Relational capital (or Relation-centric intangible assets)*: Considered the nature of the organization's relationships with all its important stakeholders, such as customers, suppliers, strategic alliances, shareholders, etc (Marr & Adams, 2004).
- *Innovation*: Defined as the creation of new knowledge and ideas to facilitate new business outcomes, aimed at improving internal business processes and structures and to

create market driven products and services (Du Plessis, 2007).

- *Organizational Process*: Defined as patterns of interaction, coordination, communication, and decision making that an organization uses to transform resources into customer value (Afuah, 2004).
- *Organizational Culture:* Defined as patterns of shared values and beliefs over time which produce behavioral norms that are adopted in solving problems (Owens, 1987; Schein, 1990).
- *Organizational learning*: The continuous testing of experience and its transformation into knowledge available to the whole organization and relevant to their mission (Senge, 1990, p. 6).
- *Information system*: An integrated and cooperating set of software directed information technologies supporting individual, group, organizational, or societal goals (Rainer, Turban, & Potter, 2007, p. 9; Watson, Boudreau, Chen, & Huber, 2008).
- *Intellectual property*: Intellectual property is referred to as the sum of knowledge assets such as patents, copyrights, trademarks, brands, registered design, trade secrets, and processes whose ownership is granted to the company by law (Brooking, 1999, p. 48; Marr, 2006; Roos, et al., 1998).
- *Market value*: The market value in this research is defined as the market price of the stock times the number of shares outstanding (Chen, Ho, Hsiao, & Wu, 2010; Lee, Liu, & Zhu, 2008; Mackey, Mackey, & Barney, 2007; Meoli, Paleari, & Urga, 2008)

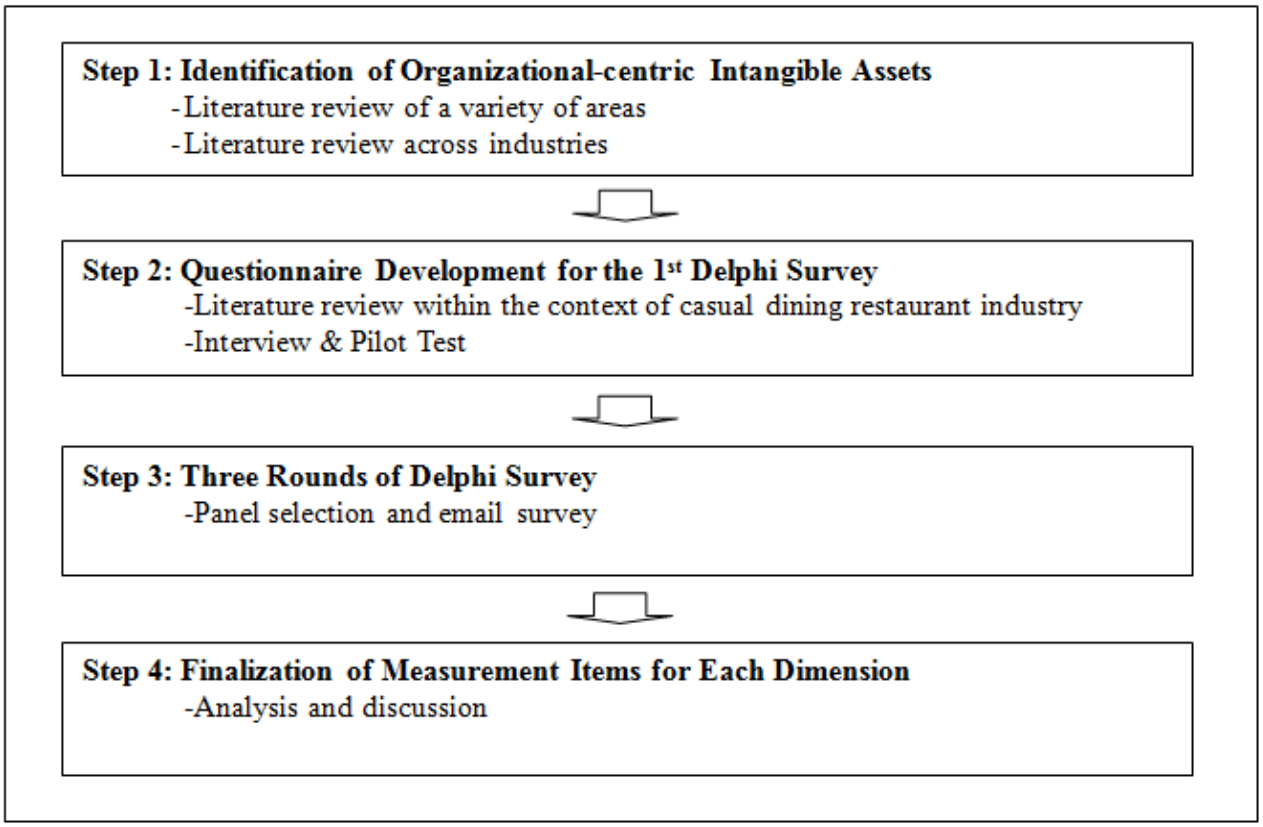
Research Process

As shown in Figure 3.1, this study was administered following the four stages of process: identification of organization-centric intangible value drivers, questionnaire development for the Delphi survey, three rounds of Delphi surveys, and analysis of survey results.

First of all, it is required to identify what specific intangible assets are considered to be critical in terms of organization-centric capital. With the focus on knowledge management and intellectual capital, an in-depth literature review of a variety of

areas, such as strategic management, human resources management, industrial engineering, accounting, finance, etc, has provided six key organization-centric capitals: innovation, organizational process, organizational culture, organizational learning, information system, and intellectual property (see Table 3.1).

<Figure 3.1> Research Process



Second, a list of measurement items operationalized in the casual dining restaurant context was developed based on a number of relevant empirical studies and literature review. Then, specific measurement items needed for the first round of Delphi survey were decided through filtering and modifying by interviews with five professional practitioners. Two primary types of views were considered in creating measurement items: operation-oriented (time and quality) and finance-oriented (Kaplan & Norton, 1996, p. 123). Interviews with five panelists (three industry professionals, one academic, and one research fellow in a research institute) and a pilot test with ten different panels (three academics and

seven industry professionals) were administered to refine and test the final instrument.

Third, the Delphi surveys were administered to casual dining restaurant practitioners and academics, such as company executives, managerial level experts, consultants, and professors. Three rounds of iterations are expected to drive consensus on which intangible value drivers in terms of organization are critical for a firm's sustainable success and what items are optimal for their measurement. At each round, panels were asked to score how important each intangible value driver is for a firm's success and how appropriate each measurement item for the relevant intangible value driver. The group response statistics, mean and median, were provided to all members so that they were allowed to adjust their original responses to help the researcher reach group consensus.

Finally, in addition to the analysis at each round of survey, in-depth analysis and discussion over the driven consensus from survey participants were provided.

Interview and Pilot Test

Because the initial measurement instrument for organization-centric intangible assets was driven primarily by the literature review, it might lack reality and context for the casual dining restaurant industry in Korea. Therefore, through interviews and a pilot test with people who have sufficient industry or academic backgrounds, the measurement instrument was verified and refined.

Interview

Semi-structured interviews (Somekh & Lewin, 2005) were conducted in an effort to narrow the gap between theory, i.e., the academic literature used to develop the instrument, and reality, i.e., the domain of the restaurant industry practitioner. Semi-structured interviews involve the preparation of an interview guide that lists a pre-determined set of questions or issues that are to be explored during an interview (Somekh & Lewin, 2005). This guide serves as a checklist during the interview and ensures that the same basic information is covered with a pool of interviewees. Within the list of topic or subject areas, the interviewer is free to pursue certain questions in greater depth. The

interview guide approach makes interviewing a number of persons more systematic and comprehensive by delimiting the issues that will be covered in the interview.

Out of the fifty expert panelists who previously agreed to participate in the Delphi surveys, eight candidates who were considered to have sufficient knowledge and background in the casual dining restaurant industry in Korea were initially approached to participate in the interview with an explanation of how they were chosen, the purpose of the interview, how the interview would be processed, and how long the interview would take. Out of eight candidates (four practitioners, two academics, one consultant of a consulting firm, and one senior fellow of an economic research institute), three (one practitioner, one academic, and one consultant) became too busy to participate in the interview process.

To those five who agreed to participate in the interview, the author sent the questionnaire survey asking for any comments on measurement items initially developed for each designated construct. The participants were asked to give comments primarily focusing on four aspects of each measurement indicator: (1) whether it is understandable, (2) whether it is valid, (3) whether it is appropriate as a measurement item for the designated construct, and (4) whether any indicators needed to be modified or included. Participants were requested to mark and make comments directly on the survey questionnaire, which was attached to the email, and send it back before the telephone or Skype interview, which helped the interviewer follow up on interviewee's arguments. Each individual interview lasted from thirty to seventy minutes. The information collected from this semi-structured individual interview process was used to improve and test the final instrument for the Delphi rounds. The interview technique prescribes that the investigators collect data that is specifically related to or bolsters the research question and not attempt to conduct an open ended inquiry (Yin, 2009).

Pilot Test

Before proceeding to the main study, it is recommended to pilot test measurement instrument in order to examine the understandability, reliability, and refinement of the measurement scales in the survey (Churchill, 1979; DeVellis, 1991;

Robinson, Wrightsman, & Andrews, 1991). Based on the information collected from a pilot test, the measurement scales were trimmed and refined. Additionally, a pilot test enables researchers to verify the testing instrument and catch potential problems in advance of the main study. Therefore, in this case, the questionnaires were pre-tested among the participants who had sufficient experience or knowledge in the casual dining restaurant industry in Korea, and revisions were made based on their suggestions.

The pilot test, an initial run of a study for the purpose of verifying whether the test itself is well-formulated, collects data from the ultimate subjects of the research project and serves as a guide for the larger study (Zikmund, 2003). Pilot testing may prevent costly mistakes. The primary purpose of pilot testing is generally considered to catch potential problems before they become costly mistakes in the main study, such as wording, instruction, measurement scale and layout. It is typically used if an instrument or method of data collection is being used for the first time or for the first time with a particular group. This smaller version of the formal study is generally utilized for refining techniques, rather than for defining the problem or clarifying the hypothesis (Zikmund, 2003). Pilot testing provides information on how long data collection can be expected to take and gives a preview of how difficult items will be to complete. After several modifications are made based on the pilot test, a questionnaire for the main study is then finalized.

Ten selected Delphi panelists (three academics and seven practitioners) were asked to answer the survey questionnaire and to provide any suggestions with a focus on whether each measurement indicator is understandable, valid, and appropriate. After receiving each completed questionnaire through email, the researcher contacted each participant and asked for his/her suggestions. The collected information was employed to further develop and test the final instrument.

Delphi Research Method

The Delphi method was originally developed by the Rand Corporation as a qualitative research method for the purpose of forecasting by workers (Benarie, 1988; Klassen & Whybark, 1994), and was later enhanced as a group decision-making tool as

well (Cline, 2000). The Delphi method has been regarded as a procedure to "obtain the most reliable consensus of opinion of a group of experts… by a series of intensive questionnaires interspersed with controlled opinion feedback" (Dalkey & Helmer, 1963). It has also been adopted to develop indicators of successful education programs or lists of objectives (Abramson, 1979).

For the Delphi method, a group of experts are employed to investigate a problem or an important issue anonymously, without knowledge about who the other members are and without a direct interaction among the panel members (Dalkey & Helmer, 1963). In particular, it is intended to allow the Delphi survey participants to assess the positive attributes of interacting groups (knowledge from a variety of sources, creative synthesis etc.), while pre-empting their negative aspects (attributable to social, personal, and political conflicts, etc) (Rowe & Wright, 1999). For the successful conduct of the Delphi technique, four key features should be taken into ample consideration: anonymity, iteration, controlled feedback, and the statistical aggregation of group response (Rowe & Wright, 1999).

- 'Anonymity': By using questionnaires, participants are arranged to express their opinions and judgments freely and privately, without interference by dominant individuals. In addition, a series of questionnaires enable participants to change their opinions without being embarrassed by others.
- 'Iteration': The Delphi method consists of several rounds of iteration. Participating experts are allowed to give an opinion for the research by filling out questionnaires in each round and change their previous ideas taking the information of other panel members' opinion into consideration.
- 'Controlled feedback': From the second round, participants are provided with group feedback composed of several forms of statistical data, such as mean, median, and standard deviation.
- "Statistical aggregation of group response:" The degree or strength of the consensus can be identified based on the median of the responses and the extent of the spread of opinion.

This study is purposed to identify key organization-centric intangible value drivers in the context of the casual dining restaurant industry in Korea. The Delphi method provides a more efficient way to collect expert opinions more than any other survey or interview technique. In each round, experts were requested to state their opinions with regard to each intangible value asset and its measurement provided in a survey questionnaire. Based on the group feedback, the participating experts rethought their earlier opinions and provided new thoughts in the subsequent rounds.

Development of Organizational Capital Index (OCI)

Intangible assets are asserted to play a critical role in determining business success or failure; however, measuring and managing these intangible assets and their contribution to a firm's market value have been considered very difficult. Thus, this study focused on the development of index equation, called as 'Organizational Capital Index (OCI)', to help a firm's internal management and to enable a firm to compare its organizational capital more effectively with those of the other firms in the same industry. It can provide a more reliable, more comprehensive way of evaluating a firm's organization-centric intangible capital.

Cap Gemini Ernst & Young's Center for Business Innovation has provided a Value Creation Index (VCI), a quantified performance measurement system allowing intangibles to be linked to firm performance (Kalafut & Low, 2001). The VCI is calculated using multiple measures for intangible value resources. This kind of index serves as a yardstick when computing the impact of intangible value resources or testing their contribution on a firm's market value. One of the biggest advantages of the index approach is that it helps management to quantify the expected effect of a change in the intangible's VCI score on selected firm financial measures as well as the expected effect of a change in any intangible driver on company performance (Kalafut & Low, 2001). Companies can make strategic and capital investment decisions based on quantified predictions, rather than relying on uncertain guesses.

The VCI calculation approach provides a basic idea for the development of the organizational capital index (OCI) for this study. The OCI was developed based on weights

which indicate the relative importance of the six organizational capitals and seventeen sub-dimensional organizational capitals in terms of contribution to a firm's market value.

Relative Importance of the Six Component Capitals for a Firm's Value

To develop the industrywise Organizational Capital Index (OCI), the equation coefficients of six component capitals (α, β, γ, δ, ε, and ζ in the below equation), which indicates the relative level of contribution of each component capital on a firm's market value in the context of casual dining restaurant industry, have to be identified. These equation coefficients are similar to the standardized coefficients (=beta) in multiple regression analysis.

$$\text{OCI} = \alpha\text{*Innovation Capital} + \beta\text{*Organizational Culture Capital} + \gamma\text{*Organizational Process Capital} + \delta\text{*Organizational Learning Capital} + \varepsilon\text{*Information System Capital} + \zeta\text{*Intellectual Property}$$

To identify the standardized coefficients of six component capitals in the above index equation, a 10 point-scale question asking the level of contribution of each component capital on a firm's market value in the context of casual dining restaurant industry was included at the end of the survey questionnaire: "Please indicate the degree to which each of the following capitals contribute on a firm's market value."

Relative Importance of the Sub-dimensions for Each Component Capital

The level of importance for each sub-dimension to the corresponding component capital is different. Therefore, the relative weight of each sub-dimension to the corresponding component capital (α_1, α_2, and α_3 in the below equation for Innovation capital) in the context of the casual dining restaurant industry has to be taken into consideration. For example, innovation capital, one of six component organization-centric capitals, is composed of three sub-dimensions: innovativeness of menu, innovativeness of operation, and R&D management. The equations for each of six organizational capitals, in

terms of the relative importance of the sub-dimensions for each component organizational capital, are as follows,

OCI for Innovation Capital = α_1*(Innovativeness of menu) + α_2*(Innovativeness of operation) + α_3*(R&D management)

OCI for Organizational Process Capital = β_1*(Service operation mgt. process) + β_2*(Procurement & inventory mgt. process) + β_3*(Sales & marketing mgt. process) + β_4*(HRM process)

:

:

:

OCI or Intellectual Property Capital = ζ1*(Patent assets) + ζ2*(Franchising assets)

To identify the industrywise level of contribution of each dimension on a firm's overall innovation capital, a question asking the level of importance of each dimension on a firm's overall innovation capital in the context of casual dining restaurants was included at the end of each section: "Indicate the degree to which each of the following sub-dimensional components contributes on the corresponding organizational capital."

Example for Calculation of OCI (Organizational Capital Index)

The example of how to calculate a firm's OCI for 'intellectual property capital,' using the relative importance of seventeen sub-dimensional capitals ($Weight_3$), is provided in the following <Table 3.1>. The example assumes there are four restaurant companies (Firm 'A', Firm 'B', Firm 'C', and Firm 'D') of interest, and evaluates each company's OCI to find its intellectual property capital, one of six organizational capitals.

First, raw data for the measurement indicators of each company are collected, from public and proprietary sources, including company and industry reports, expert ratings, government filings and special studies, as shown in the four columns on the left side in the table. The industry average of each indicator, the fifth column from the right-hand side in the table, is the average of four companies in this example.

Secondly, the standardization of each measurement indicator to a common scale is carried out by dividing each firm's score by the industry average. The four columns from the right-hand side of the table show the standardized scores of the measurement indicators for each company.

Thirdly, the average of the standardized scores of all measurement indicators under each sub-dimensional capital shows the relative size of the corresponding sub-dimensional organizational capital of each firm. In this example, firm 'C' has relatively bigger patent assets (=1.33) than the other firms. Firm 'A' shows relatively bigger franchising assets (=1.46) than the other three firms.

Fourth, the OCIs of patent assets and franchising assets for each firm can be calculated by multiplying the average scores of all standardized measurement indicators by the weights developed from this study in terms of their contribution to a firm's market value. Here, patent assets = 0.54 and franchising assets = 0.60.

Finally, the OCI for intellectual property capital, which is one of six types of intangible organizational capital, is the sum of the OCIs for patent assets and franchising assets. In terms of contribution to a firm's market value, firm 'A' has the biggest value-contributing intellectual property capital (=1.49) among all companies, followed by firm 'C' (=1.21).

<Table 3.1> Example for Calculation of Organizational Capital Index – Intellectual Property Capital

Measurement Indicators	<Raw Data> Firm 'A'	'B'	'C'	'D'	Industry Average	<Standardized w/ Industry Average> Firm 'A'	'B'	'C'	'D'
Patent Assets									
Total number of patents legally protected (#)	250	150	250	120	193	1.30	0.78	1.30	0.62
Number of new patents filed (#)	10	5	35	15	16	0.62	0.31	2.15	0.92
Average (remained) length of patents (#)	25	30	15	25	24	1.05	1.26	0.63	1.05
Cash flow from patents ($ 1,000)	$ 3,000	$ 1,500	$ 2,500	$ 1,000	$ 2,000	1.50	0.75	1.25	0.50
Average Score of Standardized Measurement Indicators (①)						**1.12**	**0.78**	**1.33**	**0.77**
Weight of Patent Assets (②)							**0.54**		
OCI - Patent Assets (①*②)						**0.61**	**0.42**	**0.72**	**0.42**
Franchising Assets									
Total number of franchising contracts (#)	200	150	100	25	119	1.68	1.26	0.84	0.21
Average (remained) length of franchising contracts (years)	10	8	12	20	13	0.80	0.64	0.96	1.60
Cash flow from franchising ($ 1,000)	$ 7,500	$ 2,500	$ 3,000	$ 1,200	$ 3,550	2.11	0.70	0.85	0.34
Bankruptcy rate of franchising properties (%)	0.20	0.15	0.10	0.20	0.16	1.23	0.92	0.62	1.23
Average Score of Standardized Measurement Indicators (①)						**1.46**	**0.88**	**0.82**	**0.84**
Weight of Franchising Assets (②)							**0.60**		
OCI - Franchising Assets (①*②)						**0.88**	**0.53**	**0.49**	**0.50**
OCI for Intellectual Property Capital						**1.49**	**0.95**	**1.21**	**0.92**

Note:
Raw Data = Scores of each measure indicator, measured with original unit of measure
Industry Average = Industry average of each measurement indicator, average of all four firms in this example.
Standardized w/ Industry Average: Raw Data ÷ Industry Average

Critical Issues for the Delphi Study

For the successful administration of a Delphi study to experts of the casual dining restaurant industry in Korea, several critical issues were taken into ample consideration.

Selection of Expert Panels

The Delphi Method is administered based on a "structured process for collecting and distilling knowledge" through a series of surveys to a pool of experts, along with controlled opinion feedback (Adler & Ziglio, 1996). Regarding the Delphi panelists, the main issues are the selection processes for participating experts and the optimal number of experts in the panel.

For the best results in a Delphi study, the mixture of participants is considered critical to the process (Jones & Twiss, 1978). The expert group can consist of practitioners, academics, and even outside industry experts to achieve the greatest breadth of results and agreement between scholars and industry leaders. In addition, the participant selection process should ensure both a wide range of participants which can provide a wide range of perspectives and a pool of participants in the relevant subject matter (Linstone & Turoff, 1975). Other discussions on this issue suggest that selection should be based on an expert's reputation, publication, and professional track record, either in research or the practitioner community (Bitter-Rijpkema, Martens, & Jochems, 2002) where the selection method should be systematic (Webler, Levine, Rakel, & Renn, 1991).

Thus, for the purpose of this research, the current Korean casual dining restaurant industry was employed as a boundary. The participants for this study were obtained from the population of the restaurant industry in Korea, focusing on casual dining restaurant market segment. This helped control for compounding effects of country, industry, and market segment environments. In addition, a wide range of restaurant industry experts were recruited, which included high-level company managers, executives, academics, or consultants. The Delphi panelists listed in <Table 3.1> are professionals and academics who have expressed their assistance for this study. All received a brief explanation of the research purpose and three rounds of the Delphi process so they would

understand the aim of the Delphi Exercise.

Number of Rounds

Other important concerns related to the Delphi method are the optimal number of rounds. Researchers are advised to pay attention to what happens between rounds of the Delphi study, following up whether the experts change their opinion to agree with the other majority or whether agreement occurs constructively as a result of experts refining their opinion. For this study, all participating panel members were requested to respond to three rounds of surveys. The Delphi surveys were completely anonymous. Although panel members were not known to each other in this study, the participants knew that they were restaurant industry experts.

Number of Panelists

It is recommended that the researcher should use a controllable number of experts in the Delphi panels since the technique is a labor-intensive and time-consuming research method. Even though there is no clear standard for the best number of panels, a group ranging from ten to thirty experts is expected to accomplish the desired results (Delbecq, Van de Ven, & Gustafson, 1975). However, if the panel members are principally heterogeneous, a larger number is recommended to achieve realistic quality (Taylor & Judd, 1989). While, thirty to thirty five panel members are recommended for the study of social issues (Gow, 1979), a group of 20~30 are considered to be appropriate for environmental forecasting (Taylor & Judd, 1989).

Even though there is no guideline to specify the optimal number of panel members to use, it is recommended to include more group members to compensate for those who may drop out between rounds. In addition, the larger the number of group members, the greater the information load. Thus, it is critical to involve enough participants. For this Delphi study, about 50 panel members of high-level company managers, executives, academics, or consultants will be included at the initial point.

<Table 3.2> The Delphi Panelists

Name	Company or Affiliation	Others
Byun, H. J.	A manager in business support team in Taco Bell Korea	• Female / 1983 • 6 years of food service industry experience • Business support team in Taco Bell Korea (1 year) • Business support team in Pizza Story (3 years) • Business support team in VIPS (3 years)
Cha, S. B.	Professor in Sooncheonhyang University	• Male / 1963 / Ph.D. in hospitality management • Professor in Sooncheonhyang University
Cheon,	Property manager of Seafood buffet	• Male / 1971 • 13 years of food service industry experience • Seafood buffet in Taco Bell (3 years) • McDonald's (10 years)
Cho, J. R.	Director in Far Niente, Dolce	• Female / 1967 / Ph.D. Candidate in food service management • 25 years of relevant industry experience. • Hilton Hotel (6 years) • Ramada Hotel (1 year) • LG Ourhome (4 years)
Cho, S. B	Assistant Professor in Chongju University	• Male / 1956 / Ph.D. in hospitality management • 20 years of relevant industry experience • Lotte Hotel (20 years)
Cho, W. H.	President of PIEDMONT	• Owner of Piedmeont restaurants
Choi, H. S.	Director in charge of food service business in Walker Hill	• Male / 1956 / Ph.D. in food service management • 30 years of relevant industry experience • Director of food service division in Walker Hill Co. (9 years) • Director of food service division in LG OurHome (1 year) • F & B in Sheraton Walker Hill Hotel (15 years) • HR team leader of Sheraton Walker Hill Hotel (3 years) • General manger of Walker Hill Airport Hotel (2 years)
Choi, J. M.	CEO of Saemaul chain restaurant	• CEO of Saemaul chain restaurant
Choi, M. Y.	A manger in Tang	• A manager in 'Tang', a chain restaurant brand of Vietnamese food.
Chung, E. H.	Manger of sales team in T.G.I.	• Male / 1967 • 20 years of relevant industry experience • T.G.I. (10 years) • F&B in Swiss Grand Hotel (10 years)
Choi, S. C.	Consultant	• Former CEO in Outback Steakhouse Korea
Eo, Y. S.	Chief of sales department in CJ Freshway	• Male / 1972 / Ph.D. in food service management • 15 years of food service industry experience • Property manger of CJ Freshway (1 year) • Chief of sales department in VIPS (4 years) • Property manger of VIPS (5 years) • Menu development in CJ Food Ville (2 years)

		• CJ Tous Les Jours bakery (1 year) • Owner of an independent restaurant (2 years)
Ham, D. C.	Consultant	• Director in Food Service Consulting
Han, K. S.	A manager in menu development team in Kraze Internal Co.	• Female / 1982 / PhD candidate in food service management • 5 years of food service industry experience • Menu Development in Kraze International Co. (5 years) • Korea Food Research Institute (1year)
Hong, J. H.	Consultant	• Consultant in FIM Korea, a food service consulting company
Ja, Y. I.	F&B Senior manager in Westin Chosun Hotel	• Male / 1964 / Ph.D. in food service management • 22 years of food service industry experience • F&B in Westin Chosun Hotel. • A manager of Japanese restaurants • A manager of Italian restaurant
Jang, Y. J.	Chief researcher in Lotte Economics Research Institute	• Female / 1971 / Ph.D. in food service management • 10 years of relevant industry experience • Chief researcher in Lotte Economics Research Institute (5 years)
Jeon, H. M.	Head of F&B service division in Everone Medical Resort Co.	• Male / 1971 / Ph.D. in food service management • 15 years of food service industry experience • Everone Medical Resort Co. (15 years)
Jeong, D. C.	Sales manager in Yongpyong Resort	• Male / 1978 / MA in food service management • 5 years of relevant industry experience • Sales manager in Yongpyong Resort • Courtyard Marriott Downtown Chicago • F&B in Grand Hilton Hotel
Jeong, D. J.	F & B senior manager in Grand Hilton Hotel	• Male / 1965 / Ph.D. in food service management • 20 years of relevant industry experience • F&B in Grand Hilton Hotel (9 years) • F&B in Swiss Grand Hotel (11 years)
Kim, A. E	Property manager of Starsera in Kangnam	• Male / 1975 • 10 years of food service industry experience • FGF Starsera (2 years) • Japanese restaurant chain ‘Ijakawa’ (1 year) • Restaurant chain ‘Paper Garden’ (7 years)
Kim, B. H.	Manger in Bennigan’s	• Manger in Bennigan’s
Kim, B.	Chef in Grand Intercontinental Hotel	• Male / 1971 / Ph.D. candidate • 16 years of relevant industry experience • Chef in Grand Intercontinental Hotel (16 years)
Kim, B. K.	HR Chief in SunAtFood	• Male / 1969 / MBA • 12 years of HR management experience • HR chief in SunAtFood (4 years) • HR in a foreign company (4 years) • HR in Samsung Co. (4 years)
Kim, H. S.	Chief of menu development team in Buccella	• Male / 1973 / Ph.D. candidate in food service management • 16 years of food service industry experience

		• Department of menu development in Buccella (3 years) • Chef of Chinese food in Riviera Hotel (4 years) • Chef of Chinese food in Ritz-Carlton Hotel (6 years)
Kim, Hans	CEO in Todai Korea	• CEO in Todai Korea, a seafood buffet chain restaurant
Kim, K. H.	Professor in Kyonggi University	• Male / 1960 / Ph.D. in hospitality management • Major: Strategic management and finance in the hospitality industry • 12 years in Kyonggi University
Kim, K. S.	Professor in BIT	• Male / 1964 / Ph.D. in hospitality management • 20 years of relevant industry experience • F&B Grand Hyatt Hotel (20 years) • BIT (3 years)
Kim, K. W.	Deputy head of F&B division in Imperial Hotel	• Male / 1967 / Ph.D. candidate • 20 years of food service industry experience • F&B in Ritz-Carton Hotel (14 years) • F&B business in Imperial hotel (4 years)
Kim, K. Y.	Head of food service in Fradia	• Male / 1969 • 18 years of food service industry experience • Chief of food service in Fradia (4 years) • F&B in Grand Hilton Hotel (14 years)
Kim, M. J.	Director in Hyundai Food Service Consulting	• Male / 1964 / Ph.D. in food service management • 20 years of food service industry experience • Director in Hyundai Food Service Consulting (5 years) • Outback Steak House (10 years) • VIPS (5 years)
Kim, S. R.	Currently, team leader of department of new business development in California Hotel	• Male / 1973/ Ph.D. in hospitality management • 11 years of relevant industry experience • Chief consulting analyst in GISCO (2 years) • Team leader of marketing department in Leader's Club (6 years) • Team leader of new business development in California Hotel (3 years)
Ko, E. S.	Property manager of Bonasera	• Male / 1974 • 10 years of food service industry experience • FGF Foodservice team (2 years) • F&B in Ritz-Carlton Hotel (8 years)
Ko, S. H.	Assistant Professor	• Currently, assistant professor in Sungshin Women's Univ • Female / 1971 / Ph.D. in nutrition • 15 years of relevant industry experience • Nutritionist (12 years) • Wine sommelier
Ko, Y. J.	Vice President in SunAtFood	• Male / 1964 / MBA • 23 years of relevant industry experience • SunAtFood (15 years) • Food business in Doosan Co. (3 years) • Inter Continental Hotel (5 years)
Kwak, Y. C.	Finance chief in SunAtFood	• Male / 1972 • 10 years of relevant industry experience • Finance and accounting in Everland (3 years)

		• Finance and accounting in SunAtFood (7 years)
Lee, A.	Property manager of Starsera in Mokdong	• Male / 1979 • 5 years of food service industry experience • FGF Foodservice team (4 years) • Marche (1 year)
Lee, H. Y.	Head f of business support team in DS Food System	• Male / 1972 • 18 years of food service industry experience • Chief of business support team in Alaska Seafood Buffet Restaurant (4 years) • Business support team in Tribeca (2 years) • Chief of service team in Chuiyoungroo (3 years) • F&B Swiss Grand Hotel (8 years)
Lee, J. C.	Manger in Outback Steak House	• Manger in Outback Steak House
Lee, J. W.	President of Bulgogi Brothers Co.	• President of Bulgogi Brothers Co.
Lee, M. S.	F&B manager in Grand Hilton Hotel	• Female / 1975 / Ph.D. candidate in food service management • 16 years of food service industry experience • F&B in Grand Hilton Hotel (16 years)
Lee, M. H.	Vice president of Mexican food chain, Ontheboard	• Vice president of Mexican food chain, Ontheboard
Lee, S. J.	Professor in Incheon community college	• Female / 1979 / MS in food service management • 6 years of relevant industry experience • Professor in Incheon community college • Wine sommelier • F&B manager in Seoul Hilton Hotel
Nam, C. H.	Chief of food service team in Rebis International Co.	• Male / 1969 / Ph.D. candidate in food service management • 16 years of food service industry experience • FGF food service team (4 years) • F&B in Ritz-Carlton Hotel (13 years)
Noh, S. B.	Leader of Benikea in Korea Tourism Organization	• Male / 1956 • 28 years of relevant industry experience • Leader of Benikea in Korea Tourism Organization • General Manager of a five star hotel (4 years) • Five star hotel (24 years)
Oh, J. M.	Director of sales division	• Male / 1969 • 17 years of food service industry experience • Foodservice industry (17 years)
Seo, H. J.	Chief reporter in Hotel & Restaurant Magazine	• Chief reporter in Hotel & Restaurant Magazine
Shim, K. H	Property Manager	• Property manager in Outback Steakhouse in Korea
Sohn, I. R.	Professor in Chongju University	• Male / 1955 / Ph.D. in hospitality management • 28 years of relevant industry experience • Hotel industry (5 years) • Faculty in university (27 years)
Yoon, T. W.	Planning chief in Pizza Hut	• Male / 1972 • 16 years of food service industry experience

	• Planning chief in Pizza Hut (4 years) • Property manager in Pizza Hut (5 years) • Property manager in Bennigan's (2 years) • Sous Chef in the Land Mark Hotel Ireland (2 years) • F&B in Hilton Hotel (4 years)

Reliability and Validity

The process of agreement among experts raises another important issue: reliability of the Delphi method. Reliability applies when a measure provides consistent results over time and across situations (Zikmund, 2003). Contradictory opinions exist for the Delphi method. While Kastein, Jacobs, van der Hell, Luttik, & Touw-Otten (1993) asserted that the Delphi method has a high level of reliability, Barat (1992) doubted the overall reliability of the Delphi method regarding the participant's ability to see the big picture of the problem under study. To overcome this dilemma, Creswell (1994) commented, "statements about the researcher's positions–the central assumptions, the selection of informants, the biases and values of the researcher–enhance the study's chances of being replicated in another setting" (p. 159). These assumptions, selection, process, and so forth are documented. Other researchers are asked to comment on this documentation and modify the instruments and supporting documentation where it is necessary. The procedures and rules in the research design stage as well as database from this study is maintained and made available for other researchers to test for reliability.

The Delphi is administered based upon the assumption of safety in numbers (i.e. several people are less likely to drive a wrong decision than a single individual). Decisions are then strengthened by reasoned argument in which assumptions are challenged, thus helping to enhance validity (Hasson, Keeney, & McKenna, 2000). Threats to validity arise principally from pressures for convergence of predictions (Hill & Fowles, 1975) which undermines the Delphi's forecasting ability. However, the use of participants who have knowledge and an interest in the topic helps to increase the content validity of the Delphi (Goodman, 1987) and the use of successive rounds of the questionnaire helps to increase the concurrent validity.

Language Translation

When translating survey questions into another language, it allows for the possibility of different meanings of questions across languages. Researchers are required to maintain the intended meaning of the questions and matching the semantic content and structure across languages in both questions. Thus, survey questionnaires originally developed in English are translated into Korean and then translated back into English to ensure equivalence. As recommended by Adler (1983) and Sekaran (1983), the translation and back-translation were conducted by different bilingual researchers who were fluent in both English and Korean.

Method of analysis

In this study, simple descriptive statistics were used to analyze the scores of every item in the measurement instrument; the mean and median were used to measure central tendency, and the standard deviation was used to assess variability in terms of the participants' opinion. The mean is the average of all the scores. The median is the midpoint of all the scores in rank order. The standard deviation is the spread of how far each score is from the mean. After each of the first and second rounds, the scores were analyzed, and the respondents were asked to reconsider their previous ratings based on the provided statistical information (i.e., mean and median) of the previous round. Helmer (1983) asserted, "Statistically speaking, successive Delphi rounds tend to produce not only convergence, but also convergence towards the true value" (Helmer, 1983, p. 150). Individuals without strong feelings tend to move their scores closer to the mean and median while those with strong feelings are likely to keep their initial ratings (Helmer, 1983). In each round, participants were asked to state their level of agreement regarding whether each organizational intangible capital provided in the survey contributes to a casual restaurant firm's value and whether the measurement indicators that were developed for each organizational intangible capital are optimal.

The determination of consensus was made through the evaluation of the final (i.e., third) round data. The approach used to measure agreement consensus was the least-

developed component of the Delphi method (Crisp, Pelletier, Duffield, Adams, & Nagy, 1997; Rayens & Hahn, 2000). This varies from study to study depending on the type or characteristics of each individual study. Delphi studies in the area of medical science tend to adopt relatively more conservative cutoff criteria than those in social science; for example, a frequency of 67% or higher (i.e., 70%, 75%, 80%, or 90%) was used for the agreement inclusion in a medical study using yes-no response categories (Alexandrov, Pullicino, Meslin, & Norris, 1996; Holloway, et al., 2001; Zaher & AlSokair, 2008). However, in the areas of social science or education, relatively generous cutoff criteria are employed, such as the mid-point on the 5 or 7 point Likert scales (Clark & Wenig, 1999; Katsioloudis, 2007; Lunkenheimer, 2002; Mack, 2011). Thus, for this study, the mean cutoff value of 4.00, the mid-point on the 7 point Likert scale, was adopted to determine the quality measurement indicators to be retained for organization-centric intangible assets. In this study, standard deviation was used to identify the consensus among the participants for each measurement item. Those items with a standard deviation of 1.0 or below were considered to be in consensus among participants (Daud, Ismail, & Omar, 2010; Kaye, et al., 2010; Murphy, 2006; Tokar & Brown, 1996). If a participant's response is more than cutoff standard deviation value, then they are not considered to reach a consensus.

Focuses and Cutoff Criteria

The focuses and cutoff decision criteria adopted for research procedures were as follows.

- 'Interview with 5 panels': Those measurement indicators which two or more interviewees were positive with were retained in the questionnaire. Addition of new suggested indicators was determined with careful deliberation of the author and research advisor.
- 'Pilot test with 10 panels': Test was conducted focusing on whether measurement indicators were understandable, valid, and appropriate. And mean and standard deviation of each measurement indicator were examined in advance before moving to the main Delphi survey rounds.

- ‘The 1st Delphi survey’: 7 Likert-type scale response ranging from 1 (strongly disagree) to 7(strongly agree) was adopted.
- ‘The 2nd Delphi survey’: Mean & median for each measurement indicator in the 1st round were provided for panels to reconsider their previous answer.
- ‘The 3rd Delphi survey’: Mean & median for each measurement item in the 2nd round were provided for panels to reconsider their previous answer. As discussed in the previous section, among the indicators with a mean value of 4.00 or above, when S.D. was less than ‘1.0’, it was considered to reach consensus.

CHAPTER 4: RESULTS

The present study was purposed to explore the key intangible value drivers as the components of organization-centric intangible assets (organizational capital) and develop their measurements in the context of the casual dining restaurant industry in Korea. Furthermore, this study focuses on the development of index, called the Organizational Capital Index (OCI), to help a firm's internal management and to enable a firm to compare its organizational capital more effectively with those of other firms in the same industry.

Due to the exploratory and qualitative characteristics of this study, a detailed explanation of all the processes conducted as well as their results is required. Firstly, the procedures and results of interviews with five panels, performed to refine the measurement instrument items, are presented. Secondly, the results of a pilot test conducted to test and refine the final instrument are explained. Finally, all detailed procedures and results of the three rounds of Delphi surveys are provided.

Interview with Five Selected Study Panelists

Interview Purpose

Since the initial measurement instrument for the organization-centric intangible assets was driven to some degree by literature review, it may lack reality or context for the casual dining restaurant industry in Korea. Therefore, through interviews with people who are considered to have sufficient industry or academic backgrounds, the measurement instrument was refined.

Interview Panel

It is important to have a mixture of participants in the process with an emphasis on the advantages of a small, highly motivated group (Jones & Twiss, 1978). Interview participants were recruited from a wide breadth of areas, such as practitioners, academics, fellows of research institutes, or consultants of hospitality management consulting firms.

Out of the fifty expert panelists who previously agreed to participate in the Delphi surveys, eight candidates who were considered to have sufficient knowledge and background in the casual dining restaurant industry in Korea were initially approached to participate in the interview: four practitioners, two academics, one consultant of a consulting firm, and one fellow of an economic research institute. Three of them (one practitioner, one academic, and one consultant) became too busy to participate in the interview process. Five out of the eight agreed to participate in the interview, and their profiles are provided in <Table 4.1>.

<Table 4.1> The Profile of the Interview Panel

Name	Selected Background	Others	Interview
Chang, K. R.	• Age: 58 • 35 years of food service industry experience • Currently, executive director of Pizza Hut in Korea	PhD in food service management	Skype (Twice) 50 minutes
Nam, C. H.	• Age: 43 • Almost 20 years of industry experience in the food service industry • Worked at F&B division in Ritz Carlton for 15 years • Currently, working as a general manager in local brand casual dining restaurants.	PhD candidate in food service management	Telephone (Three times) 70 minutes
Joo, H. O.	• Age: 41 • 13 years of experience in the food service industry • Currently, working as a property manager of Outback	MS in food service management	Skype (Once) 30 minutes
Jang, Y. J.	• Age: 37 • Currently, working at LOTTE Economic Research Institute • Primary research area is food service industry	PhD in food service management	Telephone (Twice) 40 minutes
Cha, S. B.	• Age: 50 • Currently, a professor at Soonchunhyang University • Research focus is food service management	PhD in hospitality management	Telephone (Twice) 45 minutes

Interview Procedures

Eight interview candidates were selected and contacted with an explanation of how they were chosen, the purpose of the interview, how the interview would be processed, and how long the interview would take. To those five who agreed to participate in the interview,

the author sent the questionnaire survey asking for any comments on measurement items initially developed for each designated construct. The participants were asked to give comments primarily focusing on four aspects of each measurement indicator: (1) whether it is understandable, (2) whether it is valid, (3) whether it is appropriate as a measurement item for the designated construct, and (4) whether any indicators needed to be modified or included.

Participants were requested to mark and make comments directly on the survey questionnaire, which was attached to the email, and send it back before the telephone interview, which helped the interviewer follow up on interviewee's arguments. Each interview lasted from thirty to forty five minutes. Each interview began by discussing the measurement indicators for innovation capital. When moving to a different dimensional capital, the author first explained what that capital (e.g., innovation capital) meant and asked for an interviewee's opinion on the indicators developed to measure it. Basically, the author tried to understand what an interviewee meant and not lead her/him to a particular answer. The author asked questions when an interviewee's comments were not clear.

According to the recommendation by the Institute for Social Research of the University of Michigan (1976) for increasing respondent's receptiveness to the interview, at the initial contact point, the author politely explained to the respondents who the author was and that the intent of the interviews conducted by the researcher was to gather information.

Modification Criteria

It is generally recommended that a number of items be generated that "tap the domain of the construct," that the items be screened by judges with expertise in the literature, and that pilot tests on samples from relevant populations be conducted to trim and refine the pool of items (Churchill, 1979; DeVellis, 1991; Robinson, Wrightsman, & Andrews, 1991). Furthermore, shorter and simpler items are generally easier to respond to and are more reliable (Carmines & Zeller, 1979; Churchill, 1979; Churchill & Peter, 1984; Converse & Presser, 1986; Sudman & Bradburn, 1982). Thus, items should be representative of the construct that they are proposed to measure, and they should be easy

to respond to (i.e., avoid jargon or difficult wording, double-barreled items, and ambiguous wording).

For measurement development, in addition to the requirements of validity and reliability of scales, parsimony should be taken into consideration by developing multiple items (Patrick & Chiang, 2000). As the number of items increases, measurement reliability will tend to increase, and because parsimony is also a concern in measurement (Carmines & Zeller, 1979; Clark & Watson, 1995), an important consideration is to minimize the overlapped items.

Basically, interviewees were allowed to freely comment on those items they thought were not suitable for measurement in the context of the casual dining restaurant industry in Korea. A modification decision was made in three ways: (1) correction without losing the original meaning of an indicator, (2) removal of an indicator that was considered invalid or inappropriate, and (3) addition of an indicator that was considered missing in the list.

Since the initial list of measurement indicators was developed primarily based on literature review, it could lack the context of the casual dining restaurant industry in Korea. When it comes to correction decisions, the author tried to accept the interviewee's correction recommendation as long as they did not change the original meaning of an item severely, such as a wording change or a combination of multiple similar items into one item. When it comes to removal decisions, since the panel is composed of relatively small number of five interviewees, to prevent any biases from one interviewee's skewed opinion, those items that two or more of interviewees negatively responded to (such as invalid or inappropriate) were removed from the list of measurement indicators. And addition of new suggested indicators was determined with careful deliberation of the author and research advisor.

Interview Results

Research Question One and Two: Identification of Organizational Capital & Development of Measurement Scales

Modification of measurement items was conducted based on a variety of comments from interviewees, keeping the modification criteria discussed in the previous section. The process for modification is explained by focusing on each of six sub-dimensions of organization-centric capital respectively.

Innovation Capital

First, for the sub-dimension of 'Innovativeness of Menu,' it was recommended by Jang, Y. that the overlapping items, with regard to sales and menu items, be modified into one item, which meets the parsimony principle in measurement development: 'Sales increase attributable to new menus ($)' and 'Ratio of sales attributable to new menus (%)'→ 'Sales increase attributable to new menus items ($)'; 'Number of newly introduced menus (#)' and 'Ratio of new menus out of total menus (%)' → 'Number of newly introduced menu items (#).' Two interviewees mentioned it might be very hard to obtain clear-cut numbers for sales increase attributable to newly introduced menus and new ideas suggested for menu items. However, the others expressed that sales increase was accessible because all orders made by customers were automatically archived in the database and the number of new ideas suggested was also attainable as long as a firm cooperated. Further, with regard to the item, 'Number of new ideas adopted for product (#),' Cha, S. recommended that the item reflect the quality of all suggested ideas. Thus, it was revised to 'Ratio of adopted ideas out of total ideas suggested for menu items (%).'

Secondly, for the sub-dimension of 'Innovativeness of Service Operation,' 'Sales increase attributable to a newly introduced services' was removed because two interviewees argued that it was very hard to clearly know whether the sales increase came from new services or other factors (e.g., a special event or promotion). 'Number of new ideas adopted for service (#)' was revised to 'Ratio of adopted ideas out of total suggested ideas (%).'

Thirdly, with regard to the sub-dimension of 'R&D Management,' since R&D-related departments are primarily designated to develop new menus, the wording of 'Number of projects~' used in three indicators was altered to 'Number of menus~.' Two

overlapping items, 'Number of projects conducted in R&D-related departments (#)' and 'Number of projects adopted," were combined into 'Number of new menus developed by R&D-related departments.' According to the recommendation, one new item, 'Average tenure of R&D staffs,' was included.

<Table 4.2> Modification - Innovation Capital

Interviewees' Comments	Modification Decision
Innovativeness of Menu	
<Jang, Y> • Number of newly introduced menus (#) • Ratio of new menus out of total menus (%) ➔Overlapped items • Sale increase attributable to new menus ($) • Ratio of sales attributable to new menus (%) ➔ Overlapped items • Average time required to introduce a new menu (#) ➔ Change it into 'new menu introduction cycle'? • Number of new ideas suggested for product (#) ➔ Per employee? **<Joo, H.>** • Number of new ideas suggested for product (#) ➔ Hard to obtain it. **<Nam, C.>** • Sale increase attributable to new menus ($) • Ratio of sales attributable to new menus (%) ➔ Hard to get clear-cut numbers. **<Cha, S.>** • Number of new menus (#) ➔ Need to specify 'period,' such as a year or past three years • Number of new ideas suggested for product (#) ➔ Include 'ratio of adopted ideas out of suggested ideas' to measure quality of suggested ideas **<Chang, K>** • Average time required to introduce a new menu (#) ➔Little relevance to innovativeness.	**<Modification>** • Sale increase attributable to new menus ($) • Ratio of sales attributable to new menus (%) ➔ Combined into one item, 'Sale increase attributable to new menu items ($)' • Number of newly introduced menus (#) • Ratio of new menus out of total menus (%) ➔ Combined into one item, 'Number of newly introduced menu items (#)' • Number of new ideas adopted for product (#) ➔ 'Ratio of adopted ideas out of total ideas suggested for menu items (%)' • Average time required to introduce a new menu (#) ➔ 'Average time required to introduce a new menu item over the last three years (#)'
Innovativeness of Service Operation	
<Joo, H. & Nam, C.> • Sales attributable to new services ($) ➔Hard to know whether the increase of sales comes from new	**<Removal>** • Sales attributable to new services ($)

services or other factors: menu or promotion. **<Nam, C.>** • Sales attributable to new services ($) ➔Instead of this, include 'Impact of new service on customer satisfaction (#)' by assessing results before and after. **<Jang, Y.>** • Number of new services (#) • Sales attributable to new services ($) ➔For what specific period? **<Cha, S.>** • Number of new services (#) ➔For what specific period? ➔Include 'ratio of adopted ideas out of suggested ideas'	**<Modification>** • Number of new ideas adopted for service (#) ➔ 'Ratio of adopted ideas out of suggested ideas' • Average time required to introduce a new service (#) ➔ 'Average time required to introduce a new service over the last three years (#)'
R&D Management	
<Jang, Y. & Chang, K.> ➔Seems no big difference between 'R&D' and 'menu development,' overlapped with the items of menu development. ➔Include 'average tenure of R&D staffs' or 'experience years of staffs in the area of R&D' **<Cha, S.>** • Number of projects conducted in R&D-related departments (#) • Number of projects adopted (#) ➔Need to specify 'period' such as for the past X amount of years	**<Modification>** • Number of projects conducted in R&D-related departments (#) • Number of projects adopted (#) ➔ Combined into 'Number of new menus items developed by R&D-related departments' • Ratio of adoption out of total projects conducted (%) ➔ 'Ratio of adoption of menu items developed by R&D-related departments' **<Addition>** • Average tenure of R&D staffs

Organizational Process Capital

Firstly, for the sub-dimension of 'Service Operation Management Process,' since any accident raised in the middle of service operation may cause a firm severe loss (e.g., food poisoning, employee injury, or fire), it is very critical for a firm to establish more systemized procedures or programs to prevent accidents beforehand. Thus, 'Number of accidents' is included to measure a firm's capacity for accident prevention.

Secondly, among the measurement items for 'Procurement & Inventory Management Process,' three indicators were removed. 'Theft ratio (%)' and 'Leftover rate (%)' were removed from the list because inventory theft and leftover product are very rare

and hard to track. 'Ratio of margin (%)' was taken out of the list since it was considered an inappropriate indicator for the procurement and inventory management process. To measure quality of supply companies, three items were added: 'Order fill rate (=rate of order completion) (%), 'Line item fill rate (=rate of completion of line items in order) (%), and 'Backorder rate (=rate of orders waiting to be filled) (%)'

Thirdly, when it comes to the measurement items for 'Human Resources Management Process,' two indicators, 'Numbers of reward programs (#)' and 'Number of performance-recognition activities (#),' were removed because these numbers were considered invalid by three interviewees (Chang, K., Jang, Y., and Cha, S). Additionally, another item 'Investment (or cost) on reward programs or activities ($)' was considered adequate to reflect the aspect of a firm's reward system. Two items with regard to the efficiency of the recruiting process, 'Competition rate of recruitment (%)' and 'Days required from job-posting to recruiting (#),' were removed as well since they are very changeable according to how long the application period is.

<Table 4.3> Modification - Organizational Process Capital

Interviewees' Comments	Modification Decision
Service Operation Management Process	
<Cha, S.> ➔ Need to include 'accident rate of employees'	**<Addition>** • Number of accidents (#)
<Chang, K.> • Average cooking time required (#) ➔ Not sure because cooking time depends primarily on the status of food supplies, e.g., fully raw, half-processed, or fully-processed.	**<Removal>** • Average cooking preparation time required per menu item (#)
<Jang, Y.> ➔ Include 'Number of complaints per employee (%)'	
Procurement & Inventory Mgt. Process	
<Jang, K. & Nam, C.> • Theft rate (%) ➔ Not much and hard to measure • Ratio of margin (%) ➔ Not relevant with the procurement and inventory management process	**<Removal>** • Theft rate (%) • Leftover ratio (%) • Ratio of margin (%)

<Joo, H. & Nam, C> • Leftover (%) ➔Unclear and not used in Korea	**<Addition>** • Order fill rate (=rate of order completion) (%) • Line item fill rate (=rate of completion of line items in order) (%) • Backorder rate (=rate of order waiting to be filled) (%)
Sales & Marketing Management Process	
<Nam, C.> • Cannibalization effect of new promotions ➔Very desirable if it is possible to measure. But very hard.	Nil
Human Resources Management Process	
<Chang, K., Jang, Y., & Cha. S.> • Number of reward programs (#) • Number of performance-recognition activities (#) ➔ Not appropriate and hard to count / Overlapped with 'Investment on reward programs or activities ($)' **<Jang, Y. and Chang. K.>** • Competition rate of recruitment (%) ➔Not meaningful/changeable according to the application submission period allowed. **<Joo, H., Chang, K., Cha, S. & Jang, Y>** • Days required from job posting to recruiting (#) ➔ Very arbitrary/overlapped with 'Average time required for supplementing the needs (#)'	**<Removal>** • Number of reward programs (#) • Number of performance-recognition activities (#) • Competition rate of recruitment (%) • Days required from job posting to recruiting (#) **<Addition>** • Investment in reward / performance-recognition programs ($)

Organizational Culture Capital

Firstly, when it comes to the sub-dimension of 'Leadership Culture,' two items that measure the numbers of leadership programs and leadership campaign activities were combined into 'Number of leadership-promoting activities (or programs) supported by a company (#)' since it was very hard to clearly distinguish them. 'Number of leadership program participants (#)' was revised to 'Ratio of leadership program participants out of total employees (%).'

Secondly, for the sub-dimension of 'Employee's Membership Culture,' since most companies in Korea, in order to strengthen the unity and membership of employees, usually provide a diversity of pep rallies at company or property levels (e.g., an athletic meet, picnic, hiking, or after-work dining and drinking) rather than rewards, 'Number of reward programs (#)' and 'Number of performance-recognition activities (#)' were combined and

revised to 'Number of pep rallies to strengthen the unity (#).'

Thirdly, in the list of measurement indicators for 'Service-Oriented Culture,' two new items were included: 'Average time required for handling a complaint (#)' to assess the speed of complaint handling.

Fourthly, for the sub-dimension of 'Teamwork Culture,' two items, 'Number of inter-department meetings (#)' and 'Ratio of working time used in other departments (%),' were removed since they were invalid and meaningless in the restaurant industry. In the same context of the earlier discussion, because it is very hard and meaningless to distinguish teamwork-oriented programs from activities, 'Number of teamwork-orientation programs (#)' and 'Number of teamwork-orientation activities (#)' were combined into one item, 'No. of teamwork-oriented programs or activities (#).'

<Table 4.4> Modification - Organizational Culture Capital

Interviewees' Comments	Modification Decision
Leadership Culture	
<Jang, Y.> • Number of leadership program participants (#) ➔ Better to modify it to 'Rate of participants out of total employees (%)' • Number of leadership programs supported by a firm (#) • Number of leadership campaign activities (#) ➔ Hard to distinguish leadership programs and campaigns **<Cha, S.>** ➔ Any entrepreneurship activities?	**<Modification>** • Number of leadership program participants (#) ➔ 'Ratio of leadership program participants out of total employees (%)' • Number of leadership programs supported by a firm (#) • Number of leadership campaign activities (#) ➔ 'Number of leadership-promoting activities (or programs) supported by a company (#)'
Employees' Membership	
<Nam, C. & Joo, H.> • Number of reward programs (#) ➔ Better to modify it into 'Number of rallies to strengthen the unity' **<Jang, K.>** ➔ 'Size of fringe benefit per employee in dollar amount ($)'	**<Modification>** • Number of reward programs (#) • Number of performance-recognition activities (#) ➔ 'Number of pep rallies to strengthen the unity (#)'
Service-Oriented Culture	

<Chang, K> Include 'Average time spent to clear a complaint'	**<Addition>** • Average time required for handling a complaint
<Joo, H.> • Average number of visits per customer a year: annual email survey (#) ➔Possible only for CRM members	
<Jang, Y.> ➔ Include 'Rate of revisit through CRM' or 'Rate of CRM cost among total cost'	
Teamwork Culture	
<Jang, Y. & Chang, K.> • Number of inter-department meetings (#) • Ratio of working time used in other departments (%) ➔Very hard to track and count/meaningless	**<Removal>** • Number of inter-department meetings (#) • Ratio of working time used in other departments (%)
<Jang, Y.> • Number of collaborative projects (#) ➔Revenue increase attributable to collaborative projects ➔Cost saving attributable to collaborative projects	**<Modification>** • Frequency of teamwork-orientation programs (#) • Frequency of teamwork-orientation activities (#) ➔ Combined into one item, 'No. of teamwork-oriented programs or activities (#)'

Organizational Learning Capital

For the sub-dimension of 'Knowledge Sharing,' interviewees expressed there were too many detailed indicators compared to those of other capitals. Therefore, the notionally overlapped items were combined. Especially those items that distinguished online from offline education programs were combined: 'Number of educational programs available (#)' and 'Number of virtual courses available (#)' → 'Number of education (or online) programs available (#)'; Number of employees who have taken education programs (#)' and 'Number of employees who have taken virtual courses (#)' → 'Number of employees who have taken education programs (#)'; 'Investment on education programs ($)' and 'Investment on online educational courses ($)' → 'Investment in education programs (#).' Four interviewees negatively commented on the indicators that measure numbers of inter- or intradepartmental meetings since they were very hard to track and even meaningless. Thus, these two items were removed from the list.

The most measurement indicators initially designed for a firm's 'Flexible

Adaptability' in the context of organizational learning capital were controversy among interviewees. Interviewees commented most indicators were very hard to obtain. Since the indicators that include 'key internal or external value drivers' were very difficult for the survey participants to grasp, they were removed from the list. Two items, 'Number of success cases shared on the intranet (#)' and 'Number of failure cases shared on the intranet (#)' were also removed due to the same reasons that they were unclear and unobtainable. Additionally, two items considered very hard to track and measure were removed: 'Number of updated knowledge documents (#)' and 'Proportion of updated knowledge documents (%),' which are more meaningful in the manufacturing industry.

Since strategic plans must work well in environments and represent adaptive responses to the critical changes occurring within environments, 'Frequency of evaluation of strategic planning (#)' was included. By the same token, since it is highly important for firms to identify changes in customers' preferences, 'Frequency of customer preference survey (#)' was added. Restaurant firms respond to the changes in the market using a variety of promotions and new menu items, 'Promotion objective achievement ratio (%)', 'Ratio of sales from newly introduced menu items compared to total sales', and 'Change in market share (%)' were additionally included.

<Table 4.5> Modification - Organizational Learning Capital

Interviewees' Comments	Modification Decision
Knowledge Sharing	
< Nam, C. & Chang, K.> • Number of interdepartmental meetings (#) • Number of intradepartmental meetings (#) ➔Maybe possible at headquarter, but not at property	**<Modification>** • Number of educational programs available (#) • Number of virtual courses available (#) ➔ Combined into one item, 'Number of education (or online) programs available (#)'
<Jang, Y. & Chang, K.> • Number of interdepartmental meetings (#) • Number of intradepartmental meetings (#) ➔Many kinds of meetings with many different purposes, not only for knowledge sharing. ➔Need to provide specific period, a year or three years?	• Number of employees who have taken education programs (#) • Number of employees who have taken virtual courses (#) ➔ Combined into one item, 'Number of employees who have taken education programs (#)'

<Chang, K.>

➔Include 'rate of education cost among total cost'

<Cha, S.>

➔Too many items

- Investment in education programs ($)
- Investment in online educational courses ($)
  ➔ Combined into one item, 'Investment in education programs (#)'

- Number of participants on the discussion board of intranet (#)
- Number of replies on the discussion board of intranet (#)
  ➔ Combined into one item, 'Ratio of replies on the intranet discussion board out of all employees (#)'

<Removal>

- Number of interdepartmental meetings (#)
- Number of intradepartmental meetings (#)

Flexible Adaptability

<Jang, Y>

- Number of success cases shared on the intranet (#)
- Number of failure cases shared on the intranet (#)
  ➔Same context/combine them.

<Cha, S. & Chang, K.>

- Number of updated knowledge documents (#)
- Proportion of updated knowledge documents (%)
  ➔Too wide and very hard to track and measure

<Joo, H.>

- Difference between the forecast and the actual value of key external value drivers (#)
  ➔A little ambiguous

<Nam, C. & Chang, K>

- Difference between the forecast and the actual value of key external value drivers (#)
- Difference between the forecast and the actual value of key internal value drivers (#)
  ➔Very unclear and impossible to obtain.
- Ratio of project success (%)
  ➔Company will never release this negative information.

<Chang, K.>

- Number of views of the success and failure cases on the intranet (#)
  ➔Not sure whether it is possible.

<Removal>

- Number of success cases shared on the intranet (#)
- Number of failure cases shared on the intranet (#)
- Number of updated knowledge documents (#)
- Proportion of updated knowledge documents (%)
- Difference between the forecast and the actual value of key external value drivers (#)
- Difference between the forecast and the actual value of key internal value drivers (#)

<Addition>

- Frequency of evaluation of strategic planning (#)
- Frequency of customer preference survey (#)
- Change of market share (%)
- Promotion objective achievement ratio (%)
- Ratio of sales from newly introduced menu items compared to total sales (%)

Information System Capital

When it comes to the measurement indicators for information system capital, interviewees gave relatively fewer comments than the other capitals. However, 'Residual value of investment on informational system ($)' was removed since it was considered irrelevant.

<Table 4.6> Modification - Information System Capital

Interviewees' Comments	Modification Decision
Efficiency of Info. System	
<Joo, H.> • Revenue increase attributable to the investment on information system ($) ➔Seems a little hard to measure	**Nil**
Consistent Investment on Info. System	
<Nam, C> • Residual value of investment on informational system ($) ➔Hard to standardize because each company has different depreciation standards within the possible range, such as 3 or 5 years according to items **<Cha, S.>** • Residual value of investment on informational system ($) ➔Irrelevant	**<Removal>** • Residual value of investment on informational system ($)

Intellectual Property Capital

Firstly, for the sub-dimension of 'Patent Assets,' since it is practically very hard to assess the market value of each patent, 'Market value of intellectual properties' was removed from the list. Secondly, for the sub-dimension of 'Franchising Assets,' two items, 'Cash flow from franchising ($)' and 'Percentage of cash flow from franchising (%),' were combined into 'Cash flow from franchising ($).' However, two items with regard to revenues from franchising were removed since they overlapped with the other items of cash flow from franchising, and the notion of cash flow is much more applicable to both direct and indirect franchising management. According to the recommendation of two interviewees, two new items were included: 'Growth rate of franchising contracts (%)' and 'Bankruptcy rate of franchising properties (%).'

<Table 4.7> Modification - Intellectual Property Capital

Interviewees' Comments	Modification Decision
Patent Assets	
<Joo, H. & Chang, K.> • Market value of IPs ($) ➔Hard to measure	**<Removal>** • Market value of IPs ($)
Franchising Assets	
<Chang, K.> ➔Include 'growth rate of franchising contracts (%)' ➔Two kinds of franchising: direct and indirect management. So, cash flow from franchising is better than revenue from franchising. **<Jang, Y>** • Cash flow from franchising ($) • Percentage of cash flow from franchising (%) ➔Overlapped with 'Revenue from franchising ($)' and 'Percentage of revenue from franchising (%)' **<Cha, S & Jang, K.>** ➔Include 'bankruptcy rate of franchising properties' **<Nam, C. & Joo, H.>** • Cash flow from franchising ($) • Percentage of cash flow from franchising (%) • Revenue from franchising ($) • Percentage of revenue from franchising (%) ➔Very hard to obtain this information. Company may even provide fake information about the above items.	**<Modification>** • Cash flow from franchising ($) • Percentage of cash flow from franchising (%) ➔Combined into 'Cash flow from franchising ($)' **<Removal>** • Revenue from franchising ($) • Percentage of revenue from franchising (%) ➔Combined into 'Cash from franchising ($) **<Addition>** • Growth rate of franchising contracts (%) • Bankruptcy rate of franchising properties (%)

Pilot Test with Ten Selected Delphi Panelists

Before proceeding to the main study, a pilot study was conducted to examine the understandability, reliability, and refinement of the measurement scales in the survey. Based on the information collected, the measurement scales were revised.

Pilot Test Purpose

Before proceeding to the main study, a pilot test was conducted to examine the understandability, reliability, and refinement of the measurement scales in the survey. Based on the information collected from a pilot test, the measurement scales were refined. Additionally, a pilot test enabled researchers to examine the results of the main study in advance. Even though the measurement instrument initially developed in English went through the processes of translation and back-translation by different bilingual researchers who were fluent in both English and Korean and was modified after interviews with industry experts, it was expected that some of the questions might not be interpreted in the intended way. Therefore, the questionnaires were pre-tested among participants and revised based on the suggestions of the participants who were considered to have sufficient experience or knowledge in the casual dining restaurant industry in Korea.

The pilot test, an initial run of a study for the purpose of verifying whether the test itself is well-formulated, collects data from the ultimate subjects of the research project and serves as a guide for the larger study (Zikmund, 2003). Pilot testing may prevent costly mistakes. The primary purpose of pilot testing is generally considered to catch potential problems before they become costly mistakes in the main study, such as wording, instruction, measurement scale and layout. It is typically used if an instrument or method of data collection is being used for the first time or for the first time with a particular group. This smaller version of the formal study is generally utilized for refining techniques, rather than for defining the problem or clarifying the hypothesis (Zikmund, 2003). Pilot testing provides information on how long data collection can be expected to take and gives a preview of how difficult items will be to complete. After several modifications are made

based on the pilot test, a questionnaire for the main study is then finalized.

Pilot Test Procedures

The pilot test was conducted between March 22 and March 24, 2011 through e-mail and telephone. Ten selected Delphi panelists (three academics and seven practitioners) were asked to answer the survey questionnaire and to provide any suggestions with a focus on whether each measurement indicator is understandable, valid, and appropriate. After receiving each completed questionnaire through email, the researcher contacted each participant and asked for his/her suggestions. The collected information was employed to trim and refine the measurement indicators.

Out of the fifty expert panelists who had previously agreed to participate in the Delphi surveys, twelve candidates who were considered to have sufficient knowledge and background of the casual dining restaurant industry in Korea were initially approached to participate in the pilot test: seven practitioners, four academics, and one consultant of a consulting firm. Two of them (one academic and one consultant) became too busy to participate in the pilot test within the designated time. Ten out of the twelve agreed to participate in the pilot test.

Pilot Test Panel

Among the participants, three were professors whose primary research area was strategic management or food service management, and seven were restaurant industry professionals who had on average 15 years of industry experience. Their brief profiles are provided in <Table 4.8>.

<Table 4.8> Profile of Pilot Test Panel

Name	Selected Background	Others
Kim, K. H.	• Professor of Kyonggi Univ. in Korea • Research interest in strategic management in hospitality management	Ph.D. in hospitality management
Cho, S. B.	• Professor of Chongju Univ. in Korea • 20 years of industry experience	Ph.D. in hospitality management

	• Research interest in hospitality management	
Choi, H. S.	• Professor of Busan Information Tech Univ. in Korea • 20 years of industry experience	Ph.D. in food service management
Ko, Y, J,	• Vice President of 'SunAtFood' in Korea • 23 years of industry experience	MBA
Yun, T. W.	• Chief of Planning Dept. in 'Pizza Hut Korea' • 17 years of industry experience	MBA
Eo, Y. S.	• A property manager of 'CJ Freshway' in Korea • 15 years of industry experience	Ph.D. in food service management
Kim, K. Y.	• Department Head of 'Fradia' in Korea • 18 years of industry experience	MS in hospitality management
Kwak, Y. C.	• Head of Accounting and Finance. in 'SunAtFood' in Korea • 10 years of industry experience	
Byun, H. J.	• A manager of Sales Support Team in 'Taco Bell' in Korea • 7 years of industry experience	
Kim, H. S.	• Head of Menu Development Team in 'Buccella' in Korea • 13 years of industry experience	Ph.D. candidate in food service management

Pilot Test Result

Research Question One and Two: Identification of Organizational Capital & Development of Measurement Scales

Innovation Capital

As shown in <Table 4.9>, the mean values of all indicators were higher than 4, satisfying one of the cutoff criteria for the main Delphi survey (Clark & Wenig, 1999; Katsioloudis, 2007; Lunkenheimer, 2002; Mack, 2011). However, the standard deviations of most indicators were a little bigger than 1, the consensus criterion for the main Delphi survey. However, all items were determined to stay in the measurement scale for the next Delphi survey, as standard deviation and mean values tend to fluctuate very sensitively to even one outlier in this small sample size of ten and standard deviations of most indicators were just slightly higher than 1. Additionally, several wording changes were made to improve readability of indicators and clarity of instructions.

Two indicators were suggested: 'Ratio of investment in new menu items to revenue (%)' for innovativeness of menu by Kim, H. S. and 'Lasting period of newly introduced

service (#)' for innovativeness of service operation by Kim, K. W. However, none of them were added in the measurement scale; 'Ratio of investment in new menu items to revenue (%)' is already included in the measurement items for R & D management and 'Lasting period of newly introduced services (#)' is somewhat contradictory because newly added services do not have a period to count.

<Table 4.9> Pilot Test Result - Innovation Capital

Measurement Indicators	Mean	Median	S.D.
<Innovativeness of Menu>			
Number of newly introduced menu items (#)	5.92	6.0	0.93
Sales increase attributable to new menu items ($)	6.04	6.0	0.86
Number of ideas suggested for menu items (#)	4.46	5.0	1.53
Ratio of adopted ideas out of total suggested ideas for menu items (%)	4.50	5.0	1.72
Average time required to introduce a new menu item over the last three years (#)	4.33	4.5	1.46
<Innovativeness of Service Operation>			
Number of newly introduced services (#)	5.17	5.0	1.49
Number of new ideas suggested for services (#)	4.83	5.0	1.34
Ratio of adopted ideas out of total suggested ideas for service (%)	5.42	5.5	1.32
Average time required to introduce a new service over the last three years (#)	4.54	5.0	1.53
<R&D Management>			
Number of new menu items developed by R&D related departments (#)	5.75	6.0	1.07
Ratio of adoption of menu items developed by R&D related departments (%)	5.54	6.0	1.22
Ratio of R&D investment to revenue (%)	5.33	5.5	1.49
Number of employees in R&D-related departments (#)	4.38	5.0	1.28
Average tenure of R&D staffs (#)	5.00	5.0	1.32
Contribution of Each Sub-dimension on Innovation Capital (%)			
<Innovativeness of Menu>	39.46 %	40.00 %	9.21
<Innovativeness of Service Operation>	34.71 %	35.00 %	8.76
<R & D Management>	26.25 %	27.50 %	9.00

Note: n=10

***Organizational Process Capital*:**

The mean value (m=3.96) of one indicator, 'Average number of industry-relevant certificates per person (#),' was slightly lower than 4, the mid-point of the 7-Likert scale. On the other hand, all the other indicators showed higher mean values than 4. The standard deviation of most measurement indicators was slightly larger or smaller than 1. However,

all items were determined to stay in the measurement scale for the next Delphi survey because of the same reason discussed in the previous section: the high sensitivity of mean and standard deviation values to any outlier, given this small sample size of ten.

'Ratio of imported supplies (%),' which was suggested for procurement & inventory management process, was not included because it is very hard for a firm to distinguish imported supplies from domestic supplies since most of them are provided by domestic suppliers.

<Table 4.10> Pilot Test Result – Organizational Process Capital

Measurement Indicators	Mean	Median	S.D.
<Service Operation Management Process>			
Average time required from order to service (#)	6.17	6.0	0.82
Number of customers served per employee (#)	5.79	6.0	1.41
Average cooking time required per menu item (#)	5.33	6.0	1.61
Number of accidents (#)	4.17	4.0	1.71
<Procurement & Inventory Management Process>			
On-time rate of delivery (%)	5.79	6.0	1.22
Order fill rate (=rate of order completion) (%)	6.25	6.5	0.97
Line item fill rate (=rate of completion of line items in order) (%)	6.19	6.0	0.98
Backorder rate (=rate of orders waiting to be filled) (%)	5.91	6.0	1.20
Average length of contracts with external suppliers (#)	5.38	6.0	1.38
Food cost ratio (%)	6.25	6.5	0.94
Inventory turnover rate (%)	6.04	6.0	1.00
Number of suppliers (#)	4.75	5.0	1.75
<Sales & Marketing Management Process >			
Sales management: Achievement ratio of sales plan (%)	6.50	7.0	0.72
Sales management: Average sale performance per an employee ($)	5.75	6.0	1.26
Promotion: Revenue increase attributable to sales promotions ($)	5.96	6.0	1.04
Promotion: Ratio of promotion expenditure to the increased revenue (%)	5.58	6.0	1.38
<Human Resources Management Process>			
Ratio of job offer acceptance (%)	5.00	5.0	1.62
Average number of industry-relevant certificates per person (#)	3.46	3.5	1.35
Average expenditure for training per person ($)	5.54	6.0	1.22
Average time taken for supplementing the vacancy personnel (#)	5.13	5.0	1.30
Labor cost ratio (%)	6.00	6.5	1.38
Investment in reward / performance-recognition programs ($)	5.58	6.0	1.35
Contribution of Each Sub-dimension on Organizational Process Capital (%)			
<Service Operation Management Process>	26.50 %	25.0 %	5.94
<Procurement & Inventory Management Process>	22.04 %	20.0 %	5.97
<Sales & Marketing Management Process>	24.33 %	25.0 %	5.00
<Human Resources Management Process>	27.54 %	25.5 %	9.20

Note: n=10

***Organizational Culture Capital*:**

The mean values of all indicators are higher than 4, ranging from 5.17 to 6.13. And the standard deviation of most measurement indicators is somewhat larger than 1, ranging from .95 to 1.58. However, all items were determined to stay in the measurement scale for the next Delphi survey because of the same reason discussed in the previous sections. Only several wording changes were made to improve readability.

Two indicators for service-oriented culture were suggested by participants: 'Number of customers per employee (#)' by Eo, Y.S. and 'Ratio of new customers to total (%)' by and Yun, T.W. The former, 'Number of customers per service employee (#)', was not included because it could overlap with one existing item, 'Revenue per service employee ($)', in terms of an individual employee's performance concerning customer service. The more customers an employee serves, the more revenue he / she earns. Since service-oriented culture is referred to as a firm's accumulated atmosphere to some degree, 'Ratio of new customers to total (%)' was not included.

<Table 4.11> Pilot Test Result - Organizational Culture Capital

Measurement Indicators	Mean	Median	S.D.
<Leadership Culture>			
No. of leadership programs (or campaign activities) supported by a company (#)	5.50	6.0	1.18
Ratio of leadership program participants out of total employees (%)	5.21	6.0	1.44
Investment on leadership-related programs or activities ($)	5.42	6.0	1.38
<Employees' Membership>			
Average years of tenure (#)	6.13	6.0	0.95
Annual turnover rate (%)	5.96	6.0	1.27
Number of pep rallies to strengthen the unity (#)	5.08	5.0	1.06
Investment on reward programs or activities ($)	5.71	6.0	1.27
Number of employees who received company-presenting awards (#)	4.88	5.0	1.30
<Service-oriented Culture>			
Average number of visits per customer (#)	5.88	6.0	1.23
Average time required for handling a complaint (#)	5.67	6.0	1.58
Length of years since establishment of customer relationship management system (#)	5.17	5.5	1.34
Number of customers in customer relationship management system (#)	5.63	6.0	1.17

Revenue per service employee ($)	5.33	6.0	1.17
<Teamwork Culture>			
Number of collaborative projects (#)	5.21	5.0	1.22
Number of teamwork-orientation programs and activities (#)	5.38	5.0	1.13
Investment in teamwork-related programs or activities ($)	5.29	6.0	1.30
Contribution of Each Sub-dimension on Organizational Culture Capital (%)			
<Leadership Culture>	26.17	25.0 %	6.16
<Employees' Membership>	23.50	20.0 %	6.12
<Service-oriented Culture>	30.13	30.0 %	6.85
<Teamwork Culture>	20.42	20.0 %	6.06

Note: n=10

***Organizational Learning Capital*:**

The mean values of all indicators are higher than 4, ranging from 4.67 to 6.12 and the standard deviation of all measurement indicators is somewhat larger than 1, ranging from 1.02 to 1.40. However, all items were determined to stay in the measurement scale for the next Delphi survey because of the same reason discussed in the previous sections. No new indicators were suggested. Only a few wording changes were made to improve readability.

<Table 4.12> Pilot Test Result - Organizational Learning Capital

Measurement Indicators	Mean	Median	S.D.
<Knowledge Sharing>			
Number of shared (knowledge) documents in the intranet (#)	5.29	5.5	1.40
Number of shared knowledge database (gigabytes) (#)	4.67	5.0	1.20
Number of (or online) education programs available (#)	5.46	6.0	1.35
Number of employees who have taken (or online) education programs (#)	5.58	6.0	1.06
Investment in education programs ($)	5.54	6.0	1.02
Ratio of replies on the intranet discussion board out of all employees (%)	4.79	5.0	1.64
<Flexible Adaptability>			
Frequency of evaluation of strategic planning (#)	5.38	6.0	1.11
Change of market share (%)	6.12	6.0	1.02
Promotion objective achievement ratio (%)	6.04	5.5	1.21
Frequency of customer preference survey (#)	5.99	5.5	1.20
Ratio of sales from newly introduced menu items compared to total sales (%)	6.00	6.0	1.24
Contribution of Each Sub-dimension on Organizational Culture Capital (%)			
<Knowledge Sharing>	48.46 %	50.0 %	12.18
<Flexible Adaptability>	51.54 %	50.0 %	12.18

Note: n=10

Information System Capital

The standard deviation of all measurement indicators is somewhat higher than 1, ranging from 0.92 to 1.44. Likewise, the mean values of all indicators are larger than 4, ranging from 5.17 to 5.58. All items were determined to stay in the measurement scale. No new indicators were suggested. Only a few wording changes were made to improve readability.

<Table 4.13> Pilot Test Result - Information System Capital

Measurement Indicators	Mean	Median	S.D.
<Investment & Expenditure on Information System>			
Investment in informational system infrastructure ($)	5.58	6.0	1.06
Expenditure in informational system infrastructure ($)	5.38	5.0	0.92
Wages of staff involved in information systems planning and development ($)	5.04	5.0	1.00
<Maintenance of Information System>			
Number of requests for fix or repair (#)	5.17	5.0	1.37
Average time of problem solution (#)	5.54	6.0	1.44
Number of employees who have taken training on information system (#)	5.33	5.5	1.13
Contribution of Each Sub-dimension on Information System Capital (%)			
<Investment & Expenditure on Information System>	50.46 %	50.0 %	9.25
<Maintenance of Information System>	49.54 %	50.0 %	9.25

Note: n=10

***Intellectual Property Capital*:**

Although the standard deviation of most measurement indicators was almost 2, ranging from 1.56 to 2.00, which is relatively higher than that for the other organizational capitals, the mean values of all indicators are larger than 4 (the mid-point of the 7-Likert scale), ranging from 4.96 to 6.08. All items were determined to stay in the measurement scale. No new indicators were suggested. Only a few small wording changes were made to improve readability.

<Table 4.14> Pilot Test Result - Intellectual Property Capital

Measurement Indicators	Mean	Median	S.D.
<Patent Assets>			

Total number of patents legally protected (#)	5.25	6.0	1.96
Number of new patents filed (#)	5.21	6.0	1.86
Average (remained) length of patents (#)	4.96	5.0	1.83
Cash flow from patents ($)	5.50	6.0	1.77
<Franchising Assets>			
Total number of franchising contracts (#)	5.33	6.0	1.88
Growth rate of franchising contracts (%)	5.50	6.0	2.00
Average (remained) length of franchising contracts (#)	5.63	6.0	1.56
Cash flow from franchising ($)	6.08	7.0	1.59
Bankruptcy rate of franchising properties (%)	5.21	5.5	1.89
Contribution of Each Sub-dimension on Intellectual Property Capital			
<Patent Assets>	45.21 %	40.0 %	19.59
<Franchising Assets>	54.79 %	60.0 %	19.59

Note: n=10

Research Question Three: Organizational Capital Index

Weight of Component Organizational Capitals

Out of six organizational capitals, innovation capital and organizational process capital were considered to contribute the most to a firm's value (see Weight[1] in Table 4.15). Further, information system capital was ranked the least contributive to a firm's value.

The relative weight of sub-dimensional components under each organizational capital (Weight[2]), measured using the question 'Divide 100 points based on its contribution on the corresponding organizational capital', better explains which component is more important in each organizational capital. For example, regarding innovation capital, innovativeness of menu was ranked the most important component.

<Table 4.15 > Weight of Each Organizational Capital and Sub-dimensional Capital

Organizational Centric Capitals	Weight[1]	Sub-dimensions	Weight[2]
Innovation Capital	0.817	Innovativeness of Menu	0.393
		Innovativeness of Service Operation	0.346
		R&D Management	0.261
Organizational Process Capital	0.817	Service Operation Management Process	0.264
		Procurement & Inventory Management Process	0.220
		Sales & Marketing Management Process	0.242

		Human Resources Management Process	0.274
Organizational Culture Capital	0.813	Leadership Culture	0.261
		Employees' Membership Culture	0.234
		Service-oriented Culture	0.301
		Teamwork Culture	0.204
Organizational Learning Capital	0.788	Knowledge Sharing	0.505
		Flexible Adaptability	0.495
Information System Capital	0.779	Investment & Expenditure on Information System	0.505
		Maintenance of Information System	0.495
Intellectual Property Capital	0.783	Patent Assets	0.452
		Franchising Assets	0.548

Note: Weight1 is the degree of contribution of each organizational capital on a firm's market value, standardized at '1'
Weight2 is the proportion of contribution of each sub-capital on the corresponding organizational capital.

The question, 'Divide 100 points based on its contribution on the corresponding organizational capital', was determined to be changed to 'Please indicate the degree to which each of the following sub-dimensional components contributes on the corresponding organizational capital' on a 10-point Liker-type scale. This modification enabled a comparison among all 17 sub-dimensions in terms of their contribution to a restaurant firm's market value as well as a comparison among the sub-dimensions in terms of the contribution to each respective organizational capital. For example, when it comes to the three sub-dimensional components of innovation capital—innovativeness of menu, innovativeness of service operation, and R&D management—the innovativeness of menu was perceived to contribute the most to innovation capital (Weight2 = 0.39).

However, using the 100-point division question, the sub-dimensions of innovational capital were not compared with those of the other five organizational capitals in terms of their contribution to a restaurant firm's market value. For example, according to the existing 100-point division, the innovation of menu (0.321=0.817*0.393) or the sales & marketing management process (0.198=0.817*0.242) was interpreted to contribute less to a firm's market value than the maintenance of the information system (0.386=0.779*0.495), which was caused by a different number of sub-dimensions in each organizational capital. Therefore, the modification of the question from the 100-point division to a 10-point Likert

scale enabled a comparison among the 17 sub-dimensions in terms of their contribution to a firm's value.

Three Rounds of Delphi Surveys

The Delphi surveys were administered to casual dining restaurant practitioners and academics, such as company executives, managerial level experts, consultants, and professors. Three rounds of iterations are expected to drive consensus on which intangible value drivers in terms of organization are critical for a firm's sustainable success, what items are optimal for their measurement, and how much each organizational capital contributes to a firm's market value. The group response statistics, mean and median, were provided to all members so that they were allowed to adjust their original responses in order to help the researcher reach group consensus. Eight out of ten pilot test participants, who showed interests and agreed to stay in this research, were included in the Delphi panel.

First Round of Delphi Survey

Before distributing the first survey to the fifty Delphi panelists who had previously agreed to participate in the survey, the researcher contacted each of them via phone and requested they finish the survey and return it within three days. A reminder call was made on the day before the deadline date. Thirty-six usable surveys were collected.

Second Round of Delphi Survey

The second survey was distributed only to the thirty-six panelists who participated in the first survey. Before distributing the second survey, the researcher contacted each of them again via phone and explained the mean and median of each indicator. They were asked to finish the second survey and return it within three days. Thirty-four usable surveys were collected within the deadline.

<Table 4.16> Delphi Survey Participants

Name	Company or Affiliation	Others	1st Delphi (n=36)	2nd Delphi (n=34)	3rd Delphi (n=30)
Byun, H. J.	A manager in business support team in Taco Bell Korea	• Female / 1983 • 6 years of food service industry experience • Business support team in Taco Bell Korea (1 year) • Business support team in Pizza Story (3 years) • Business support team in VIPS (3 years)	Yes	Yes	
Cha, S. B.	Professor in Sooncheonhyang University	• Male / 1963 / Ph.D. in hospitality management • Professor in Sooncheonhyang University	Yes	Yes	Yes
Cheon, H. S.	A property manager of Seafood buffet	• Male / 1971 • 13 years of food service industry experience • Seafood buffet in Taco Bell (3 years) • McDonald's (10 years)	Yes	Yes	
Cho, J. R.	Director in Far Niente, Dolce	• Female / 1967 / Ph.D. Candidate in food service management • 25 years of relevant industry experience. • Hilton Hotel (6 years) • Ramada Hotel (1 year) • LG Ourhome (4 years)	Yes	Yes	
Cho, S. B	Assistant Professor in Chongju University	• Male / 1956 / Ph.D. in hospitality management • 20 years of relevant industry experience • Lotte Hotel (20 years)	Yes	Yes	Yes
Cho, W. H.	President of PIEDMONT	• Owner of Piedmeont restaurants			
Choi, H. S.	Director in charge of food service business in Walker Hill	• Male / 1956 / Ph.D. in food service management • 30 years of relevant industry experience • Director of food service division in Walker Hill Co. (9 years) • Director of food service division in LG OurHome (1 year) • F & B in Sheraton Walker Hill Hotel (15 years) • HR team leader of Sheraton Walker Hill Hotel (3 years) • General manger of Walker Hill Airport Hotel (2 years)	Yes	Yes	Yes
Choi, J. M.	CEO of Saemaul chain restaurant	• CEO of Saemaul chain restaurant			

Choi, M. Y.	A manger in Tang	• A manager in 'Tang', a chain restaurant brand of Vietnamese food.			
Chung, E. H.	Manger of sales team in T.G.I.	• Male / 1967 • 20 years of relevant industry experience • T.G.I. (10 years) • F&B in Swiss Grand Hotel (10 years)			
Choi, S. C.	Consultant	• Former CEO in Outback Steakhouse Korea			
Eo, Y. S.	Chief of sales department in CJ Freshway	• Male / 1972 / Ph.D. in food service management • 15 years of food service industry experience • Property manger of CJ Freshway (1 year) • Chief of sales department in VIPS (4 years) • Property manger of VIPS (5 years) • Menu development in CJ Food Ville (2 years) • CJ Tous Les Jours bakery (1 year) • Owner of an independent restaurant (2 years)	Yes	Yes	Yes
Ham, D. C.	Consultant	• Director in Food Service Consulting			
Han, K. S.	A manager in menu development team in Kraze Internal Co.	• Female / 1982 / PhD candidate in food service management • 5 years of food service industry experience • Menu Development in Kraze International Co. (5 years) • Korea Food Research Institute (1year)	Yes	Yes	
Hong, J. H.	Consultant	• Consultant in FIM Korea, a food service consulting company			
Ja, Y. I.	F&B Senior manager in Westin Chosun Hotel	• Male / 1964 / Ph.D. in food service management • 22 years of food service industry experience • F&B in Westin Chosun Hotel. • A manager of Japanese restaurants • A manager of Italian restaurant	Yes	Yes	Yes
Jang, Y. J.	Chief researcher in Lotte Economics Research Institute	• Female / 1971 / Ph.D. in food service management • 10 years of relevant industry experience • Chief researcher in Lotte Economics Research Institute (5 years)	Yes	Yes	Yes
Jeon, H. M.	Head of F&B service division in Everone Medical Resort Co.	• Male / 1971 / Ph.D. in food service management • 15 years of food service industry experience • Everone Medical Resort Co. (15 years)	Yes	Yes	Yes

Jeong, D. C.	Sales manager in Yongpyong Resort	• Male / 1978 / MA in food service management • 5 years of relevant industry experience • Sales manager in Yongpyong Resort • Courtyard Marriott Downtown Chicago • F&B in Grand Hilton Hotel	Yes	Yes	Yes
Jeong, D. J.	Manager in Grand Hilton Hotel	• Male / 1965 / Ph.D. in food service management • 20 years of relevant industry experience • F&B in Grand Hilton Hotel (9 years) • F&B in Swiss Grand Hotel (11 years)	Yes	Yes	Yes
Kim, A. E	Property manager of Starsera in Kangnam	• Male / 1975 • 10 years of food service industry experience • FGF Starsera (2 years) • Japanese restaurant chain 'Ijakawa' (1 year) • Restaurant chain 'Paper Garden' (7 years)	Yes	Yes	Yes
Kim, B. H.	Manger in Bennigan's	• Manger in Bennigan's			
Kim, B.	Chef in Grand Intercontinental Hotel	• Male / 1971 / Ph.D. candidate • 16 years of relevant industry experience • Chef in Grand Intercontinental Hotel (16 years)	Yes	Yes	Yes
Kim, B. K.	HR Director in SunAtFood	• Male / 1969 / MBA • 12 years of HR management experience • HR chief in SunAtFood (4 years) • HR in a foreign company (4 years) • HR in Samsung Co. (4 years)	Yes	Yes	Yes
Kim, H. S.	Chief of menu development team in Buccella	• Male / 1973 / Ph.D. candidate in food service management • 16 years of food service industry experience • Department of menu development in Buccella (3 years) • Chef of Chinese food in Riviera Hotel (4 years) • Chef of Chinese food in Ritz-Carlton Hotel (6 years)	Yes	Yes	Yes
Kim, Hans	CEO in Todai Korea	• CEO in Todai Korea, a seafood buffet chain restaurant			
Kim, K. H.	Professor in Kyonggi University	• Male / 1960 / Ph.D. in hospitality management • Major: Strategic management and finance in the hospitality industry • 12 years in Kyonggi University	Yes	Yes	Yes
Kim, K. S.	Professor in BIT	• Male / 1964 / Ph.D. in hospitality management	Yes	Yes	Yes

		• 20 years of relevant industry experience • F&B Grand Hyatt Hotel (20 years) • BIT (3 years)			
Kim, K. W.	Deputy head of F&B division in Imperial Hotel	• Male / 1967 / Ph.D. candidate • 20 years of food service industry experience • F&B in Ritz-Carton Hotel (14 years) • F&B business in Imperial hotel (4 years)	Yes	Yes	Yes
Kim, T. S.	Head of planning department in Fradia	• Male / 1969 • 15 years of food service industry experience • Chief of food service in Fradia (5 years) • F&B in Grand Hilton Hotel (10 years)	Yes	Yes	Yes
Kim, M. J.	Director in Hyundai Food Service Consulting	• Male / 1964 / Ph.D. in food service management • 20 years of food service industry experience • Director in Hyundai Food Service Consulting (5 years) • Outback Steak House (10 years) • VIPS (5 years)	Yes	Yes	Yes
Kim, S. R.	Currently, team leader of department of new business development in California Hotel	• Male / 1973/ Ph.D. in hospitality management • 11 years of relevant industry experience • Chief consulting analyst in GISCO (2 years) • Team leader of marketing department in Leader's Club (6 years) • Team leader of new business development in California Hotel (3 years)	Yes	Yes	Yes
Ko, E. S.	Property manager of Bonasera	• Male / 1974 • 10 years of food service industry experience • FGF Foodservice team (2 years) • F&B in Ritz-Carlton Hotel (8 years)	Yes	Yes	Yes
Ko, S. H.	Assistant Professor	• Currently, assistant professor in Sungshin Women's Univ • Female / 1971 / Ph.D. in nutrition • 15 years of relevant industry experience • Nutritionist (12 years) • Wine sommelier	Yes	Yes	Yes
Ko, Y. J.	Vice President in SunAtFood	• Male / 1964 / MBA • 23 years of relevant industry experience • SunAtFood (15 years)	Yes	Yes	Yes

		• Food business in Doosan Co. (3 years) • Inter Continental Hotel (5 years)			
Kwak, Y. C.	Finance director in SunAtFood	• Male / 1972 • 10 years of relevant industry experience • Finance and accounting in Everland (3 years) • Finance and accounting in SunAtFood (7 years)	Yes	Yes	Yes
Lee, A.	Property manager of Starsera in Mokdong	• Male / 1979 • 5 years of food service industry experience • FGF Foodservice team (4 years) • Marche (1 year)	Yes	Yes	Yes
Lee, H. Y.	Head of business support team in DS Food System	• Male / 1972 • 18 years of food service industry experience • Chief of business support team in Alaska Seafood Buffet Restaurant (4 years) • Business support team in Tribeca (2 years) • Chief of service team in Chuiyoungroo (3 years) • F&B Swiss Grand Hotel (8 years)	Yes	Yes	Yes
Lee, J. C.	A manger in Outback Steak House	• A manger in Outback Steak House			
Lee, J. W.	President of Bulgogi Brothers Co.	• President of Bulgogi Brothers Co.			
Lee, M. S.	F&B manager in Grand Hilton Hotel	• Female / 1975 / Ph.D. candidate in food service management • 16 years of food service industry experience • F&B in Grand Hilton Hotel (16 years)	Yes	Yes	Yes
Lee, M. H.	Vice president of Mexican food chain, Ontheboard	• Vice president of Mexican food chain, Ontheboard			
Lee, S. J.	Professor in Incheon community college	• Female / 1979 / MS in food service management • 6 years of relevant industry experience • Professor in Incheon community college • Wine sommelier • F&B manager in Seoul Hilton Hotel	Yes		
Nam, C. H.	Chief of food service team in Rebis International Co.	• Male / 1969 / Ph.D. candidate in food service management • 16 years of food service industry experience • FGF food service team (4 years)	Yes	Yes	Yes

		• F&B in Ritz-Carlton Hotel (13 years)			
Noh, S. B.	Leader of Benikea in Korea Tourism Organization	• Male / 1956 • 28 years of relevant industry experience • Leader of Benikea in Korea Tourism Organization • General Manager of a five star hotel (4 years) • Five star hotel (24 years)	Yes	Yes	Yes
Oh, J. M.	Director of sales division	• Male / 1969 • 17 years of food service industry experience • Foodservice industry (17 years)	Yes		
Seo, H. J.	Chief reporter in Hotel & Restaurant Magazine	• Chief reporter in Hotel & Restaurant Magazine			
Shim, K. H	Property Manager	• Property manager in Outback Steakhouse in Korea			
Sohn, I. R.	Professor in Chongju University	• Male / 1955 / Ph.D. in hospitality management • 28 years of relevant industry experience • Hotel industry (5 years) • Faculty in university (27 years)	Yes	Yes	Yes
Yoon, T. W.	Planning Director in Pizza Hut	• Male / 1972 • 16 years of food service industry experience • Planning chief in Pizza Hut (4 years) • Property manager in Pizza Hut (5 years) • Property manager in Bennigan's (2 years) • Sous Chef in the Land Mark Hotel Ireland (2 years) • F&B in Hilton Hotel (4 years)	Yes	Yes	Yes

Third Round of Delphi Survey

The final survey was distributed only to the thirty four panelists who had participated in the second survey. Before distributing the final survey, the researcher contacted each panelist again via phone and asked them to finish and return it within the following five days. Thirty usable surveys were collected.

Delphi Survey Participants

Those who participated in all three rounds of surveys were composed of twenty one restaurant industry professionals who had on average 15 years industry experience, six professors whose primary research area was food service management or strategic management, one consultant, and two research fellows of research institute. Their brief profiles are provided in <Table 4.16>

Information for participants in the Delphi panel is illustrated in <Table 4.17>. Of the 50 panelists initially recruited, 30 (60%) participated in the final round of the survey. Since more than 50% of panelists in most categories participated, the results were considered to be little influenced by non-participants.

<Table 4.17> Participation Rate According to Types of Delphi Panelists

Delphi Panelists	Number	Participants	Non-participants
Director level	12	5 (42%)	7 (58%)
Managerial Level	22	15 (68%)	7 (32%)
Professor	7	6 (86%)	1 (14%)
Consultant	4	1 (25%)	3 (75%)
Chef	2	2 (100%)	0 (0%)
Researcher	2	1 (50%)	1 (50%)
Reporter	1	0 (0%)	1 (0%)
Total	50	30 (60%)	20 (40%)

Final Delphi Survey Result

Research Question One and Two: Identification of Organizational Capital & Development of Measurement Scales

Innovation Capital

Since all five indicators developed to measure innovativeness of menu satisfied the cutoff criteria (mean > 4.00 and standard deviation < 1.0), they were all retained for the measurement scale. Among the five indicators, 'Number of newly introduced menu items (#)' and 'Sales increase attributable to new menu items ($)' were the two most-highly agreed indicators for menu innovativeness (Mean/S.D. = 5.40/0.72 and 5.87/0.63, respectively).

With regard to innovativeness of service operation, all four indicators developed to measure firms' innovativeness of service operations satisfied the cutoff criteria. Thus, they were all retained for the measurement scale. Among the four indicators, 'Number of newly introduced services (#)' and 'Ratio of adopted ideas out of total suggested ideas for service (%)' were the two most-highly agreed indicators for innovativeness of service operation (Mean/S.D. = 5.13/0.63 and 5.07/0.69, respectively).

When it comes to measurement indicators for R&D management, as shown in <Table 4.18>, all five indicators satisfied the cutoff criteria. Thus, they were all retained for the measurement scale. The two most-highly agreed indicators for R&D management were 'Ratio of adoption of menu items developed by R&D related departments (%)' and 'Number of new menu items developed by R&D related departments (#)' (Mean/S.D. = 5.53/0.78 and 5.13/0.82, respectively).

<Table 4.18> Delphi Survey Result - Innovation Capital

Measurement Indicators	Mean	Median	S.D.	Reliability
<Innovativeness of Menu>				0.71
Number of newly introduced menu items (#)	5.40	6.0	0.72	
Sales increase attributable to new menu items ($)	5.87	6.0	0.63	

Number of ideas suggested for menu items (#)	4.77	5.0	0.90	
Ratio of adopted ideas out of total suggested ideas for menu items (%)	4.90	5.0	0.72	
Average time required to introduce a new menu item over the last three years (#)	4.83	5.0	0.65	
<Innovativeness of Service Operation>				0.65
Number of newly introduced services (#)	5.13	5.0	0.63	
Number of new ideas suggested for services (#)	5.00	5.0	0.69	
Ratio of adopted ideas out of total suggested ideas for service (%)	5.07	5.0	0.69	
Average time required to introduce a new service over the last three years (#)	4.63	5.0	0.72	
<R&D Management>				0.76
Number of new menu items developed by R&D related departments (#)	5.13	5.0	0.82	
Ratio of adoption of menu items developed by R&D related departments (%)	5.53	6.0	0.78	
Ratio of R&D investment to revenue (%)	4.87	5.0	0.97	
Number of employees in R&D-related departments (#)	4.17	4.0	0.87	
Average tenure of R&D staffs (#)	4.73	5.0	0.78	

Note: n=30

***Organizational Process Capital*:**

As shown in the final Delphi survey, only three of four indicators developed to assess firms' service operation management processes satisfied the cutoff criteria (mean > 4.00 and standard deviation < 1.0). 'Number of accidents (#)' was eliminated from the list, since the mean score was less than 4.00, the cutoff criterion (Mean/S.D. = 3.87/0.97). The two most-highly agreed indicators for service operation management process were 'Average time required from order to service (#)' and 'Number of customers served per employee (#)' (Mean/S.D. = 5.83/0.65 and 5.73/0.64, respectively).

<Table 4.19> Delphi Survey – Organizational Process Capital

Measurement Indicators	Mean	Median	S.D.	Reliability
<Service Operation Management Process>				0.83
Average time required from order to service (#)	5.83	6.0	0.65	
Number of customers served per employee (#)	5.73	6.0	0.64	
Average cooking time required per menu item (#)	5.23	5.0	0.73	
Number of accidents (#)	3.87	4.0	0.97	
<Procurement & Inventory Management Process>				0.73
On-time rate of delivery (%)	5.47	6.0	0.63	

Order fill rate (=rate of order completion) (%)	5.27	5.0	0.78	
Line item fill rate (=rate of completion of line items in order) (%)	4.90	5.0	0.80	
Backorder rate (=rate of orders waiting to be filled) (%)	4.67	5.0	1.27	
Average length of contracts with external suppliers (#)	4.60	5.0	1.10	
Food cost ratio (%)	5.53	6.0	0.82	
Inventory turnover rate (%)	5.43	6.0	0.77	
Number of suppliers (#)	3.67	4.0	1.06	
<Sales & Marketing Management Process >				0.72
Achievement ratio of sales plan (%)	5.80	6.0	0.85	
Average sale performance per an employee ($)	5.57	6.0	0.82	
Revenue increase attributable to sales promotions ($)	5.63	6.0	0.61	
Ratio of promotion expenditure to the increased revenue (%)	5.00	5.0	0.91	
<Human Resources Management Process>				0.83
Ratio of job offer acceptance (%)	4.73	5.0	0.64	
Average number of industry-relevant certificates per person (#)	3.73	4.0	0.91	
Average expenditure for training per person ($)	5.10	5.0	0.84	
Average time taken for supplementing the vacancy personnel (#)	4.50	4.0	0.97	
Labor cost ratio (%)	5.27	5.0	0.94	
Investment in reward / performance-recognition programs ($)	5.00	5.0	1.17	

Note: n=30

With regard to the measurement indicators for procurement and inventory management process, only five of the eight indicators satisfied the cutoff criteria. 'Backorder rate (= rate of orders waiting to be filled) (%)', 'Average length of contracts with external suppliers (#)', and 'Number of suppliers (#)' were removed from the list, since their mean scores were less than 4.00 or their standard deviations were bigger than 1.0. 'Food cost ratio (%)' and 'On-time rate of delivery (%)' were two most-highly agreed indicators (Mean/S.D. = 5.53/0.82 and 5.47/0.63, respectively).

The final Delphi survey revealed that all four indicators designed to assess firms' sales and marketing management processes satisfied the cutoff criteria (mean > 4.00 and standard deviation < 1.0). The two most-highly agreed indicators for sales and marketing management process were 'Achievement ratio of sales plan (%)' and 'Revenue increase attributable to sales promotions ($)' (Mean/S.D. = 5.80/0.85 and 5.63/0.61, respectively).

When it comes to the measurement indicators for human resources management process, only four of the six indicators satisfied the cutoff criteria. 'Number of industry-relevant certificates per employee (#)' and 'Investment in reward/performance-recognition programs ($)' were eliminated, since their mean scores were less than 4.00 or their standard

deviations were bigger than 1.0. The two most-highly agreed indicators were ‘Labor cost ($)’ and ‘Average expenditure for training per person ($)’ (Mean/S.D. = 5.27/0.94 and 5.10/0.84, respectively).

***Organizational Culture Capital*:**

As shown in the <Table 4.20>, all three indicators designed to assess firms’ leadership culture satisfied the cutoff criteria (mean > 4.00 and standard deviation < 1.0). All three indicators got similar level of agreement from the panelists, with a mean of about 5.00.

With regard to the measurement indicators for employee membership culture, all five indicators satisfied the cutoff criteria. Two highly agreed indicators were ‘Annual turnover rate (%)’ and ‘Average years of tenure (#)’ (Mean/S.D. = 5.93/0.52 and 5.87/0.35, respectively).

When it comes to the measurement indicators for service-oriented culture, all four indicators satisfied the cutoff. ‘Revenue per service employee’ and ‘Average number of visits per customer (#)’ were two highly agreed indicators (Mean/S.D. =5.73/0.74 and 5.60/0.67).

All three indicators designed to assess firms’ teamwork cultures satisfied the cutoff criteria. Two highly agreed measurement indicators were ‘Investment in teamwork-related programs or activities ($)’ and ‘Number of teamwork-orientation programs and activities (#)’ (Mean/S.D. = 4.90/0.71 and 4.80/0.71, respectively).

<Table 4.20> Delphi Survey - Organizational Culture Capital

Measurement Indicators	Mean	Median	S.D.	Reliability
<Leadership Culture>				0.71
No. of leadership programs (or campaign activities) supported by a company (#)	5.00	5.0	0.37	
Ratio of leadership program participants out of total employees (%)	5.00	5.0	0.59	
Investment on leadership-related programs or activities ($)	5.03	5.0	0.76	
<Employees’ Membership>				0.70
Average years of tenure (#)	5.87	6.0	0.35	

Annual turnover rate (%)	5.93	6.0	0.52	
Number of pep rallies to strengthen the unity (#)	4.73	5.0	0.52	
Investment on reward programs or activities ($)	5.37	5.5	0.72	
Number of employees who received company-presenting awards (#)	4.50	5.0	0.57	
<Service-oriented Culture>				0.73
Average number of visits per customer (#)	5.60	6.0	0.67	
Average time required for handling a complaint (#)	5.20	5.0	0.89	
Length of years since establishment of customer relationship management system (#)	4.70	5.0	0.79	
Number of customers in customer relationship management system (#)	5.10	5.0	0.92	
Revenue per service employee ($)	5.73	6.0	0.74	
<Teamwork Culture>				0.65
Number of collaborative projects (#)	4.73	5.0	0.58	
Number of teamwork-orientation programs and activities (#)	4.80	5.0	0.71	
Investment in teamwork-related programs or activities ($)	4.90	5.0	0.71	

Note: n=30

***Organizational Learning Capital*:**

When it comes to the measurement indicators for a firm's knowledge sharing, five out of the six indicators satisfied the cutoff criteria (mean > 4.00 and standard deviation < 1.0). 'Ratio of replies on the intranet discussion board to all employees' was removed from the measurement list, since its mean score was less than 4.00, the cutoff criterion. Two highly agreed indicators were 'Investment in education programs ($)' and 'Number of (or online) education programs available (#)' (Mean/S.D. = 5.47/0.78 and 5.40/0.56, respectively).

As shown in the <Table 4.21>, all five indicators designed to assess firms' flex adaptability satisfied the cutoff criteria. The two highly agreed measurement indicators were 'Change of market share (%)' and 'Promotion objective achievement ratio (%)' (Mean/S.D. = 5.73/0.45 and 5.47/0.63, respectively).

<Table 4.21> Delphi Survey - Organizational Learning Capital

Measurement Indicators	Mean	Median	S.D.	Reliability
<Knowledge Sharing>				0.65
Number of shared (knowledge) documents in the intranet (#	4.90	5.0	0.61	
Number of shared knowledge database (gigabytes) (#)	4.73	5.0	0.58	

Number of (or online) education programs available (#)	5.40	5.0	0.56	
Number of employees who have taken (or online) education programs (#)	5.03	5.0	0.56	
Investment in education programs ($)	5.47	6.0	0.78	
Ratio of replies on the intranet discussion board out of all employees (%)	3.80	4.0	0.76	
<Flexible Adaptability>				0.70
Frequency of evaluation of strategic planning (#)	5.23	5.0	0.63	
Change of market share (%)	5.73	6.0	0.45	
Promotion objective achievement ratio (%)	5.47	6.0	0.63	
Frequency of customer preference survey (#)	4.93	5.0	0.58	
Ratio of sales from newly introduced menu items compared to total sales (%)	5.30	5.0	0.70	

Note: n=30

Information System Capital

As shown in the <Table 4.22>, all three indicators designed to assess firms' investment in information systems satisfied the cutoff criteria (mean > 4.00 and standard deviation < 1.0). The two highly agreed measurement indicators were 'Investment in informational system infrastructure ($)' and 'Expenditure in informational system infrastructure ($)' (Mean/S.D. = 5.50/0.51 and 5.17/0.46, respectively).

When it comes to the measurement indicators for a firm's maintenance of information system, all three indicators passed the cutoff criteria. 'Average time of problem solution (#)' and 'Number of requests for fix or repair (#) were two highly agreed indicators (Mean/S.D. = 5.10/0.66 and 4.93/0.52, respectively)

<Table 4.22> Delphi Survey - Information System Capital

Measurement Indicators	Mean	Median	S.D.	Reliability
<Investment in Information System>				0.67
Investment in informational system infrastructure ($)	5.50	5.5	0.51	
Expenditure in informational system infrastructure ($)	5.17	5.0	0.46	
Wages of staff involved in information systems planning and development ($)	4.63	5.0	0.61	
<Maintenance of Information System>				0.72
Number of requests for fix or repair (#)	4.93	5.0	0.52	
Average time of problem solution (#)	5.10	5.0	0.66	
Number of employees who have taken training on	4.50	4.0	0.62	

information system (#)				

Note: n=30

***Intellectual Property Capital*:**

As shown in the <Table 4.23>, all four indicators designed to measure firms' patent assets satisfied the cutoff criteria (mean > 4.00 and standard deviation < 1.0). Thus, they were all retained for the measurement scale. Two highly agreed indicators were 'Total number of patents legally protected (#)' and 'Cash flow from patents ($)' (Mean/S.D. = 4.83/0.83 and 4.77 /0.73, respectively).

<Table 4.23> Delphi Survey - Intellectual Property Capital

Measurement Indicators	Mean	Median	S.D.	Reliability
<Patent Assets>				0.78
Total number of patents legally protected (#)	4.83	5.0	0.83	
Number of new patents filed (#)	4.70	5.0	0.84	
Average (remained) length of patents (#)	4.43	4.0	0.77	
Cash flow from patents ($)	4.80	5.0	0.66	
<Franchising Assets>				0.81
Total number of franchising contracts (#)	5.30	5.0	0.75	
Growth rate of franchising contracts (%)	5.27	5.0	1.14	
Average (remained) length of franchising contracts (#)	4.93	5.0	0.94	
Cash flow from franchising ($)	5.50	6.0	0.78	
Bankruptcy rate of franchising properties (%)	5.20	5.0	0.81	

Note: n=30

When it comes to the measurement indicators for franchising assets, only four of the five indicators satisfied the cutoff criteria. 'Growth rate of franchising contracts (%)' was eliminated, since its standard deviation was bigger than the cutoff criterion (S.D. = 1.15). 'Cash flow from franchising ($)' and 'Total number of franchising contracts (#)' were two highly agreed indicators (Mean/S.D. = 5.50/0.78 and 5.30/0.75, respectively).

Research Question Three: Organizational Capital Index

Weight of Component Organizational Capitals

The relative importance of six types of organizational capital ($Mean_1$), measured using the question 'Indicate the degree to which each organizational capital contributes on a firm's market value' on a 10-point Likert-type measurement scale, better indicates which type of organizational capital is more contributive to a firm's value. Innovation capital was perceived to contribute the most on a firm's value. On the other hand, information system capital was considered to contribute relatively the least to a firm's value.

The relative importance of sub-dimensional components under each organizational capital ($Mean_2$), measured using the question 'Indicate the degree to which each of the following sub-dimensional components contributes on the corresponding organizational capital' on a 10-point Liker-type scale, better explains which component is more important in each organizational capital. For example, regarding innovation capital, innovativeness of menu was ranked the most important component.

<Table 4.24> Dimensional Structure of Organization-centric Intangible Capital

Organization-Centric Capitals	**$Mean_1$**	**Sub-dimensions**	**$Mean_2$**
Innovation Capital	8.56	Innovativeness of Menu	8.07
		Innovativeness of Service Operation	7.93
		R&D Management	7.23
Organizational Process Capital	8.00	Service Operation Management Process	8.47
		Human Resources Management Process	8.37
		Sales & Marketing Management Process	7.70
		Procurement & Inventory Management Process	7.07
Organizational Culture Capital	7.90	Service-oriented Culture	8.60
		Employees' Membership Culture	8.23
		Leadership Culture	7.90
		Teamwork Culture	7.83
Organizational Learning	7.86	Flexible Adaptability	7.90

Capital		Knowledge Sharing	7.77
Intellectual Property Capital	7.43	Franchising Assets	8.10
		Patent Assets	7.27
Information System Capital	7.20	Investment in Information System	7.63
		Maintenance of Information System	7.57

When it comes to the contribution of organization-centric intellectual capital to the market value of casual dining restaurant firms, measured with a 10-point Likert-type scale, as expected, innovation capital ranked first, of the six types of organizational capital (Mean = 8.57). Organizational process capital ranked second (Mean = 8.00), just slightly higher than organizational culture capital (Mean = 7.90). Organizational learning capital ranked fourth (Mean = 7.86). Information system capital appeared to contribute least to a firms' value (Mean = 7.20).

Out of three industrywise sub-dimensions of innovation capital, both innovativeness of menu items and service operation were considered the most important (Mean = 8.07 and 7.93, respectively). When it comes to the sub-dimensions of organizational process capital and organizational culture capital, two similar factors (service and human resources) were perceived to be the most important: service operation management process (M = 8.47) and human resources management process (M = 8.37) for organizational process capital and service-oriented culture (M = 8.60) and employees' membership culture (M = 8.23).

A firm's flexible adaptability (M = 7.90) was evaluated to impact, slightly more than knowledge sharing (M = 7.77), on its organizational learning capital. For a restaurant firm's intellectual property capital, franchising assets (M = 8.10) were perceived significantly more important than patent asset (M = 7.27). When it comes to information system capital, investment in information system (M = 7.63) were considered slightly more important than maintenance of information system (M = 7.57).

Both $Weight_1$ and $Weight_2$ in <Table 4.25>, initially measured on a 10-point Likert-type scale, were standardized at '1'. The relative weight of six types of organizational capital ($Weight_1$) better indicates which type of organizational capital is more contributive to a firm's value. The relative weight of sub-dimensional components under each

organizational capital ($Weight_2$) better explains which component is more important in each organizational capital.

<Table 4.25> Dimensional Structure of Organization-centric Intangible Capital

Organization-Centric Capitals	$Weigt_1$	Sub-dimensions	$Weight_2$	$Weight_3$ ($Weight_1$ * $Weight_2$)
Innovation Capital	0.86	Innovativeness of Menu	0.81	0.69
		Innovativeness of Service Operation	0.79	0.68
		R&D Management	0.72	0.62
Organizational Process Capital	0.80	Service Operation Management Process	0.85	0.68
		Human Resources Management Process	0.84	0.67
		Sales & Marketing Management Process	0.77	0.62
		Procurement & Inventory Management Process	0.71	0.57
Organizational Culture Capital	0.79	Service-oriented Culture	0.86	0.68
		Employees' Membership Culture	0.82	0.65
		Leadership Culture	0.79	0.62
		Teamwork Culture	0.78	0.62
Organizational Learning Capital	0.78	Flexible Adaptability	0.79	0.62
		Knowledge Sharing	0.78	0.61
Intellectual Property Capital	0.74	Franchising Assets	0.81	0.60
		Patent Assets	0.73	0.54
Information System Capital	0.72	Investment in Information System	0.76	0.55
		Maintenance of Information System	0.76	0.55

Note: $Weight_1$ is the degree of contribution of each organizational capital on a firm's value.
$Weight_2$ is the degree of contribution of each sub-dimension on the corresponding organizational capital.
$Weight_3$ is the degree of contribution of each sub-dimension on a firm's overall market value.

Taken together, these organizational intangible value assets can be combined to form a single measure of organizational capital index (OCI). The equation for OCI in the context of the casual dining restaurant industry, taking the relative importance of six component organizational capitals ($Weight_1$) into consideration, is as follows,

OCI = 0.86*(Innovation capital) + 0.80*(Organizational process capital) + 0.79*(Organizational culture capital) + 0.78*(Organizational learning capital) + 0.74*(Intellectual property capital) + 0.72*(Informational system capital)

To develop more precise and comprehensive index, more precise seventeen sub-dimensional organizational capitals are used for Organizational Capital Index (OCI). The equation for OCI, taking the relative importance of seventeen sub-dimensional organizational capitals ($Weight_1$) into consideration, is as follows,

OCI = 0.69*(Innovativeness of menu) + 0.68*(Innovativeness of service operation) + 0.62*(R&D management) + 0.68*(Service operation management process) + 0.67*(Human resources management process) + 0.62*(Sales & marketing process) + 0.57*(Procurement & inventory management process) + 0.68*(Service-oriented culture) + 0.65*(Employees' membership culture) + 0.62*(Leadership culture) + 0.62*(Teamwork culture) + + 0.62*(Flexible Adaptability) + 0.61*(Knowledge sharing) + + 0.60*(Franchising assets) + 0.54*(Patent assets) + 0.55*(Investment in information system) + 0.55*(Maintenance of information system)

Change of Responses between Three Rounds of Delphi Studies

Three rounds of iterations are expected to drive consensus on which intangible value drivers, in terms of an organization, are critical for a firm's sustainable success, and which items are optimal for their measurement. The group response statistics (mean and median) of the previous survey were provided to all members in the following survey, so that they were allowed to adjust their original responses in order to help the researcher reach a group consensus.

<Table 4.26> Average Change of Response between Delphi Surveys

Organizational Capitals	Sub-dimensional Organizational Capitals	1st → 2nd		2nd → 3rd	
		$Mean_1$	SD_2	$Mean_1$	SD_2
Innovation Capital	Innovativeness of Menu (5 items)	0.12	-0.13	0.03	-0.14
	Innovativeness of Service Operation (4 items)	0.02	-0.13	0.04	-0.23
	R&D Management (5 items)	-0.07	-0.12	-0.09	-0.14
	<Average of 3 Sub-dimensions>	0.02	**-0.12**	-0.01	**-0.17**
Organizational Process Capital	Service Operation Management Process (4 items)	-0.11	-0.31	-0.12	-0.22
	Human Resources Management Process (6 items)	-0.15	-0.35	-0.07	-0.10
	Sales & Marketing Management Process (4 items)	-0.13	-0.20	-0.16	-0.10
	Procurement & Inventory Management Process (8 items)	-0.06	-0.17	-0.20	-0.13
	<Average of 4 Sub-dimensions>	-0.11	**-0.26**	-0.14	**-0.14**
Organizational Culture Capital	Service-oriented Culture (5 items)	-0.20	-0.26	0.01	-0.15
	Employees' Membership Culture (5 items)	-0.06	-0.39	-0.11	-0.24
	Leadership Culture (3 items)	-0.28	-0.34	0.02	-0.31
	Teamwork Culture (3 items)	-0.34	-0.30	0.00	-0.20
	<Average of 4 Sub-dimensions>	-0.22	**-0.32**	-0.02	**-0.22**
Organizational Learning Capital	Flexible Adaptability (5 items)	-0.21	-0.30	0.05	-0.23
	Knowledge Sharing (6 items)	0.05	-0.32	-0.08	-0.21
	<Average of 2 Sub-dimensions>	-0.08	**-0.31**	-0.02	**-0.22**
Intellectual Property Capital	Franchising Assets (5 items)	-0.28	-0.43	-0.09	-0.13
	Patent Assets (4 items)	-0.50	-0.78	-0.07	-0.05
	<Average of 2 Sub-dimensions>	-0.39	**-0.60**	-0.08	**-0.09**
Information System Capital	Investment in Information System (3 items)	-0.26	-0.16	0.08	-0.21
	Maintenance of Information System (3 items)	-0.38	-0.49	0.14	-0.21
	<Average of 2 Sub-dimensions>	-0.32	**-0.33**	0.11	**-0.21**
TOTAL		-0.18	**-0.32**	-0.03	**-0.17**

Note: Mean: Average change of response in each sub-dimension between 1st, 2nd, and 3rd rounds
SD: Average change of standard deviation between 1st, 2nd, and 3rd rounds

Overall, the standard deviation adopted to measure the consensus agreement among the Delphi panel showed a significant decrease when the subsequent Delphi survey was conducted. The average change of standard deviation for all 78 measurement items, located at the bottom row in <Table 4.26>, showed a significant decrease from round 1 to round 2, and from round 2 to round 3 (-0.32 and -0.17, respectively), leading to an increased consensus agreement among the Delphi panelists. The relatively wide variation in the range of scores reported for each measurement item in the previous round of surveys may have been influenced by the diversity of the panel in the subsequent round of the survey.

As shown in <Table 4.26>, the average change in standard deviation from study 1 to study 2 (-0.32), in terms of the response change of the Delphi panel, indicated a much bigger decrease than that from study 2 to study 3 (-0.17). It is also asserted that, in general, the bigger change in terms of the variation of responses among the Delphi panel can be found between the 1st round survey and the 2nd round survey. The average change in the standard deviation of measurement items in each of six organizational capitals between study 1 and study 2 ranged from -0.12 to -0.60, and those between study 2 and study 3 ranged from -0.09 to -0.22.

Between round 1 and round 2, the average change in the standard deviation of all measurement items for ‘intellectual property capital’ showed the most significant decrease (-0.60) among the six organizational capitals. And from round 2 and round 3, the average standard deviation of measurement items in both ‘organizational culture capital’ and ‘organizational learning capital’ overall showed the biggest changes among the six organizational capital items (-0.22).

When it comes to the 17 sub-dimensional organizational capitals, the average standard deviation of measurement items for ‘patent assets’ between round 1 and round 2 showed the biggest decrease (-0.60), followed by the ‘maintenance of information system’ (-0.49). From round 2 and round 3, ‘leadership culture’ indicated the biggest decrease (-0.31), followed by ‘employees’ membership culture’ (-0.24).

The change in the standard deviation of all measurement items for the six organizational capitals is provided in the following tables.

<Table 4.27> Change of Responses between Surveys - Innovation Capital

Measurement Indicators	1st		2nd		3rd		1st → 2nd		2nd → 3rd	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
<Innovativeness of Menu>										
Number of newly introduced menu items (#)	5.75	0.91	5.47	0.90	5.40	0.72	-0.3	0.0	-0.1	-0.2
Sales increase attributable to new menu items ($)	5.97	0.77	5.82	0.83	5.87	0.63	-0.1	0.1	0.0	-0.2
Number of ideas suggested for menu items (#)	4.53	0.97	4.82	0.90	4.77	0.90	0.3	-0.1	-0.1	0.0
Ratio of adopted ideas out of total suggested ideas for menu items (%)	4.44	1.13	4.79	0.88	4.90	0.72	0.4	-0.3	0.1	-0.2
Average time required to introduce a new menu item over the last three years (#)	4.33	1.15	4.74	0.79	4.83	0.65	0.4	-0.4	0.1	-0.1
<Innovativeness of Service Operation>										
Number of newly introduced services (#)	4.97	1.06	4.97	0.90	5.13	0.63	0.0	-0.2	0.2	-0.3
Number of new ideas suggested for services (#)	4.90	0.96	4.80	0.96	5.00	0.69	-0.1	0.0	0.2	-0.3
Ratio of adopted ideas out of total suggested ideas for service (%)	5.25	1.08	4.94	0.95	5.07	0.69	-0.3	-0.1	0.1	-0.3
Average time required to introduce a new service over the last three years (#)	4.47	1.08	4.94	0.85	4.63	0.72	0.5	-0.2	-0.3	-0.1
<R&D Management>										
Number of new menu items developed by R&D related departments (#)	5.53	1.00	5.32	0.94	5.13	0.82	-0.2	-0.1	-0.2	-0.1
Ratio of adoption of menu items developed by R&D related departments (%)	5.42	1.08	5.44	0.96	5.53	0.78	0.0	-0.1	0.1	-0.2
Ratio of R&D investment to revenue (%)	5.11	1.19	5.00	1.18	4.87	0.97	-0.1	0.0	-0.1	-0.2
Number of employees in R&D-related departments (#)	4.33	1.17	4.38	1.02	4.17	0.87	0.0	-0.2	-0.2	-0.2
Average tenure of R&D staffs (#)	4.86	1.07	4.74	0.83	4.73	0.78	-0.1	-0.2	0.0	0.0

Note: Highlighted Columns: Changes between 1st, 2nd, and 3rd Delphi surveys

<Table 4.28> Change of Responses between Surveys – Organizational Process Capital

Measurement Indicators	1st		2nd		3rd		1st → 2nd		2nd → 3rd	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
<Service Operation Management Process>										
Average time required from order to service (#)	6.08	0.84	5.94	0.79	5.83	0.65	-0.1	0.0	-0.1	-0.1
Number of customers served per employee (#)	5.78	1.29	5.79	0.88	5.73	0.64	0.0	-0.4	-0.1	-0.2
Average cooking time required per menu item (#)	5.58	1.36	5.44	0.89	5.23	0.73	-0.1	-0.5	-0.2	-0.2
Number of accidents (#)	4.12	1.60	3.97	1.29	3.87	0.97	-0.2	-0.3	-0.1	-0.3
<Procurement & Inventory Management Process>										
On-time rate of delivery (%)	5.58	1.13	5.53	0.83	5.47	0.63	0.0	-0.3	-0.1	-0.2
Order fill rate (=rate of order completion) (%)	5.31	0.89	5.32	0.88	5.27	0.78	0.0	0.0	-0.1	-0.1
Line item fill rate (=rate of completion of line items in order) (%)	4.86	0.96	5.15	0.82	4.90	0.80	0.3	-0.1	-0.3	0.0
Backorder rate (=rate of orders waiting to be filled) (%)	4.69	1.41	4.82	1.45	4.67	1.27	0.1	0.0	-0.2	-0.2
Average length of contracts with external suppliers (#)	5.22	1.51	5.00	1.28	4.60	1.10	-0.2	-0.2	-0.4	-0.2
Food cost ratio (%)	6.03	1.06	5.71	0.87	5.53	0.82	-0.3	-0.2	-0.2	-0.1
Inventory turnover rate (%)	5.86	1.02	5.69	0.73	5.43	0.77	-0.2	-0.3	-0.3	0.0
Number of suppliers (#)	4.12	1.66	3.95	1.44	3.67	1.06	-0.2	-0.2	-0.3	-0.4
<Sales & Marketing Management Process >										
Achievement ratio of sales plan (%)	6.31	0.91	6.18	0.86	5.80	0.85	-0.1	-0.1	-0.4	0.0
Average sale performance per an employee ($)	5.58	1.20	5.79	0.88	5.57	0.82	0.2	-0.3	-0.2	-0.1
Revenue increase attributable to sales promotions ($)	5.86	0.96	5.71	0.76	5.63	0.61	-0.2	-0.2	-0.1	-0.2
Ratio of promotion expenditure to the increased revenue (%)	5.42	1.32	4.97	1.09	5.00	0.91	-0.5	-0.2	0.0	-0.2
<Human Resources Management Process>										
Ratio of job offer acceptance (%)	4.92	1.42	4.71	0.80	4.73	0.64	-0.2	-0.6	0.0	-0.2
Average number of industry-relevant certificates per person (#)	3.53	1.23	3.62	0.95	3.73	0.91	0.1	-0.3	0.1	0.0
Average expenditure for training per person ($)	5.22	1.38	5.12	0.95	5.10	0.84	-0.1	-0.4	0.0	-0.1
Average time taken for supplementing the vacancy personnel (#)	4.89	1.30	4.62	1.04	4.50	0.97	-0.3	-0.3	-0.1	-0.1
Labor cost ratio (%)	5.69	1.41	5.41	0.96	5.27	0.94	-0.3	-0.5	-0.1	0.0
Investment in reward / performance-recognition programs ($)	5.44	1.38	5.29	1.34	5.00	1.17	-0.2	0.0	-0.3	-0.2

Note: Highlighted Columns: Changes between 1st, 2nd, and 3rd Delphi surveys

<Table 4.29> Change of Responses between Surveys – Organizational Culture Capital

Measurement Indicators	1st		2nd		3rd		1st → 2nd		2nd → 3rd	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
<Leadership Culture>										
No. of leadership programs (or campaign activities) supported by a company (#)	5.36	1.07	5.09	0.97	5.00	0.37	-0.3	-0.1	-0.1	-0.6
Ratio of leadership program participants out of total employees (%)	5.14	1.27	4.71	0.87	5.00	0.59	-0.4	-0.4	0.3	-0.3
Investment on leadership-related programs or activities ($)	5.31	1.33	5.18	0.80	5.03	0.76	-0.1	-0.5	-0.1	0.0
<Employees' Membership>										
Average years of tenure (#)	5.92	1.00	5.91	0.71	5.87	0.35	0.0	-0.3	0.0	-0.4
Annual turnover rate (%)	5.89	1.21	5.88	0.73	5.93	0.52	0.0	-0.5	0.0	-0.2
Number of pep rallies to strengthen the unity (#)	4.89	1.06	4.91	0.83	4.73	0.52	0.0	-0.2	-0.2	-0.3
Investment on reward programs or activities ($)	5.58	1.30	5.53	0.86	5.37	0.72	0.0	-0.4	-0.2	-0.1
Number of employees who received company-presenting awards (#)	4.94	1.26	4.71	0.76	4.50	0.57	-0.2	-0.5	-0.2	-0.2
<Service-oriented Culture>										
Average number of visits per customer (#)	5.83	1.11	5.38	0.89	5.60	0.67	-0.5	-0.2	0.2	-0.2
Average time required for handling a complaint (#)	5.64	1.40	5.32	1.10	5.20	0.89	-0.3	-0.3	-0.1	-0.2
Length of years since establishment of customer relationship management system (#)	4.92	1.34	4.59	0.95	4.70	0.79	-0.3	-0.4	0.1	-0.2
Number of customers in customer relationship management system (#)	5.50	1.11	5.44	0.93	5.10	0.92	-0.1	-0.2	-0.3	0.0
Revenue per service employee ($)	5.39	1.10	5.53	0.90	5.73	0.74	0.1	-0.2	0.2	-0.2
<Teamwork Culture>										
Number of collaborative projects (#)	5.11	1.12	4.65	0.85	4.73	0.58	-0.5	-0.3	0.1	-0.3
Number of teamwork-orientation programs and activities (#)	5.17	1.13	4.82	0.80	4.80	0.71	-0.4	-0.3	0.0	-0.1
Investment in teamwork-related programs or activities ($)	5.19	1.24	4.97	0.94	4.90	0.71	-0.2	-0.3	-0.1	-0.2

Note: Highlighted Columns: Changes between 1st, 2nd, and 3rd Delphi surveys

<Table 4.30> Change of Responses between Surveys – Organizational Learning Capital

Measurement Indicators	1st		2nd		3rd		1st → 2nd		2nd → 3rd	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
<Knowledge Sharing>										
Number of shared (knowledge) documents in the intranet (#)	5.25	1.18	5.21	0.69	4.90	0.61	0.0	-0.5	-0.3	-0.1
Number of shared knowledge database (gigabytes) (#)	4.69	1.01	4.94	0.78	4.73	0.58	0.3	-0.2	-0.2	-0.2
Number of (or online) education programs available (#)	5.19	1.28	5.24	0.78	5.40	0.56	0.0	-0.5	0.2	-0.2
Number of employees who have taken (or online) education programs (#)	5.36	1.07	5.15	0.82	5.03	0.56	-0.2	-0.3	-0.1	-0.3
Investment in education programs ($)	5.44	1.11	5.50	0.93	5.47	0.78	0.1	-0.2	0.0	-0.2
Ratio of replies on the intranet discussion board out of all employees (%)	3.58	1.34	3.79	1.09	3.80	0.76	0.2	-0.3	0.0	-0.3
<Flexible Adaptability>										
Frequency of evaluation of strategic planning (#)	5.44	1.11	5.21	0.84	5.23	0.63	-0.2	-0.3	0.0	-0.2
Change of market share (%)	5.58	1.16	5.62	0.78	5.73	0.45	0.0	-0.4	0.1	-0.3
Promotion objective achievement ratio (%)	5.97	1.00	5.44	0.79	5.47	0.63	-0.5	-0.2	0.0	-0.2
Frequency of customer preference survey (#)	5.00	1.20	4.71	0.74	4.93	0.58	-0.3	-0.5	0.2	-0.2
Ratio of sales from newly introduced menu items compared to total sales (%)	5.47	1.18	5.44	0.99	5.30	0.70	0.0	-0.2	-0.1	-0.3

Note: Highlighted Columns: Changes between 1st, 2nd, and 3rd Delphi surveys

<Table 4.31> Change of Responses between Surveys – Information System Capital

Measurement Indicators	1st		2nd		3rd		1st → 2nd		2nd → 3rd	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
<Investment in Information System>										
Investment in informational system infrastructure ($)	5.61	0.93	5.53	0.75	5.50	0.51	-0.1	-0.2	0.0	-0.2
Expenditure in informational system infrastructure ($)	5.28	0.85	5.21	0.64	5.17	0.46	-0.1	-0.2	0.0	-0.2
Wages of staff involved in information systems planning and development ($)	4.94	0.89	4.32	0.81	4.63	0.61	-0.6	-0.1	0.3	-0.2
<Maintenance of Information System>										
Number of requests for fix or repair (#)	5.00	1.33	4.82	0.83	4.93	0.52	-0.2	-0.5	0.1	-0.3
Average time of problem solution (#)	5.19	1.43	4.97	0.87	5.10	0.66	-0.2	-0.6	0.1	-0.2
Number of employees who have taken training on information system (#)	5.06	1.15	4.32	0.73	4.50	0.62	-0.7	-0.4	0.2	-0.1

Note: Highlighted Columns: Changes between 1st, 2nd, and 3rd Delphi surveys

<Table 4.32> Change of Responses between Surveys – Intellectual Property Capital

Measurement Indicators	1st		2nd		3rd		1st → 2nd		2nd → 3rd	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
<Patent Assets>										
Total number of patents legally protected (#)	5.33	1.74	4.83	0.83	4.91	0.75	-0.5	-0.9	0.1	-0.1
Number of new patents filed (#)	5.14	1.69	4.70	0.87	4.53	0.86	-0.4	-0.8	-0.2	0.0
Average (remained) length of patents (#)	4.89	1.63	4.43	0.86	4.24	0.85	-0.5	-0.8	-0.2	0.0
Cash flow from patents ($)	5.42	1.56	4.80	0.95	4.82	0.83	-0.6	-0.6	0.0	-0.1
<Franchising Assets>										
Total number of franchising contracts (#)	5.33	1.74	5.30	0.75	5.15	0.70	0.0	-1.0	-0.2	0.0
Growth rate of franchising contracts (%)	5.53	1.65	5.27	1.34	5.21	1.15	-0.3	-0.3	-0.1	-0.2
Average (remained) length of franchising contracts (#)	5.39	1.46	4.93	1.10	4.79	0.98	-0.5	-0.4	-0.1	-0.1
Cash flow from franchising ($)	6.03	1.32	5.50	1.11	5.41	0.89	-0.5	-0.2	-0.1	-0.2
Bankruptcy rate of franchising properties (%)	5.31	1.25	5.20	0.97	5.18	0.90	-0.1	-0.3	0.0	-0.1

Note: Highlighted Columns: Changes between 1st, 2nd, and 3rd Delphi surveys

CHAPTER 5: DISCUSSION

This chapter discusses the results of this exploratory study on the identification of organization-centric capital and the development of its measurement, as part of an intangible asset management system of <Figure 5.1>, especially in the context of the casual dining restaurant industry. The chapter is composed of four sections: a summary of the study, a discussion of the findings and their implications, contributions made by the study, limitations of the study, and directions for future research.

In the first section, a summary of the study is provided, covering everything from the research questions to the theoretical underpinnings on which the study is based. A discussion on organization-centric capital follows, based on the research questions and results provided in the previous chapter. Third, the managerial and theoretical contributions of the findings are discussed. Finally, the chapter concludes with the study's limitations and suggestions for future research.

Summary of the Study

Since the value of restaurant firms is mostly dependent on intangible assets, such as brand, human capital, franchise systems, and operation systems (Murphy & Olsen, 2010), it is strongly advisable for such firms to establish an 'intangible asset management system' that enables them to measure, manage, and value their intangibles. The essential thrust of all intangible asset management and valuation models is to identify and measure key intangible resources. Given the great importance of intangible value resources and the different foci of the value creation process in the service industry (Namasivayam & Denizci, 2006), it is necessary to understand what intangible resources exist, how to measure and manage them, and how much they contribute to firms' value in the context of the hospitality industry. However, there have been few studies on these topics.

Identifying the dimensions and components of intangible assets helps improve our understanding of what intangible assets are and also enables us to apply the concept of intangible assets on strategic and even operational levels (Roos et al 1998). The most

widely-accepted approach is a three-way distinction between human-centric intangible assets (human capital), relation-centric intangible assets (customer capital), and organization-centric intangible assets (organizational capital or structural capital) (Bontis, 1998; Roos et al, 1998; Stewart, 1997; Sveiby, 1997).

Human capital is the firm- or industry-specific knowledge possessed by an employee that can be used (but not owned) by a firm in the process of value creation (Dooley, 2000). It refers to the knowledge, skills, abilities, experience, and other attributes of the firm's human resources. Customer capital is considered to be the nature of an organization's relationships with all its important stakeholders (Marr and Adams, 2004). It includes all relationships with constituent groups – such as customers, strategic alliances, business partnerships, collaborative relationships, and industry associations – that help reinforce the firm's reputation and industry position (Lev, 2001). Finally, organizational capital, which is this study's main theme, refers to the learning and knowledge enacted in day-to-day activities (Kong, 2007). The core of organizational capital is the knowledge that remains in organizations at the end of the day, after their members have left (Grasenick and Low, 2004; Roos et al., 1998). It indicates all of the non-human repositories of knowledge in organizations – such as databases, process manuals, strategies, routines, organizational culture, publications, and copyrights – that are expected to create value for organizations, thus adding to their material value (Bontis et al., 2000; Ordonez de Pablos, 2004).

While the concepts of human capital and customer capital have been relatively widely examined in the areas of human resources management and marketing management, the concept of organizational capital remains under-examined and heterogeneous, in terms of its primary components (Adler & Kwon, 2002). Additionally, there has been little effort made to explore these areas in the hospitality industry. Therefore, the objective of this research is to identify the key intangible value assets of organizational capital; develop their measurements, as a prerequisite for the financial valuation of intangible value resources; and examine the relevance of their value in the context of the casual dining restaurant industry. Specifically, the following research questions were examined:

- What are the key intangible value resources of organizational capital in the context of the casual dining restaurant industry?
- How can the key intangible value resources of organizational capital in the context of the casual dining restaurant industry be measured?
- How can a firm's overall organizational capital be measured and compared with those of other firms in the same industry?

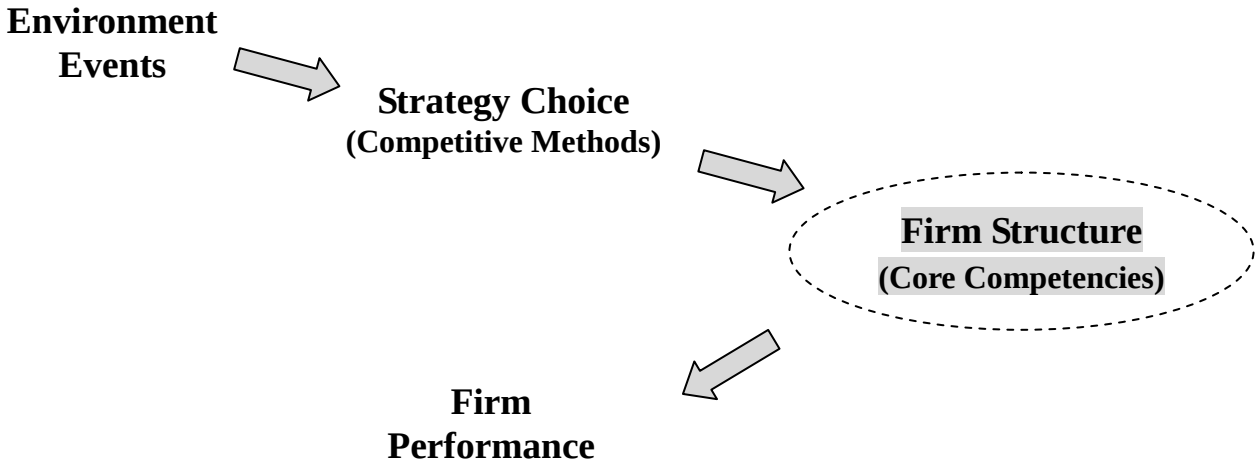
Above all, the identification of core intangible value assets will help improve casual dining restaurant firms' understanding of what intangible assets are and will enable them to apply the concept of intangible assets to strategic and operational management. Investment in intangible assets is considered to increase productivity and competitiveness. The objective measurement indicators developed in this study will help restaurant firms manage intangible assets more systematically and assist investors in valuing restaurant firms. In terms of investment in intangible assets, finding the value relevance of these assets will help firms make strategic investment decisions.

Intangibles in Co-alignment Theory

According to the co-alignment model, an underpinning for this research, the concept of strategic management refers to the ability of the management of the firm to properly align the firm with the forces driving changes in the environment in which the firm competes (Olsen, West, & Tse, 2008). For this alignment, management of the firm must discover and invest in competitive methods that can generate the greatest overall financial value to the firm. After scanning of the environment and selection of competitive methods, management must create a firm structure which can facilitate consistent allocation of resources to the competitive methods that can generate the greatest value to the firm. To achieve this successfully, management has to develop a set of core competencies (see Figure 5.1). According to Olsen, et al. (2008, p. 260), "the greater the integration among core competencies and competitive methods, the greater the likelihood that the firm can achieve competitive advantages that are not easily copied by other firms". As seen in

<Figure 5.1>, the concept of core competencies in the co-alignment model provides a tool to identify intangible resources, distinguishes which ones are really important, and help understand their combined synergies.

<Figure 5.1> The Co-alignment Model



A core competency is considered to be composed of a stack of various types of intangible resources. Hamel and Prahalad (1994) define a core competence as "a bundle of skills and technologies that enables a company to provide a particular benefit to customers" (p. 199). On the other hand, tangible assets, such as properties or capital, support the core competencies, but do not constitute the critical part of them (Andriessen, Frijlink, Van Gisbergen, & Blom, 1999). The ability to distinguish core from noncore enables us to identify those intangible resources that are of strategic important for companies. These strategically important intangibles will somehow be part of core competencies. Andriessen (2004) argued that the weightless wealth of companies is composed of a diversity of intangible resources. However, it is not enough for management to merely list all its intangible resources. Management should develop the ability to distinguish between strategically relevant and irrelevant intangible resources. The relevant intangible resources, referred to as core competencies in the co-alignment model, are those resources that can be integrated well with competitive methods and that can generate substantial additional value

to the firm. Roos et al (1998, p. 25) also insisted that intellectual capital is much broader in scope than core competencies are. While core competencies are certainly part of intellectual capital, they are more restricted in their focus than is intellectual capital. The differentiation of the core versus non-core competencies is dependent on a firm's strategy and left to its management. And non-core invisible assets or competencies also need to be managed.

It is also asserted that, in the hospitality industry, each competitive method should be properly implemented and executed at the point of transaction between the customer and the firm which is referred to as the exchange process where all the products and services are directly presented to the customer by a customer contact employee (Olsen, et al., 2008). To accomplish this successfully, the firm must establish a bundle of core competencies. These core competencies must receive the bulk of the firm's resources. And peripheral competencies support the continuing development and maintenance of the core competencies

Intangible Assets

There are a number of definitions of intangible assets, intangible resources, intellectual capital, and knowledge assets. In general, these definitions tend to be very broad and focus on the intangible aspect of corresponding assets. According to the Longman's Dictionary of Contemporary English, the term 'intangible' is described as "which is hidden or not material, but known to be real," "which by its nature cannot be known by the senses, though it can be felt", and "which is difficult to understand". Researchers described it using the following words, "not have a physical or financial embodiment (Lev, 2001), "non-physical features" (Blair & Wallman, 2001), "the personal asset of individuals and a combination of genetic inheritance" (Hudson, 1993) or "knowledge, experience, expertise, and associated soft assets" (Klein, 1998)".

The accounting, valuation and performance measurement communities use the term 'intangible assets'. The management and legal communities primarily use the term 'intellectual capital'. The human resource community uses the terms 'human capital or human assets'. Some other communities use 'know-how capital or knowledge-based assets'.

The terms intangible assets, knowledge assets, and intellectual capital were used interchangeably throughout the research.

When it comes to the dimensionality of intangible assets, there is disagreement among researchers. Many scholars have tried to identify components and dimensions of intangible assets because the identification of them helps to improve our understanding of what an intangible asset is, and also enables us to take the concept down to a strategic and even operational level (Roos, Roos, et al., 1998). The number of dimensions typically proposed in the literature has ranged from two to four. The variation is due to categorization of the assets that comprise intangible assets. These assets include human capital (human-resources-centric intangible assets), organizational capital (organization-centric intangible assets), and customer capital (relationship with external stakeholders, such as customers and suppliers).

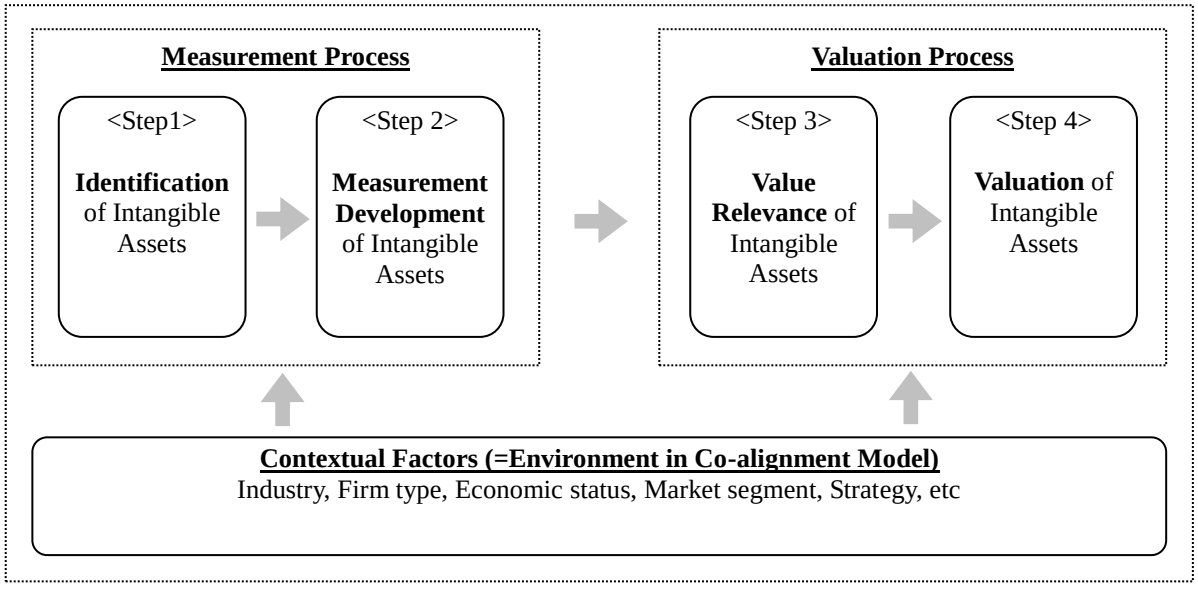
Human capital is referred as the individual knowledge stock of an organization as represented by its employees (Bontis, 2001). Roos et al. (1997) argue that employees generate intellectual capital through their competence, their attitude, and their intellectual agility. Customer capital is the knowledge embedded in the marketing channel and customer relationships that an organization develops through the course of conducting business (Bontis, 1999). Organizational capital is defined as "what remains in the company when employees go home for the night" (Roos & Roos, 1997, p. 42). Organizational capital arises from processes and organizational value, reflecting the external and internal focuses of the company, plus renewal and development value for the future (Bontis, et al., 2000).

Theoretical Frame - Intangible Assets Management System

Measurement or valuation methods were grouped into one of four methods; financial valuation method, value measurement method, value assessment method, and measurement method. Andriessen and Tissen (2000) argued that they are differentiated into two broader categories, valuation method and measurement method. For valuation method, implicit and explicit criteria or yardsticks for usefulness or desirability should be created. Rescher (1969) describes valuation as "a comparative assessment or measurement of

something with respect to its embodiment of a certain value". Using money as the denominator of value is advantageous because it creates a value scale at the ratio level that allows for mathematical transformations. A measurement method is not a method for valuation, yet this type of method is often used within the intellectual capital community. Many of the measurement methods use indicators to pinpoint areas of attention. Many of these indicators are similar to those used for measuring production or quality levels. As such, many of the measurement methods result in tools for internal management rather than for external reporting.

<Figure 5.2> Intangible Assets Management System



For successful management of intangible assets, both measurement and valuation methods should be taken into consideration together. Therefore, 'Intangible Assets Management System' of <Figure 5.2> is suggested for this study. First of all, companies should identify their intangible assets which are considered to be important for business and develop appropriate measurements for the respective intangible value attributes. As seen in <Figure 5.2>, the market value of intangible assets varies according to such contextual factors as environment in the co-alignment model, economic status, market conditions, and type of industry. Therefore, the valuation process should take into consideration these

factors. In the process of valuation, it is important to understand and define the context for intangible assets to improve the understanding of the potential value of intangible assets to the organization. Marr (2006, p. 46) asserted that even though most organizations posses a wide stock of intangible resources, not all of those are critical value drivers. The reason for this is that the value of resources is context specific and that resources are not just static – they dynamically interact with each other to be transformed into capabilities and core competencies (Marr, 2006, p. 46). For the successful valuation, companies should also confirm the value-relevance of intangible assets.

This study was limited in the measurement process, step 1 (identification of components for intangible assets) and step 2 (measurement development for intangible assets) in <Figure 5.2>. The first stage is processed to establish the salient dimensions of organization capital and identify industry-specific contexts for each respective dimension. The focus of the second step is deriving consensus among industry professionals and academics on the industry-specific contexts identified to measure organizational capital and the optimal measurement indicators developed based on these industry-specific contexts.

This study focused on the development of objective measurement indicators, not subjective perceptual measurement items which are generally used. These measurement indicators are developed taking primarily three criteria into consideration: cost, quality, and time (Kaplan & Norton, 1996). The objective measurement indicators enable a firm to measure and manage intangible value resources more precisely and efficiently. In addition, objective measurement indicators are more applicable across time and easier to be monitored by stakeholders, such as CEO, investors, owners, or customers. Additionally, this study does focus on the development of index equation, referred to as 'Organizational Capital Index (OCI)', to help a firm's internal management and to enable a firm to compare its organizational capital more effectively with those of the other firms in the same industry. It can provide a more reliable, more comprehensive way of evaluating a firm's organization-centric intangible capital. This kind of index serves as a yardstick when computing the impact of intangible value resources or testing their contribution on a firm's market value (Kalafut & Low, 2001)."

Discussion on Research Questions

Research Question One: Key Organizational Intangible Value Assets

"What are the key intangible value resources of organizational capital in the context of the casual dining restaurant industry?"

Organizational capital is defined as 'the institutionalized knowledge and codified experience stored in databases, routines, patents, manuals, structures, and the like' (Hall, 1992; Itami & Roehl, 1987; Walsh & Ungson, 1991). Creating organizational capital requires that information and skills acquired from the innovation activities are formally integrated. This represents knowledge integration as a formal process through which information and skills become an integral component of the routines that guide a firm's future actions (Zahra, Ireland, & Hitt, 2000).

Based on the in-depth literature review covering a wide range of areas (e.g., knowledge management, strategic management, organizational behavior, accounting, finance, industrial engineering, human resources management, and food service management), the following six of the most widely agreed upon domains of organizational capital were identified: innovation capital, organizational process capital, organizational culture capital, organizational learning capital, information system capital, and intellectual property capital. From the continuous literature review, seventeen sub-dimensions from the restaurant industry context for these six domains of organizational capital were established (see Table 5.1). This structure of six domains of organizational capital and seventeen sub-dimensional domains of capital was refined through the following interviews with five experts and the pilot test with ten experts.

The following <Table 5.1> provides the means and rankings of the components of organizational capital in the final round of the Delphi survey. The second and fifth columns ($Mean_1$ and $Mean_2$) provide the means of six types of organizational capital, measured with a 10-point Likert-type scale, in terms of the contribution of each type of capital to a firms' market value and the contribution of each sub-dimension to its corresponding category of organizational capital respectively.

<Table 5.1> Dimensional Structure of Organization-centric Intangible Capital

Organization-Centric Capitals	$Mean_1$	$Ranking_1$	Sub-dimensions	$Mean_2$	$Ranking_2$
Innovation Capital	8.56	1	Innovativeness of Menu	8.07	1
			Innovativeness of Service Operation	7.93	2
			R&D Management	7.23	3
Organizational Process Capital	8.00	2	Service Operation Management Process	8.47	1
			Human Resources Management Process	8.37	2
			Sales & Marketing Management Process	7.70	3
			Procurement & Inventory Management Process	7.07	4
Organizational Culture Capital	7.90	3	Service-oriented Culture	8.60	1
			Employees' Membership Culture	8.23	2
			Leadership Culture	7.90	3
			Teamwork Culture	7.83	4
Organizational Learning Capital	7.86	4	Flexible Adaptability	7.90	1
			Knowledge Sharing	7.77	2
Intellectual Property Capital	7.43	5	Franchising Assets	8.10	1
			Patent Assets	7.27	2
Information System Capital	7.20	6	Investment in Information System	7.63	1
			Maintenance of Information System	7.57	2

Note: $Mean_1$ is the degree of contribution of each organizational capital on a firm's value, on a 10-points Likert scale. $Mean_2$ is the degree of contribution of each sub-dimension on the corresponding organizational capital, measured on a 10-points Likert scale.

Regarding the contribution of organization-centric capital to the market value of casual dining restaurant firms, as expected, innovation capital (Mean = 8.56) ranked first among the six types of organizational capital. Organizational process capital (Mean = 8.00) ranked second, followed by organizational culture capital (Mean = 7.90). Information system capital (Mean = 7.20) was evaluated to contribute least to a firm's value. Interestingly, the ranking (Ranking1) of the six domains of organizational capital measured in terms of their contribution to a restaurant firm's value is almost identical to the order of these domains as identified in the literature review in terms of the number of models that

placed a premium on each of them as follows: innovation capital – twelve, organizational process capital – nine, organizational culture capital – nine, organizational learning culture – seven, information system – six, and intellectual property – five.

As expected from the previous literature review, this study also showed that innovation capital is predominantly perceived as the most important for a restaurant firm's value. A reasonable conclusion indicates that despite the industry to which a firm belongs, innovation capability is the most important organizational capital for a firm's survival and maintenance of its competitive advantage in a rapidly changing environment. Out of three industry wide sub-dimensions of innovation capital, innovativeness of menu items and service operation were considered the most important. Since customer preferences are continually changing very rapidly nowadays, restaurant firms must cope with these rapid changes by shortening the time required to introduce new menu items and services.

Both organizational process capital and organizational culture capital were perceived at almost the same level of importance (i.e., Mean = 8.0 and 7.9, respectively), which is also identical to the findings reported in the literature; indeed, both types of capital were considered important in the same number (i.e., nine) of models. In the context of the casual dining restaurant industry, the service operation process and the human resources management process were considered the two most important factors that can impact a firm's capability for organizational process management (i.e., Mean = 8.47 and 8.37, respectively). In terms of organizational culture capital, the service-oriented culture and the employees' membership culture were considered the two most important factors; these sub-dimensions are related to the two most important factors for organizational process capital, i.e., service operation management process and human resources management process. Indeed, restaurant companies in Korea place a great deal of importance on service and human resources.

Out of the six domains of organizational capital, organizational learning capital was ranked fourth in terms of contribution to a firm's value, which is identical to the finding from the literature review; i.e., organizational learning capital was also ranked fourth when measured by the number of models that placed a premium on an individual organizational

capital. According to evaluations, a firm's flexible adaptability has a slightly greater impact than knowledge sharing on its organizational learning capital. To sustain a competitive advantage, firms must cope with the rapidly-changing external environment and identify changes in customer preferences. In an effort to meet this changing demand, restaurants conduct a variety of promotions and introduce newly-developed menu items. Companies can gain a competitive advantage when they are able to exploit the knowledge, expertise, and skills of their employees and make use of the most effective managerial practices in their day-to-day operations. Hospitality employees should recognize that their own efforts and joint creative thinking are critical to achieving increased customer satisfaction and greater quality of service (Bouncken, Pick, & Hipp, 2006).

Regarding the rankings in terms of the number of models that placed a premium on each of the six domains of organizational capital, information system was slightly higher than intellectual property capital (frequency number of 6 and 5, respectively). In contrast, this study reports that intellectual property capital was found to be a little more important than information system capital (Mean = 7.43 and 7.20, respectively) due to the relatively bigger importance of franchising assets in the restaurant industry. In a highly competitive food service market, like that in Korea, restaurant owners or firms must take steps to protect their proprietary information, including recipes, techniques, concepts, and strategies, from theft by former employees or competitors. In the following section, more detailed discussion of each of the six domains of organizational capital is provided with a focus on measurement indicators for each type of organizational capital.

Research Question Two: Measurement for Organization-centric Capital

"How can the key intangible value resources of organizational capital in the context of the casual dining restaurant industry be measured?"

Innovation Capital

Innovation capital ranked first, of the six types of organization-centric capital, in the final round of the Delphi survey, with a mean of 8.56 on a 10-point Likert-type

measurement scale. It indicates that casual dining restaurant firms in Korea place more importance on innovation than on any other type of organizational capital. In Korea's highly saturated food service market (i.e., 605,929 restaurants open in 2010, which equated to 81 people per restaurant), restaurants are continuously forced to look for ways to improve quality and reputation, cut costs, entice new customers, and increase sales and profits. One of the best approaches to improve quality and reputation is through innovation, i.e., the ability to develop and launch new and successful hospitality services (Ottenbacher & Gnoth, 2005; Rodgers, 2008). In this regard, innovation in the form of new menu items and services are considered an important strategic weapon for restaurants in Korea.

<Innovativeness of Menu>

In the strategic management field, crucial sources of competitive advantage are new product/service development and innovation (Tushman, Anderson, & O'Reilly, 1997). Innovation and the creative renewal of products or services are achieved by adding value, through the application of expertise and imagination. In terms of the restaurant industry, firms differentiate themselves through menu choices (variation of ingredients and preparation methods), décor, theming and branding (Hudson, 1994).

The introduction of new menu items, to cope with changes in consumers' dining behaviors and preferences, is necessary for restaurant firms to achieve or maintain their competitive advantage in the restaurant market. For example, taking into consideration consumers' sharply-increasing health concerns and government's stronger health regulations, opportunities exist for progressive restaurant companies to spin value by introducing more creative health menu options and marketing health more effectively.

Of the three sub-dimensions of innovation capital, as expected, innovativeness of menu items was considered to contribute the most to firms' innovation capital (Mean = 8.07). Since all five indicators developed to measure innovativeness of menu satisfied the cutoff criteria (mean > 4.00 and standard deviation < 1.0), they were all retained for the measurement scale. Among the five indicators, 'Number of newly introduced menu items (#)' and 'Sales increase attributable to new menu items ($)' were the two most-highly

agreed indicators for menu innovativeness, which indicates that continuous introduction of new menu items should be accompanied by creation of additional profit to a firm.

The introduction of new menu items is pretty dependent on employees' suggestions. Therefore, it is very important for firms to create atmospheres that encourage employees to suggest ideas for new menu items. Employees who make contact with customers are more likely to catch onto trends in customers' preferences. Thus, 'Number of ideas suggested for menu items (#)' and 'Ratio of adopted ideas out of total suggested ideas for menu items (%)' were taken to reflect the degree to which firms' atmospheres are proactive enough to encourage employees to suggest ideas related to menu innovativeness. Currently many restaurant firms in Korea recruit ideas for new menu items even directly from customers by offering cash prize or giveway, or from young college students with a prize of employment guarantee in the conferences.

Since customers' preferences change very rapidly and consistently nowadays, restaurant firms must cope with rapid changes by shortening the time required to introduce new menu items. Therefore, 'Average time required to introduce a new menu item over the last three years (#)' is considered to be a relevant indicator of how diligently firms cope with changing customer preferences.

<Innovativeness of Service Operations>

As mentioned in the previous section, crucial sources of competitive advantage are new product/service development and innovation (Tushman, et al., 1997). Innovation can be achieved through creative renewal or the invention of products or services. Innovativeness of service operation, as well as menu innovativeness, is also important in the restaurant industry. Innovativeness of service operation ranked second, of the three sub-dimensions of innovation capital, in terms of contribution to innovation capital (Mean = 7.93). As shown in the final Delphi survey, all four indicators developed to measure firms' innovativeness of service operations satisfied the cutoff criteria. Thus, they were all retained for the measurement scale.

'Number of newly introduced services (#)' is considered a good indicator of how

hard restaurant firms try to satisfy or attract customers. As noted in the section on innovativeness of menu, it is important for firms to create atmospheres that encourage employees to suggest ideas for improving service operations. Therefore, 'Number of new ideas suggested for services (#)' and 'Ratio of adopted ideas out of total suggested ideas for service (%)' are appropriate indicators of firms' efforts to encourage employees to suggest ideas concerning new service operations. By the same token, with regard to service operation innovativeness, 'Average time required to introduce a new service over the last three years (#)' is considered to be a relevant indicator of how diligently restaurant firms cope with changing customer preferences.

Currently, one of the hottest issues for restaurant companies in Korea is the drive to determine how to make the best use of the highly developed mobile infrastructure and devices. The convergence of social media, mobile devices, and consumer lifestyles is ushering in a new era for restaurant-consumer interaction, thereby opening new doors for restaurant operators to build customer relationships and sales opportunities. For example, many restaurant companies have developed and released free apps for mobile devices to provide a variety of services, including nearest-store search service, transportation information to the nearest store, direct booking service, menu introduction, promotion coupon download service, real time event information, etc. Additionally, several restaurant companies have installed iPads at every table instead of using traditional menus, thereby enabling customers to order dishes directly from the table and enjoy other entertainment content before the food is ready to be served.

<R&D Management>

Research and development (R&D) management was considered to contribute much less to firms' innovation capital, as measured with a 10-point Likert-type measurement scale (Mean = 7.23), than the other two sub-dimensions of innovation capital. When it comes to measurement indicators for R&D management, as shown in the final Delphi survey, all five indicators designed to measure firms' capacity for R&D management satisfied the cutoff criteria (mean > 4.00 and standard deviation < 1.0). Thus, they were all

retained for the measurement scale.

Since one of the primary concerns of R&D-related departments is creating innovative ways to reduce food costs or develop new menu items that respond to what consumers want, two indicators, 'Number of new menu items developed by R&D related departments (#)' and 'Ratio of adoption of menu items developed by R&D related departments (%)', were perceived by the Delphi panel to duly indicate the capacity of R&D-related departments.

Another way of evaluating firms' R&D management is by assessing the investment of capital and labor in R&D-related projects. Thus, 'Ratio of R&D investment to revenue (%)' and 'Number of employees in R&D-related departments (#)' were considered appropriate indicators. Additionally, since the proficiency of R&D staff is critical for the successful implementation of R&D projects, 'Average tenure of R&D staffs (#)' was also included as an indicator.

Organizational Process Capital

In terms of contribution to market value, organizational process capital ranked second, of the six types of organization-centric capital, in the final round of the Delphi survey, with a mean of 8.0 on a 10-point Likert-type measurement scale. Organizational process is defined as the patterns of interaction, coordination, communication, and decision-making that an organization uses to transform resources into customer value (Afuah, 2004). While human capital is the core component of intellectual capital and forms the basis of value realization and value increase, process capital provides environmental support for creating knowledge and wealth; and relational capital ensures the value realization of knowledge created by effective interaction and matching (Edvinsson & Malone, 1997, p. 36). Shang and Huang (2008) have proposed three methods of measuring organizational processes: measuring investment in processes, measuring the results of processes, and measuring the management capability of processes.

<Service Operations Management Process>

Of the four sub-dimensions of organizational process capital, service operation

management process was considered to contribute most to a firms' entire organizational process capital, with a mean of 8.47 on a 10-point Likert-type measurement scale. As shown in the final Delphi survey, only three of four indicators developed to assess firms' service operation management processes satisfied the cutoff criteria. 'Number of accidents (#)' was eliminated, since the mean score was less than 4.00, the cutoff criterion.

In the hospitality industry, competitive methods should be properly implemented and executed at points of transaction between customers and firms – i.e., during the exchange process, wherein all products and services are directly presented to customers by customer contact employees (Olsen, et al., 2008). In the exchange process between customers and employees at restaurants, wait time is one of the biggest factors in customer satisfaction. Restaurant firms must make their best efforts to reduce customer wait time. Thus, 'Average time required from order to service (#)' and 'Average cooking time required per menu item (#)' were perceived as good indicators of the efficiency of service operations at restaurants. 'Number of customers served per employee (#)' was also considered an appropriate indicator of the efficiency of service operations management at restaurants.

According to Yoo and Lee (2008), restaurant firms encounter difficulties when enticing new customers due to the highly saturated market and the increased number of new competitors; indeed, there were 91 people per restaurant in 2008 (K.F.D.A., 2009) as compared to 81 people per restaurant in 2010, and 190,000 new restaurants opened in Korea in 2010 (NTS, 2011). Thus, restaurant firms pay a lot of attention to the strategies used to maintain current customers as well as attracting new customers by improving service quality. Out of the three measurement indicators for the service operation management process, "Average time required from order to service (#)" was perceived as the most appropriate indicator. Indeed, customer wait time is regarded as one of the most important aspects of service quality since it influences a customer's overall service quality appraisal. The perceived customer wait time significantly affects customers' negative emotional reactions, which in turn significantly affect their service evaluations and switching intentions.

<Human Resources Management Process>

Of the four sub-dimensions of organizational process capital, human resources management process was considered to contribute second-most to firms' organizational process capital, with a mean of 8.37 on a 10-point Likert-type measurement scale. The final Delphi survey revealed that only four of the six indicators initially designed to assess firms' human resources management processes satisfied the cutoff criteria. 'Number of industry-relevant certificates per employee (#)' and 'Investment in reward/performance-recognition programs ($)' were eliminated, since their mean scores were less than 4.00, the cutoff criterion.

Recruitment is the beginning of the employment relationship, and, thus, the ability of human resources management practices to positively impact organizational effectiveness is rooted in the effectiveness of recruitment practices (Ferris, Berkson, & Harris, 2002). It is critical that firms maximize the number of initially-selected quality candidates who accept job offers. Thus, 'Ratio of job offer acceptance (%)' was considered a good indicator of the effectiveness of firms' recruitment processes.

Training and development are known to impact the job satisfaction and organizational commitment of employees (Lam & Zhang, 2003; Poulston, 2008b; Taylor, Davies, & Savery, 2001). Those employees who are insufficiently skilled and perform tasks publicly may jeopardize service quality. Since poor training is associated with workplace problems, and improving training is likely to reduce such problems as under-staffing and theft, investment in training is recommended (Poulston, 2008a). Thus, 'Average expenditure for training per person' was considered an appropriate indicator of firms' efforts to provide employees with training.

Effective human resources management is expected to decrease labor costs. For example, recruitment and training costs can be reduced by decreasing turnover. Therefore, 'Labor cost ratio (%)' was considered to reflect, to some extent, the quality of organizations' human resources management.

Long-lasting vacancies are expected to slow down certain processes and increase the fatigue of employees affected by vacancies. Long-lasting vacancies are especially injurious

to the quality of service provided during direct transactions with customers. Therefore, firms must supplement vacant positions as quickly as possible. The indicator, 'Average time taken for supplementing vacancy personnel (#)' was shown by the Delphi panel to indicate the quality of human resources management practices, to some extent.

<Sales & Marketing Management Process>

Of the four sub-dimensions of organizational process capital, the sales and marketing management process ranked third, in terms of contribution to firms' organizational process capital, with a mean of 7.77 on a 10-point Likert-type measurement scale. The final Delphi survey revealed that all four indicators designed to assess firms' sales and marketing management processes satisfied the cutoff criteria.

When it comes to the quality of sales management processes within organizations, 'Achievement ratio of sales plan (%)' and 'Average sales performance per an employee ($)' were confirmed by the Delphi panel to indicate the achievements of firms' sales management teams in the casual dining restaurant industry.

Promotion is the key ingredient of marketing campaigns. A variety of promotional methods are used in the restaurant industry, including prizes, events, coupons, and gift cards. Good promotions are very important ways of communicating restaurants' products and building their images (Aprilia, 2006). Thus, both 'Revenue increase attributable to marketing promotions ($)' and 'Ratio of promotion expenditure to increased revenue (%)' were perceived by the Delphi panel to show the efficiency of firms' promotion management.

<Procurement & Inventory Management Process>

Of the four sub-dimensions of organizational process capital, procurement and inventory management process was considered to contribute least to a firms' organizational process capital, with a mean of 7.06 on a 10-point Likert-type measurement scale. The final Delphi survey showed that only five of the eight indicators initially designed to assess firms' procurement and inventory management processes satisfied the cutoff criteria. 'Backorder rate (= rate of orders waiting to be filled) (%)', 'Average length of contracts

with external suppliers (#)', and 'Number of suppliers (#)' were removed from the list, since their mean scores were less than 4.00 or their standard deviations were bigger than 1.0.

'On-time rate of delivery (%)', 'Order fill rate (= rate of order completion) (%)', and 'Line item fill rate (= rate of completion of line items in order) (%)' were agreed to be valid and appropriate indicators of restaurant firms' procurement and inventory management processes. For restaurant firms to maintain optimal levels of inventory replenishment, they must have reliable quality suppliers who have the right products available to meet demand at the right time. Smart suppliers are focused on delivering the highest possible level of service to restaurant firms while minimizing on-hand inventory. In terms of strategic supply chain management, supply companies continuously measure service performance levels by monitoring their delivery of cases ordered by customers (= order fill rate) and the successful delivery of orders within one hour of pre-arranged times (= on-time delivery) (*TGI*, 2009).

'Inventory turnover ratio (%)' and 'Food cost ratio (%)' were also agreed to be valid and appropriate indicators for procurement and inventory management processes. A key element of inventory management is periodic inventory-turnover analysis, particularly among food-service operators with numerous and diverse menus that change frequently (Reynolds, 1999). Periodic inventory-turnover monitoring enables restaurant firms to improve their inventory-management processes, especially when coupled with common precautions such as monitoring deliveries, dealing with preferred vendors, rotating stock, and keeping prices up to date (Reynolds, 1999).

Organizational Culture Capital

Organizational culture capital ranked third, of the six types of organization-centric capital, in the final round of the Delphi survey, with a mean of 7.90 on a 10-point Likert-type measurement scale. Of the four sub-dimensions of organizational culture capital, service-oriented culture was considered to contribute most to organizational culture capital, with a mean of 8.60 on a 10-point Likert-type ordinal measurement agreement scale. Employee membership culture ranked second.

Organizational culture has been defined as patterns of shared values and beliefs that develop over time and produce behavioral norms that are adopted when solving problems (Owens, 1987; Schein, 1990). Schein (1985) has also noted that culture is a body of solutions that have worked consistently and are, therefore, taught to new members as appropriate ways to perceive, think about, and feel in relation to common problems. In fact, these shared philosophies, assumptions, values, expectations, attitudes, and norms bind organizations together (Kilmann, Saxton, & Serpa, 1985). Organizational culture is of fundamental importance to effectiveness and efficiency, since it provides people with shared frameworks for interpreting events, frameworks that encourage individuals to operate both as autonomous entities and as teams, to achieve their companies' goals (Gregory, Harris, Armenakis, & Shook, 2009; Marr, Schiuma, & Neely, 2004).

<Service-oriented Culture>

Of the four sub-dimensions of organizational culture capital, service-oriented culture was considered to contribute most to firms' organizational culture capital, with a mean of 8.60 on a 10-point Likert-type measurement scale. As shown in the final Delphi survey, all five indicators developed to assess firms' service-orientation satisfied the cutoff criteria. Service-orientation refers to organizational commitment to meeting customer demands, as well as to identifying and satisfying customer concerns (Jun & Cai, 2010; Li, Chau, & Lai, 2010).

Customer relationship management helps transform firms into customer-oriented organizations that maximize the value of every customer (Skaates & Seppänen, 2005). Customer relationship management is the strategic application of people, processes, and technology to improving and sustaining profitable relationships with customers and partners (Ku, 2010). Customer relationship management enables firms to enhance relationships with their customers by attracting more profitable customers and establishing stronger and more durable customer relationships (Ö zgener & raz, 2006). Thus, 'Length of years since establishment of customer relationship management system (#)' and 'Number of customers in customer relationship management system (#)' were agreed to be good

indicators of firms' cultures of service orientation.

'Average time required for handling a complaint (#)' was also agreed to be an appropriate indicator of how service-oriented firms' cultures are. It is critical for companies to welcome complaints and view them as second chances to make customers loyal. Complaint management is important to customer relationship management strategies (Zineldin, 2006). In some circumstances, 95 percent of complainers will return if their complaints are handled satisfactorily (Zineldin, 2006). However, it is essential that complaints be resolved in an appropriate manner and as promptly as possible.

The importance of 'Average number of visits per customer (#)' and 'Revenue per service employee (#)' were also confirmed by the Delphi panel. According to Pryce (2006), organizational culture influences the job satisfaction of hotel workers, which, in turn, impacts customer satisfaction and profitability. The degree to which organizations' cultures are service-oriented affects customer satisfaction, which, in turn, affects whether customers are attracted to organizations' services.

<Employee Membership Culture>

Of the four sub-dimensions of organizational culture capital, employee membership culture was considered to contribute second-most to firms' organizational culture capital, with a mean of 8.23 on a 10-point Likert-type measurement scale. As shown in the final Delphi survey, all five indicators developed to assess firms' service-orientedness satisfied the cutoff criteria.

'Average years of tenure (#)' and 'Annual turnover rate (%)' were considered indicators of employee belonging in organizations. The hospitality industry is notorious for high turnover. High levels of turnover have both direct and indirect costs; direct costs include the time and money needed to find, hire, and train replacement workers, and indirect costs include the reductions in productivity and service caused by understaffing during the time it takes to find replacement workers and due to the inexperience of new workers once they are found and hired (Hinkin & Tracey, 2000; Woods & Macaulay, 1989). It is extremely important for firms to reduce employee turnover.

‘Number of pep rallies to strengthen unity (#)’ and ‘Investment in reward programs or activities ($)’ were considered valid measurements of firms’ efforts to support or reinforce their employees. The morale and attitudes of employees can have a significant impact on the quality of services they provide. Low morale can hinder the performance of most activities. Thus, as part of internal marketing, firms should hold pep rallies to enhance the unity of employees and should arrange rewards programs and activities.

<Leadership Culture>

Of the four sub-dimensions of organizational culture capital, leadership culture was ranked third, in terms of contribution to organizational culture capital, with a mean of 7.90 on a 10-point Likert-type measurement scale. As shown in the final Delphi survey, all three indicators designed to assess firms’ leadership culture satisfied the cutoff criteria.

Leadership influences follower performance by directly influencing follower attitudes. Shamir, House, and Arthur (1993) have observed that leaders increase the intrinsic motivation of their followers by linking goals and efforts to self-concepts that followers value. It is very hard to directly measure organizational leadership culture. Thus, three surrogate indicators that may reflect firms’ willingness and efforts to enhance their leadership atmosphere were developed. ‘Number of leadership-promoting activities (or programs) supported by a company (#)’, ‘Investment in leadership-related programs or activities ($)’, and ‘Ratio of leadership program participants to total employees (%)’ were agreed to be valid and appropriate measures for firms’ leadership environments.

Indeed, leadership has a remarkable influence on employee behavior in the customer service industry (Ahmed & Parasuraman, 1994; Clark, Hartline, & Jones, 2009). Leadership skills are very important in the hospitality industry, which is labor-intensive and has a dynamic environment and a service orientation (Gillet & Morda, 2003). Specifically, the transformational leadership style improves employee dedication, social behavior, role clarity, and satisfaction (Gill & Mathur, 2007). According to the study by Kim and Hancer (2011), which used a sample of restaurant employees, both the participative leadership style and supportive leadership style influence affective commitment of restaurant employees.

<Teamwork Culture>

Of the four sub-dimensions of organizational culture capital, teamwork culture was ranked fourth, in terms of contribution to firms' overall organizational culture capital, with a mean of 7.83 on a 10-point Likert-type measurement scale. As shown in the final Delphi survey, all three indicators designed to assess firms' teamwork cultures satisfied the cutoff criteria.

Good teamwork, supported by top management, is considered an important driver of productivity in organizations. Teamwork-oriented environments reduce costs and result in better-quality products and greater productivity (Parker, 1991). It is very hard to directly measure teamwork culture within organizations. Thus, three surrogate indicators that may show firms' willingness and efforts to enhance the degree to which their atmospheres are teamwork-oriented were developed. Three indicators of teamwork enhancement programs or activities – 'Number of teamwork-orientation programs and activities (#)', 'Number of collaborative projects (#)', and 'Investment in teamwork-related programs or activities ($)' – were perceived to indicate teamwork atmosphere.

Team development has become important because innovative tasks require the input of specialized knowledge available in multiple locations. Quinn's (1992) study of 84 cases of innovation emphasized fine teamwork as one of the most important factors to foster organizational innovation. Reciprocal interactions can prevent misunderstandings and enhance shared values, leadership, trust, and justice in team-member relationships, thus promoting the democratization of knowledge (Ardichvili, Page, & Wentling, 2003; Yang, 2007).

Organizational Learning Capital

Organizational learning capital ranked fourth, of the six types of organization-centric capitals, in the final round of the Delphi survey, with a mean of 7.87 on a 10-point Likert-type measurement agreement scale. Of the two sub-dimensions of organizational learning capital, flexible adaptability was perceived to contribute relatively more to firms'

organizational learning capital than knowledge sharing.

Senge (1990) defines organizational learning as ‘‘a continuous testing of experience and its transformation into knowledge available to the whole organization and relevant to its mission’’ (p. 6). Organizational learning enhances the innovative capacity of organizations, and firms can only innovate, if they have efficient methods of developing resources, competencies, and capabilities (Akgün, Keskin, Byrne, & Aren, 2007; Alegre & Chiva, 2008; Argyris & Schon, 1978; Calantone, Cavusgil, & Zhao, 2002; Chipika & Wilson, 2006; Helfat & Raubitschek, 2000; Sinkula, Baker, & Noordewier, 1997; Stata, 1994).

<Flexible Adaptability>

Of the two sub-dimensions of organizational learning capital, flexible adaptability was considered to contribute, slightly higher than knowledge sharing, to firms’ overall organizational learning capital, with a mean of 7.90 on a 10-point Likert-type measurement scale. As shown in the final Delphi survey, all five indicators designed to assess firms’ flexible adaptability satisfied the cutoff criteria.

Strategic plans can work well in environments where stability and predictability are becoming increasingly scarce. Such plans must represent adaptive responses to external environments and the critical changes occurring within them (Dobson, Starkey, & Richards, 2004). Speed of reaction and flexibility, both geared toward enabling organizations to function in environments that are fast-changing and essentially unpredictable, should be emphasized. Additionally, it is highly important for firms to identify changes in customers’ preferences. Customer surveys help firms identify customer demand, create new markets, take initiative, and adapt current strategies. Thus, ‘Frequency of evaluation of strategic planning (#)’ and ‘Frequency of customer preference survey (#)’ were perceived by the Delphi panel to indicate firms’ adaptability to the market.

To sustain competitive advantage, firms must cope with rapidly-changing external environments and identify changes in customers’ preferences. Restaurant firms conduct a variety of promotions and introduce newly-developed menu items in order to meet

changing demand. The primary purpose of adaptability is to increase (or maintain) competitive advantage in the market, which affects market share. Thus, 'Promotion objective achievement ratio (%)', 'Ratio of sales from newly introduced menu items compared to total sales', and 'Change in market share (%)' were agreed to be indicators of firms' adaptability.

<Knowledge Sharing>

Of the two sub-dimensions of organizational learning capital, knowledge sharing was considered to contribute, slightly lower than flexible adaptability, to firms' overall organizational learning capital, with a mean of 7.77 on a 10-point Likert-type measurement scale. As shown in the final Delphi survey, five out of the six indicators designed to assess firms' knowledge sharing satisfied the cutoff criteria. 'Ratio of replies on the intranet discussion board to all employees' was removed from the measurement list, since its standard deviation was bigger than 1.0, the cutoff criterion.

In order to achieve good performance in terms of service innovation, hospitality organizations clearly must first develop and ensure knowledge sharing behavior (Hu, Horng, & Sun, 2009). Companies can gain a competitive advantage only if they are able to truly utilize their employees' knowledge, expertise, and skills and implement the most effective managerial practices in their daily operations. Additionally, hospitality and tourist industry employees must recognize that their contributions are critical to obtaining increased customer satisfaction and providing higher quality service (Bouncken, et al., 2006). Of course, obstacles always exist in the process of knowledge sharing, because knowledge is sometimes considered power; therefore, employees may be reluctant to share their knowledge. For example, restaurant chefs may face strong competition and start keeping "secret recipes" to themselves. Partial transfer of knowledge, i.e., where employees share only selected aspects of a given case rather than all of it, may be a more common way of hoarding information (Goh, 2002). The elimination of such hoarding behavior seems to be quite difficult to eradicate for any team or company; thus, understanding how to inspire individuals to share their knowledge has become crucial.

The sharing of information on issues such as financial performance, strategy, and operational measures conveys to organizations' employees that they are trusted (Murphy, 2006). People who are motivated and trained cannot contribute to enhancing organizational performance if they do not have information on important dimensions of performance and, in addition, training on how to use and interpret that information (Morgan 2001). Most companies provide extensive information on their websites for their employees (Murphy, 2006). As an example, Darden Restaurant (2006) has employee information available in many languages on its unit restaurants' POS systems. It also makes information available 24-7 via web-based employee access. In the same context, 'Number of shared (knowledge) documents in the intranet (#)' and 'Number of shared knowledge database (gigabytes) (#)' were considered to indicate firms' levels of knowledge sharing.

Organizational learning is a complex process that refers to the development of new knowledge and has the potential to change behavior (Huber, 1991; Slater & Narver, 1995). It is a time-honored process that involves changing individual and organizational behavior (Murray & Donegan, 2003). Developing a strong learning culture is important to creating, acquiring, and transferring knowledge, as well as modifying behavior to reflect new knowledge and insight (Garvin, 1993; Huber, 1991). Hence, organizations stressing organizational learning culture must first acquire information; interpret it, to fully understand its meaning; and transform it into knowledge. It is very important that firms provide learning environments for their employees. Thus, 'Number of education programs available (#)', 'Investment in education programs ($)', and 'Number of employees who have taken education programs (#)' were confirmed by the Delphi panel to indicate firms' efforts to improve knowledge sharing among employees.

Intellectual Property Capital

Intellectual property capital ranked fifth, of the six types of organization-centric capital, in the final round of the Delphi survey, with a mean of 7.43 on a 10-point Likert-type measurement scale. Of the two sub-dimensions of intellectual property capital, franchising assets was perceived to contribute relatively more to firms' intellectual property

capital than patent assets, in the context of the casual dining restaurant industry.

Intellectual property provides firms with a wide array of growth opportunities and a competitive edge and is crucial to remaining competitive (Chang, Hung, & Tsai, 2005). For example, patents can legally exclude potential entrants to the market from manufacturing and selling products (Chang, et al., 2005). In comprehensive strategies, reasons for patenting have been shown to extend beyond direct profit and include blocking, cross-licensing, and the prevention of lawsuits (Cohen, Nelson, & Walsh, 2000).

Bollen, Vergauwen, and Schnieders (2005) have asserted that intellectual capital is an important source of economic wealth and should, therefore, be taken into serious consideration when firms formulate their strategies. The strategy formulation process can be enhanced by fully integrating intellectual property and intellectual capital into management models.

<Franchising Assets>

Of the two sub-dimensions of intellectual property capital, franchising assets were considered to contribute more to firms' intellectual property capital than patent assets, in the context of the casual dining restaurant industry, with a mean of 8.10 on a 10-point Likert-type measurement scale. As shown in the final Delphi survey, only four of the five indicators designed to assess firms' franchising assets satisfied the cutoff criteria. 'Growth rate of franchising contracts (%)' was eliminated, since its standard deviation was bigger than the cutoff criterion (S.D. = 1.15).

'Number of franchising contracts (#)', 'Cash flow from current franchising ($)', and 'Average (remained) length of franchising contracts (#)' were perceived by the Delphi panel to be good indicators of casual dining restaurants' franchising assets. Therefore, when assessing restaurant firms' present franchising capacity, three questions need to be taken into consideration: How many franchising contracts is an establishment currently under? How much cash flow is being generated by these contracts? And how long will the current franchising contracts last?

'Bankruptcy rate of franchising properties (%)' was also considered a good

indicator of restaurant firms' franchising capacity. Currently, franchise marketing is widely used in every segment of food services in Korea – e.g., for fried chicken, pizza, lunch boxes, bulgogi, and kalbi. Unfortunately, many franchisees go bankrupt due to poor support from irresponsible franchisors. Therefore, the bankruptcy rate of franchisees can be used as an indicator of franchising service quality. According to the annual report provided by the National Tax Service in Korea (NTS, 2011), the total number of restaurants open in 2010 was 605,929; yet, the number of restaurants that went out of business in 2010 was 172,879. On the other hand, a similar number of new restaurants (i.e., 188,008) opened up in 2010.

'Growth rate of franchising contracts (%)' did not reach an agreement among the Delphi panel because it is considered very difficult for casual dining restaurant firms to maintain consistent growth of franchising contracts in food service markets as highly-saturated as Korea's.

<Patent Assets>

In addition to the need for trademarks for logos, conflicts tend to spring up over the infringement of recipes, menu item names, trade secrets, etc. in the restaurant industry. The term "trade secrets" refers to any type of information that provides the owner of that information with a competitive advantage as a result of the information not being generally known and readily ascertainable by others. As previously noted, in a highly competitive food service market, like that in Korea, restaurant owners or firms must protect their proprietary information, including recipes, techniques, concepts and strategies, from theft by former employees. For example, restaurant owners and chefs often disagree when determining who owns the copyright to recipes created by the chef for the dishes served at the restaurant. This conflict occurs quite frequently because the answer requires inquiry into a number of factors in order to make a proper determination of ownership (Broussard, 2007).

Of the two sub-dimensions of intellectual property capital, patent assets were considered to contribute less to firms' intellectual property capital than franchising assets, in the context of the casual dining restaurant industry, with a mean of 7.27 on a 10-point

Likert-type measurement scale. As shown in the final Delphi survey, all four indicators designed to measure firms' patent assets satisfied the cutoff criteria. Thus, they were all retained for the measurement scale.

By the same token, 'Number of patents legally protected (#)', 'Cash flow from patents ($)', and 'Average (remaining) length of patents (#)' were perceived by the Delphi panel to be good indicators for casual dining restaurants' patent assets. Thus, when assessing restaurant firms' patent assets, three questions need to be taken into consideration: How many patents are legally protected? How much cash flow is generated by the current patent assets? And how long will the current patent assets be legally protected? In addition, it is also very important for firms to consistently invent (or develop) new processes or competitive methods. Thus, 'Number of new patents filed (#)' was also agreed to be a good indicator of firms' potential patent assets.

Information Systems Capital

Information systems capital ranked sixth, of the six types of organization-centric capital, in the final round of the Delphi survey, with a mean of 7.20 on a 10-point Likert-type measurement scale. Of the two sub-dimensions of information systems capital, investment in and expenditures on information systems were perceived to contribute relatively more to firms' information systems capital than the maintenance of information systems.

<Investment in Information Systems>

Of the two sub-dimensions of information systems capital, investment in information systems was considered to contribute, slightly more than the maintenance of information systems, to firms' overall information systems capital, with a mean of 7.63 on a 10-point Likert-type measurement scale. As shown in the final Delphi survey, all three indicators designed to assess firms' investment in information systems satisfied the cutoff criteria.

Many food service establishments utilize information system for a variety of purposes; good and labor cost analyses, sales forecasts, server performance evaluations,

menu analysis, and so on (Huber, 2003). An information system is likely to be considered any combination of information technology that supports an organization's knowledge management. The advancement of information technology improves the internal structure of organizations. In many industries, investment in information systems is also regarded as a measure of progress toward accomplishing corporate goals (Sveiby, 1997, p. 175). Organizations view investments in information technology as a way of combating competition by improving the productivity, profitability, and quality of operations (Devaraj & Kohli, 2003). Companies with systems for information retrieval and distribution have powerful structures that support their organization (Sveiby, 1997). Thus, 'Investment in information systems infrastructure ($)', 'Expenditure on information systems infrastructure ($)', and 'Labor cost of information systems-related departments' were perceived to reflect firms' information systems capital.

<Maintenance of Information Systems>

Of the two sub-dimensions of information systems capital, the maintenance of information systems was considered to contribute, slightly less than investment in information systems, to firms' overall information systems capital, with a mean of 7.57 on a 10-point Likert-type measurement scale. As shown in the final Delphi survey, all three indicators designed to assess firms' investment in information systems satisfied the cutoff criteria.

Information systems investments can be expressed as percentages of sales or in absolute figures and provide valuable clues as to how internal structure is developing. However, it is also very important for firms to utilize information systems effectively and maintain information systems infrastructure. Well-maintained information systems help employees do their jobs more effectively and efficiently. Thus, 'Number of requests for fix or repair (#)', 'Average time of problem solution (#)', and 'Number of employees who have taken training in information systems (#)' were perceived to indicate firms' ability to maintain information systems.

Research Questions Three: Organizational Capital Index (OCI)

"How can a firm's overall organizational capital be measured and compared with those of other firms in the same industry?"

The relative weight of six types of organizational capital ($Weight_1$), measured using the question 'Indicate the degree to which each organizational capital contributes on a firm's market value' on a 10-point Likert-type measurement scale, better indicates which type of organizational capital is more contributive to a firm's value. The relative weight of sub-dimensional components under each organizational capital ($Weight_2$), measured using the question 'Indicate the degree to which each of the following sub-dimensional components contributes on the corresponding organizational capital' on a 10-point Liker-type scale, better explains which component is more important in each organizational capital. For example, regarding innovation capital, innovativeness of menu was ranked the most important component. Both $Weight_1$ and $Weight_2$, initially measured on a 10-point Likert-type scale, were standardized at '1'.

Taken together, these organizational intangible value assets can be combined to form a single measure of organizational capital index (OCI). The equation for OCI in the context of the casual dining restaurant industry, taking the relative importance of six component organizational capitals ($Weight_1$) into consideration, is as follows,

OCI = 0.86*(Innovation capital) + 0.80*(Organizational process capital) + 0.79*(Organizational culture capital) + 0.78*(Organizational learning capital) + 0.74*(Intellectual property capital) + 0.72*(Informational system capital)

<Table 5.2> Dimension Structure of Organization-centric Intangible Capital

Organization-Centric Capitals	$Weigt_1$ (Ranking)	Sub-dimensions	$Weight_2$	$Weight_3$ ($Weight_1$ * $Weight_2$)	Ranking
Innovation Capital	0.86 (1)	Innovativeness of Menu	0.81	0.69	1
		Innovativeness of Service Operation	0.79	0.68	2
		R&D Management	0.72	0.62	7

Organizational Process Capital	0.80 (2)	Service Operation Management Process	0.85	0.68	2
		Human Resources Management Process	0.84	0.67	5
		Sales & Marketing Management Process	0.77	0.62	7
		Procurement & Inventory Management Process	0.71	0.57	14
Organizational Culture Capital	0.79 (3)	Service-oriented Culture	0.86	0.68	2
		Employees' Membership Culture	0.82	0.65	6
		Leadership Culture	0.79	0.62	7
		Teamwork Culture	0.78	0.62	7
Organizational Learning Capital	0.78 (4)	Flexible Adaptability	0.79	0.62	7
		Knowledge Sharing	0.78	0.61	12
Intellectual Property Capital	0.74 (5)	Franchising Assets	0.81	0.60	13
		Patent Assets	0.73	0.54	17
Information System Capital	0.72(6)	Investment in Information System	0.76	0.55	15
		Maintenance of Information System	0.76	0.55	15

Note: $Weight_1$ is the degree of contribution of each organizational capital on a firm's value.
$Weight_2$ is the degree of contribution of each sub-dimension on the corresponding organizational capital.
$Weight_3$ is the degree of contribution of each sub-dimension on a firm's overall market value.

$Weight_3$, located in the fifth column in the <Table 5.2>, is $Weight_1$ times $Weight_2$. $Wight_3$ indicates the relative importance of seventeen sub-dimensional capitals in terms of contribution on a firm's value. Five highly contributive (sub-dimensional) organizational capitals on a firm's market value were 'Innovativeness of menu', 'Innovativeness of service operation', 'Service operation management process', 'Service-oriented culture', and 'Human resources management process.' To develop more precise and comprehensive index, it is recommended to reflect different aspects of each organizational capital. Thus, instead of six broader organizational capitals, more precise seventeen sub-dimensional organizational capitals are used for Organizational Capital Index (OCI). The equation for OCI in the context of the casual dining restaurant industry, taking the relative importance of seventeen sub-dimensional organizational capitals ($Weight_1$) into consideration, is as follows,

OCI = 0.69*(Innovativeness of menu) + 0.68*(Innovativeness of service operation) + 0.62*(R&D management) + 0.68*(Service operation management process) + 0.67*(Human resources management process) + 0.62*(Sales & marketing process) + 0.57*(Procurement & inventory

management process) + 0.68*(Service-oriented culture) + 0.65*(Employees' membership culture) + 0.62*(Leadership culture) + 0.62*(Teamwork culture) + + 0.62*(Flexible Adaptability) + 0.61*(Knowledge sharing) + + 0.60*(Franchising assets) + 0.54*(Patent assets) + 0.55*(Investment in information system) + 0.55*(Maintenance of information system)

The organizational capital index, or OCI, is the single index that represents the sum total of a firm's organizational capital in terms of its contribution to a firm's market value. To calculate OCI, the multiple measurement indicators for each sub-dimensional capital should be standardized to a common scale, as each measurement indicator has a different unit of measure, such as a dollar amount, number, ratio, and so on.

Here is the brief summary of how to apply this approach to the other food service market segments or other hospitality industries. For example, when developing OCI in the context of hotel industry, firstly, reconfirmation of these six categories of organizational capital is needed. Secondly, in order to improve validity and precision in the context of the hotel industry, more industrywise sub-dimensions for each organizational capital should be established. Thirdly, hotel industry-specific measurement indicators need to be developed for each sub-dimension. Fourthly, using the panel of industry professionals, the relative weight of each sub-dimension in terms of its contribution to hotel companies is identified. Fifthly, data for each measurement indicators are identified, from public and proprietary sources, including company and industry reports, expert ratings, government filings and special studies. Finally, taken all together, these weights and data are combined to form a single measure of organizational capital, OCI.

The example of how to calculate a firm's OCI for 'intellectual property capital', using the relative importance of seventeen sub-dimensional capitals ($Weight_3$), is provided in the <Table 5.3>. The example is made assuming there are four restaurant companies (Firm 'A', Firm 'B', Firm 'C', and Firm 'D') of interest to evaluate each company's OCI for intellectual property capital.

Firstly, raw data of measurement indicators for each company are collected, from public and proprietary sources, including company and industry reports, expert ratings,

government filings and special studies, the four columns on the left side in the table. Industry-average of each indicator, the fifth column from the right-hand side in the table, is average of four companies in this example.

Secondly, standardization of each measurement indicator to a common scale is made by dividing each firm's score by the industry-average. The four columns from the right-hand side in the table show the standardized scores of measurement indicators for each company.

Thirdly, the average of standardized scores of all measurement indicators under each sub-dimensional capital shows the relative size of the corresponding sub-dimensional organizational capital of each firm. In this example, firm 'C' has the relatively bigger patent assets (=1.33) than the other firms. And firm 'A' shows the relatively bigger franchising assets (=1.46) than the other three firms.

Fourth, the OCIs of patent assets and franchising assets for each firm can be calculated by multiplying the average scores of all standardized measurement indicators by the weights developed from this study in terms of their contribution to a firm's market value ,patent assets = 0.54 and franchising assets = 0.60.

Finally, the OCI for intellectual property capital which is one of six types of intangible organizational capital is the sum of OCI of patent assets and that of franchising assets. In terms of contribution to a firm's market value, firm 'A' has the biggest value-contributing intellectual property capital (=1.49) among all companies, followed by firm 'C' (=1.21).

<Table 5.3> Example for Calculation of Organizational Capital Index – Intellectual Property Capital

Measurement Indicators	<Raw Data>				Industry-average	<Standardized w/ Industry-average>			
	Firm 'A'	'B'	'C'	'D'		Firm 'A'	'B'	'C'	'D'
Patent Assets									
Total number of patents legally protected (#)	250	150	250	120	193	1.30	0.78	1.30	0.62
Number of new patents filed (#)	10	5	35	15	16	0.62	0.31	2.15	0.92
Average (remained) length of patents (#)	25	30	15	25	24	1.05	1.26	0.63	1.05
Cash flow from patents ($ 1,000)	$ 3,000	$ 1,500	$ 2,500	$ 1,000	$ 2,000	1.50	0.75	1.25	0.50
Average Score of Standardized Measurement Indicators (①)						**1.12**	**0.78**	**1.33**	**0.77**
Weight of Patent Assets (②)							**0.54**		
OCI - Patent Assets (①*②)						**0.61**	**0.42**	**0.72**	**0.42**
Franchising Assets									
Total number of franchising contracts (#)	200	150	100	25	119	1.68	1.26	0.84	0.21
Average (remained) length of franchising contracts (years)	10	8	12	20	13	0.80	0.64	0.96	1.60
Cash flow from franchising ($ 1,000)	$ 7,500	$ 2,500	$ 3,000	$ 1,200	$ 3,550	2.11	0.70	0.85	0.34
Bankruptcy rate of franchising properties (%)	0.20	0.15	0.10	0.20	0.16	1.23	0.92	0.62	1.23
Average Score of Standardized Measurement Indicators (①)						**1.46**	**0.88**	**0.82**	**0.84**
Weight of Franchising Assets (②)							**0.60**		
OCI - Franchising Assets (①*②)						**0.88**	**0.53**	**0.49**	**0.50**
OCI for Intellectual Property Capital						**1.49**	**0.95**	**1.21**	**0.92**

Note:
Raw Data = Scores of each measure indicator, measured with original unit of measure
Industry Average = Industry average of each measurement indicator, average of all four firms in this example.
Standardized w/ Industry-average: Raw Data ÷ Industry-average

Conclusions

Given the extensive importance of intangible value assets and the different foci of the value creation process in the service industry, it is critical to understand what intangible assets exist, how to measure and manage them, and how much they contribute to a firm's value in the context of the hospitality industry. Even though the pertinent investment in intangible assets is expected to lead to a firm's higher productivity and competitiveness, there have been few studies in the hospitality industry due to the unclear connection between intangible assets and a firm's value.

To date, this study is the first of its kind to attempt to establish a systematic structure of intangible value assets and to develop objective measurement scales in the hospitality industry. The essential thrust of the present study is to identify key intangible value resources and establish their measurement, which will help to measure the financial contribution of each intangible asset in order to make an investment decision on it. This study identifies key organization-centric intangible value assets in the context of the casual dining restaurant industry, develops their measurement, and examines their contribution to a firm's market value.

This section presents a primary conclusion on the structure of six organizational capitals, the sub-dimensional capitals of each of them, and the organizational capital index (OCI), based on the findings from an intensive literature review, analysis of the Delphi survey, and subsequent discussions on each research question. At the end of each brief discussion, commentaries are provided.

Structure of Organization-centric Capital

Organizational capital is defined as the institutionalized knowledge and codified experience of an organization. Creating organizational capital requires formally integrating the information and skills acquired from innovation activities. This represents knowledge integration as a formal process through which information and skills become integral components of the routines that guide a firm's future actions.

The concept of core competencies in the co-alignment model provides a tool to

identify intangible resources, distinguishing which ones are really important and helping to understand their combined synergies. This core competency is much closer to organizational capital than the other two types of intangible value assets, human capital and relation (or customer) capital. The differentiation of the core versus non-core competencies is that it is dependent on a firm's strategy and left to its management. However, non-core intangible assets or competencies also need to be managed. According to the forces driving changes in the working environment, management strategy may require different types of core competencies that are less important before.

Based on an in-depth literature review covering a wide range of areas, the following six of the most widely agreed upon domains of organizational capital were identified: innovation capital, organizational process capital, organizational culture capital, organizational learning capital, information system capital, and intellectual property capital. This structure of the six most important domains of organizational capital was verified through subsequent interviews with five experts, the pilot test with ten experts, and three rounds of the Delphi survey.

- **Commentary 1**: The structure of organization-centric capital consists of six component organizational capitals: innovation capital, organizational process capital, organizational culture capital, organizational learning capital, information system capital, and intellectual property capital.

In Korea's highly saturated food service market (e.g., 605,929 restaurants opened in 2010, which equated to 81 people per restaurant), restaurants are continuously forced to look for ways to improve their quality and reputation, cut costs, entice new customers, and increase sales and profits. One of the best approaches to improve quality and reputation is through innovation, i.e., the ability to develop and launch new and successful hospitality services (Ottenbacher & Gnoth, 2005; Rodgers, 2008). In this regard, innovation in the form of new menu items and services are considered an important strategic weapon for restaurants in Korea.

As expected from the previous literature review, this study also shows that innovation capital is predominantly perceived as the most important aspect for a restaurant firm's value. A reasonable conclusion indicates that despite the industry to which a firm belongs, innovation capability is the most important organizational capital for a firm's survival and the maintenance of its competitive advantage in a rapidly changing environment. Additionally, it is expected that innovation capital reinforces the other five organizational capitals.

- **Commentary 2:** Innovation capital is identified as the most important organizational capital among the six categories of organizational capitals in the casual dining restaurant industry.

The structure of the six organizational capitals identified from this study is more universal. While 17 sub-dimensions of these six organizational capitals were identified to more precisely focus, relatively speaking, on the unique characteristics of the casual dining restaurant industry (e.g., innovativeness of menu, procurement and inventory management process, and franchising assets), this structure of six component organizational capitals was developed at a firm's level and originally drawn from the previous studies conducted across industries. Therefore, even though this structure was processed in the context of the casual dining restaurant industry for the purposes of this study, it is applicable to other hospitality industries as well as different restaurant market segments (e.g., the fast food industry, hotel industry, or cruise industry).

- **Commentary 3:** The six categorization structure of organization-centric capital is applicable to different hospitality industries as well as different types of market segments.

Sub-dimensions of Each Organizational Capital

Although the issue of management and the evaluation of intangible value assets lies at

the heart of knowledge management and strategic management, there has been no comprehensive framework or studies delineating the various components and measures of intellectual capital in the hospitality industry. The six salient dimensions of organization capital identified from the initial literature review were too broad and lacked industry-specific precision. Thus, each of the six primary organizational capitals was classified into several sub-dimensions, taking the casual dining restaurant, industry-specific contexts into consideration. The subsequent measurement development was also conducted more precisely in the context of the casual dining restaurant industry. These industry-contextual operationalization procedures improve the validity of this structure for organizing intangible assets.

Seventeen sub-dimensions were identified through the literature review, interviews, the pilot test, and the Delphi study with professionals. This industry-specific categorical system helps a firm identify and manage various types of intangible resources more precisely and efficiently. Furthermore, it can enable restaurant management to clearly understand how to cope with different types of intangible resources and how to gather, create, use, share, and develop them more appropriately. The findings can be grouped into the following conclusions.

- **Commentary 4**: The structure of organization-centric capital in the casual dining restaurant industry consists of six broader organizational capitals and seventeen industry-specific sub-dimensional organizational capitals.

The greater the integration among the core competencies and competitive methods, the greater the likelihood that a firm will achieve a competitive advantage that is not easily copied by other firms (Olsen, et al., 2008). The relevant intangible resources, referred to as core competencies in the co-alignment model, are those resources that can be easily integrated with competitive methods and that can generate a substantial additional value to the firm.

The top-five ranked sub-dimensional organizational capitals, in terms of their

contribution to a firm's market value, were innovativeness of menu (#1), innovativeness of service operation (#2), a service-oriented culture (#2), a service operation management process (#2), and the human resources management process (#5). Interestingly, the result shows that casual dining restaurant company managers place more value on the organizational capital, innovativeness, culture, and process management when they are directly associated with competitive methods, food menu and services.

- **Commentary 5**: Casual dining restaurant company managers put higher value on organizational capitals that are directly connected to competitive methods in the restaurant industry, food menu and services.

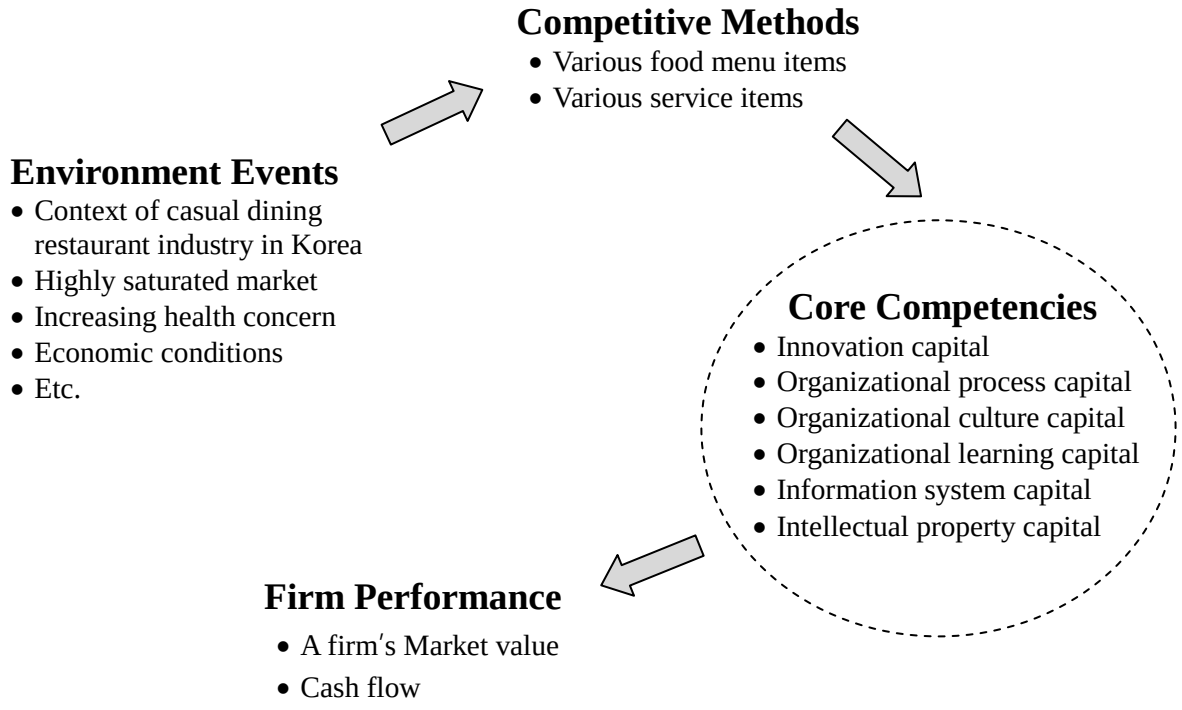
The two highest sub-dimensional organizational capitals, in terms of their contribution to a firm's market value, were innovativeness of menu (#1) and innovativeness of service operation (#2). This implies that casual dining restaurant company managers understand the combination of innovation and the competitive method contribute the most to a restaurant firm's value.

New competitive methods (menu items and services) are relatively easily copied by competitors in the food service market in Korea, such as recipes, menu names, interior, or service operations. However, if new competitive methods are available only when combined with certain organizational capitals (e.g., unique culture, patented recipe) which are not easily obtainable or replicable, restaurant firms can achieve competitive advantage in the market, which then leads to high performance (see Figure 5.3).

In the strategic management field, new product/service developments and innovation are crucial sources of competitive advantage. Innovation and the creative renewal of products or services are achieved by adding value, through the application of expertise and imagination. In terms of the restaurant industry, firms differentiate themselves through menu and service choices. Since customer preferences are continually changing very rapidly, restaurant firms must cope with these rapid changes by shortening the time required to introduce new menu items and services.

- **Commentary 6**: Casual dining restaurant company managers prefer innovation capital the most, especially when it is associated with a competitive method.

<Figure 5.3> Organizational Capitals as Core Competencies in the Co-alignment Model



The co-alignment model underpins the current research and the proposed theoretical structure of the intangible asset management system in <Figure 5.2>. The above <Figure 5.3> helps understand the critical role of organization-centric intangible assets as core competencies in the co-alignment principle (Olsen, et al., 2008). As shown in <Figure 5.3>, the co-alignment process proceeds from scanning the environment to selecting competitive methods, which are unique combinations of goods and services that are sustainable and create value for firms. In this case, the process refers to the development and introduction of sustainable new menu items or services, with consideration of a variety of environmental factors in the casual dining restaurant industry in South Korea. The next step in strategic

management is to ensure that resources are consistently allocated to the competitive methods selected; in this study, this involves the identification and development of a set of intangible organization-centric capitals as core competencies, along with an assessment of the strengths and weaknesses of each competency in the context of South Korea's casual dining restaurant industry. When environmental events, competitive methods, and core competencies are aligned, restaurant firms are able to achieve their desired levels of financial performance.

Contribution of Study

First, this study contributes to strategy literature in the hospitality industry, and especially literature on the co-alignment model, by establishing a systematic structure for organization-centric intangible assets as core competencies. More specifically, in the casual dining restaurant industry, this study identifies dimensions of organization-centric intangible assets, develops measurement scales for them, and confirms the importance of the co-alignment of competitive methods and core competencies (e.g., co-alignment of new menu items or service and innovation capital).

There have been few studies on organization-centric intangible assets in the hospitality industry. This systematic framework for the entire organization-centric intellectual capital of an organization contributes to the intellectual capital literature or knowledge management. Especially, this framework will provide a solid basis of further studies in the area of knowledge management and strategic management.

This industry-specific categorical system, in terms of internal management of organization-centric core competencies, helps a casual dining restaurant firm identify and manage various types of intangible resources more precisely and efficiently. Furthermore, it can enable restaurant management to clearly understand how to cope with different types of intangible resources and how to gather, create, use, share, and develop them more appropriately.

The findings from this study will provide foundations for further studies. Above all, unlike using subjective perceptual measurement scales, the measured values using the

objective measurement scales are consistent regardless of time or people. Therefore, the financial value (or contribution) of each of the six organizational capitals can be estimated more precisely along with the data of firms' market value.

Management has recognized that intangible resources drive the value of a firm and the pertinent investment in them leads to higher productivity and competitiveness. This measurement framework for organization-centric intellectual capital enables a firm to manage intangible value resources more precisely and efficiently.

This study focused on the development of objective measurement indicators instead of on the subjective perceptual measurement items which are generally used. In addition, objective measurement indicators are more applicable across time and easier to be monitored by stakeholders such as CEOs, investors, owners, or customers.

Limitations and Future Study

Limitations

This study exposed some limitations which call for further investigation in future studies. Firstly, since the context of this study is the casual dining restaurant industry in Korea, the Delphi panel is composed of restaurant practitioners and academics from Korea. Therefore, there may be limits in applying the measurement scales developed from this study to the different restaurant segments, such as the fast food or luxury dining restaurant segments or outside of Korea.

Although, when the findings are applied to the same casual dining restaurant industry, careful consideration needs to be taken into account if it is located in countries with different cultural settings, such as North American or European countries. Therefore, replication of the study seems to be highly desirable in order to examine whether the findings of this study would be applicable to different market segments. In addition, when using the measurement scales developed from this study directly in the different contexts, it is recommended to refine them through a pilot test before moving to the main study.

Communications for this study were conducted only using electronic devices: e-mail,

Skype, and telephone. It was sufficient to use telephone and e-mail for the pilot test and for the three rounds of Delphi surveys which did not require face-to-face contact. On the other hand, for the interviews with the five panelists, there may have been some limits in terms of drawing in-depth opinions from the interviewees when using electronic devices.

Even though the author briefly explained the concepts of the six organizational-centric intangible capitals to each research participant on the telephone before sending the survey questionnaire, some of them may still have had a limited understanding about the intangible assets. Additionally, out of fifty Delphi panelists who initially agreed to cooperate with the research, only thirty remained for the final round of the survey. However, the thirty Delphi panelists meet the recommended number, from ten to thirty panelists, to accomplish the desired results (Delbecq, Van de Ven, & Gustafson, 1975).

OCI weights indicating the relative importance of dimensional organizational capitals, in terms of the contribution of each intangible organizational capital to a firm's market value were developed based on the opinions of industry experts in this study. However, the importance and contribution of intangible resources is more likely to change depending on many business environmental factors or according to the specific historical period; therefore, it is recommended that analysts monitor and re-estimate OCI weights of dimensional organizational capitals periodically.

Future Study

First of all, using the objective measurement indicators developed from this research, the contribution of each organization-centric intellectual capital on a firm’s market value can be calculated more precisely. The values of organizational intellectual capital that were measured using subjective perceptual measurement scales can be inconsistent according to when or by whom the measurement was taken; however, The values of organizational intellectual capital that were measured using the objective measurement indicators are consistent despite these factors. Therefore, through the longitudinal study, the historical contribution of organizational intangible capital on a firm’s value can be examined.

Second, it is recommended to expand the entire framework of six organizational

intellectual capitals and their sub-dimensions to other service sectors in the hospitality industry as well as to other market segments in the restaurant industry. Since the current framework was developed at a firm level, the entire frame can be, to a certain degree, applicable for other industries as well.

Third, as mentioned previously, the subjective perceptual measurement scales have been generally used in past research. Therefore, it is meaningful to examine the gap between organizational capitals measured using subjective perceptual measurement scales and those using the objective perceptual measurement scales developed in this study.

Fourth, this study focused on the development of measurement scales only for organization-centric intellectual capital. When using the approach used in this study, it is recommended to develop objective measurement scale frameworks for the other two intellectual capitals of an organization: human-centric capital and customer-centric capital. Then, the entire measurement framework for all intangible assets of an organization can be completed.

The OCI weights indicating the relative importance of dimensional organizational capitals in terms of the contribution of each organizational capital to a firm's market value were developed based on the subjective opinion of research participants. Therefore, in a future study, it would be useful to derive OCI weights based on the actual industry data of measurement indicators, and compare them with those based on the subjective perception of industry experts in this study.

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APPENDIX:

Appendix A: Questionnaire for the Interview

February 21, 2011

Mr. (or Ms.) :

We appreciate your willingness to assist for the survey. This research is purposed to identify the key organizational-centric intangible assets and develop their measurement in the context of casual dining restaurant industry, focusing on more applicable objective measurement indicators directly relevant to the casual dining restaurant industry. We hope this project may contribute to developing the hospitality industry as well as your firm.

The questionnaire is comprised of 6 sections according to the dimensions of organization-centric intangible assets: innovation, organizational process, organizational culture, organizational learning, information system, and intellectual property. In each section, measurement indicators for the respective dimension, developed in the context of the casual dining restaurant industry, are provided. Please indicate your level of agreement with the measurement indicators for the corresponding intangible assets.

Please feel free to express your opinion in an open manner. There is no right or wrong answers in this survey. We want to know your personal opinion. All of your answers will be kept strictly confidential and will be used only in combined statistical form. We appreciate your cooperation again. And if you have any questions with regard to this survey, please feel to email or call me.

Sincerely yours,

Gyumin Lee,
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<Part 1-1> INNOVATION CAPITAL:

It is defined as a firm's accumulated capacity of the creation of new knowledge and ideas to facilitate new business outcomes, aimed at improving internal business processes and structures and to create market driven products and services.

Please indicate the degree to which each of the following indicators is <u>appropriate and valid</u> for measuring a casual dining restaurant firm's '*Innovative Capability*'.

<Innovativeness of Menu>	**← Strongly Disagree**						**Strongly Agree→**
No. of new menus (#)	①	②	③	④	⑤	⑥	⑦
Ratio of new menus among total menus (%)	①	②	③	④	⑤	⑥	⑦
Sale increase attributable to new menus ($)	①	②	③	④	⑤	⑥	⑦
Ratio of sales attributable to new menus (%)	①	②	③	④	⑤	⑥	⑦
Average time required to introduce a new menu (#)	①	②	③	④	⑤	⑥	⑦
No. of new ideas suggested for products (#)	①	②	③	④	⑤	⑥	⑦
No. of new ideas adopted for products (#)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Innovativeness of Service Operation>	**← Strongly Disagree**						**Strongly Agree→**
No. of new services (#)	①	②	③	④	⑤	⑥	⑦
Sales attributable to new services ($)	①	②	③	④	⑤	⑥	⑦
Average time required to introduce a new service (#)	①	②	③	④	⑤	⑥	⑦
No. of new ideas suggested for service (#)	①	②	③	④	⑤	⑥	⑦
No. of new ideas adopted for service (#)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<R&D Management>	**← Strongly Disagree**						**Strongly Agree→**
No. of projects conducted in R&D related departments (#)	①	②	③	④	⑤	⑥	⑦
No. of projects adopted (#)	①	②	③	④	⑤	⑥	⑦
Ratio of adoption out of total projects conducted (%)	①	②	③	④	⑤	⑥	⑦
Ratio of R&D investment to revenue (%)	①	②	③	④	⑤	⑥	⑦
Ratio of R&D investment to administrative expense (%)	①	②	③	④	⑤	⑥	⑦
No. of employees in R&D-related departments (#)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Part 1-2> Divide 100 points among the above three factors based on its contribution on a firm's innovation capital. (Make the total 100 points).

Innovativeness of menu ( ), Innovativeness of service operation ( ), R & D management ( )

<Part 2-1> ORGANIZATIONAL PROCESS CAPITAL:

It is defined as a firm's accumulated capacity with regard to patterns of interaction, coordination, communication, and decision making that a firm uses to transform resources into customer value

Please indicate the degree to which each of the following indicators is <u>appropriate and valid</u> for measuring a casual dining restaurant firm's '*Organizational Process Capability*'.

<Service Operation Management Process>	**← Strongly Disagree**						**Strongly Agree→**
Average cooking time required (#)	①	②	③	④	⑤	⑥	⑦
Average cooking preparation time required (#)	①	②	③	④	⑤	⑥	⑦
Average time required from order to service (#)	①	②	③	④	⑤	⑥	⑦
No. of customers served per employee (#)	①	②	③	④	⑤	⑥	⑦

	①	②	③	④	⑤	⑥	⑦

<Procurement & Inventory Management Process>	**← Strongly Disagree**						**Strongly Agree→**
In-time rate of delivery (%)	①	②	③	④	⑤	⑥	⑦
Average time required for delivery (#)	①	②	③	④	⑤	⑥	⑦
Average contract years with external distributers (#)	①	②	③	④	⑤	⑥	⑦
Ratio of margin (%)	①	②	③	④	⑤	⑥	⑦
Food cost ratio (%)	①	②	③	④	⑤	⑥	⑦
Inventory turnover rate (%)	①	②	③	④	⑤	⑥	⑦
Leftover rate (%)	①	②	③	④	⑤	⑥	⑦
Theft rate (%)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Sales & Marketing Management Process >	**← Strongly Disagree**						**Strongly Agree→**
Achievement ratio of sales plan (%)	①	②	③	④	⑤	⑥	⑦
Average sale performance per an employee ($)	①	②	③	④	⑤	⑥	⑦
Revenue increase attributable to sales promotions ($)	①	②	③	④	⑤	⑥	⑦
Ratio of promotion expenditure to the increased revenue (%)	①	②	③	④	⑤	⑥	⑦
Cannibalization effect of new promotions	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Human Resources Management Process>	**← Strongly Disagree**						**Strongly Agree→**
Competition rate of recruitment (%)	①	②	③	④	⑤	⑥	⑦
Percentage of job offer acceptance (%)	①	②	③	④	⑤	⑥	⑦
Days required from job-posting to recruiting (#)	①	②	③	④	⑤	⑥	⑦
Recruiting cost per employee ($)	①	②	③	④	⑤	⑥	⑦
Average training score (#)	①	②	③	④	⑤	⑥	⑦
Average No. of industry-relevant certificates per person (#)	①	②	③	④	⑤	⑥	⑦
Average expenditure for training per person ($)	①	②	③	④	⑤	⑥	⑦
Average time required for supplementing the needs (#)	①	②	③	④	⑤	⑥	⑦
Average No. of customers per employee (#)	①	②	③	④	⑤	⑥	⑦
Labor cost ratio (%)	①	②	③	④	⑤	⑥	⑦
No. of reward programs (#)	①	②	③	④	⑤	⑥	⑦
No. of performance-recognition activities (#)							
	①	②	③	④	⑤	⑥	⑦

<Part 2-2> Divide 100 points among the above four factors based on its contribution on a firm's organizational process capital. (Make the total 100 points).

Service operation mgt. process ( ), Procurement & inventory mgt. process ( ),
Sales & marketing mgt. process ( ), Human resources mgt. process ( )

<Part 3-1> ORGANIZATIONAL CULTURE CAPITAL:

It Is defined as a firm's accumulated capacity with regard to patterns of shared values and beliefs over time which produces behavioral norms that are adopted in solving problems.

Please indicate the degree to which each of the following indicators is <u>appropriate and valid</u> for measuring a casual dining restaurant firm's '*Organizational Culture Capability*'.

<Leadership Culture>	**← Strongly Disagree**						**Strongly Agree→**

No. of leadership programs provided or supported by a firm (#)	①	②	③	④	⑤	⑥	⑦
No. of leadership campaign activities (#)	①	②	③	④	⑤	⑥	⑦
No. of leadership program participants (#)	①	②	③	④	⑤	⑥	⑦
Investment on leadership-related programs or activities ($)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Employees' Membership Culture>	**← Strongly Disagree**						**Strongly Agree→**
Avg. years of tenure (#)	①	②	③	④	⑤	⑥	⑦
Annual employees' turnover rate (%)	①	②	③	④	⑤	⑥	⑦
No. of reward programs (#)	①	②	③	④	⑤	⑥	⑦
No. of performance-recognition activities (#)	①	②	③	④	⑤	⑥	⑦
Investment on reward programs or activities ($)	①	②	③	④	⑤	⑥	⑦
No. of award-winners (#)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Service-oriented Culture>	**← Strongly Disagree**						**Strongly Agree→**
Length of years since CRM system establishment (#)	①	②	③	④	⑤	⑥	⑦
No. of customers in CRM system (#)	①	②	③	④	⑤	⑥	⑦
Average No. of visits per customer a year: annual email survey (#)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Teamwork Culture>	**← Strongly Disagree**						**Strongly Agree→**
Number of inter-department meetings (#)	①	②	③	④	⑤	⑥	⑦
Number of collaborative projects (#)	①	②	③	④	⑤	⑥	⑦
Ratio of working time used in another department (%)	①	②	③	④	⑤	⑥	⑦
Frequency of teamwork-orientation programs (#)	①	②	③	④	⑤	⑥	⑦
Frequency of teamwork-orientation activities (#)	①	②	③	④	⑤	⑥	⑦
Investment on teamwork-related programs or activities ($)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Part 3-2> Divide 100 points among the above four factors based on its contribution on a firm's organizational culture capital. (Make the total 100 points).

Leadership culture ( ), Employees' membership culture ( ), Service-oriented culture ( ), Teamwork culture ( )

<Part 4-1> ORGANIZATIONAL LEARNING CAPITAL:

It is defined as a firm's accumulated capacity with regard to the continuous testing of experience and its transformation into knowledge available to whole organization and relevant to their mission.

Please indicate the degree to which each of the following indicators is <u>appropriate and valid</u> for measuring a casual dining restaurant firm's '*Organizational Learning Capability*'.

<Knowledge Sharing>	**← Strongly Disagree**						**Strongly Agree→**
No. of shared (knowledge) documents in the intranet (#)	①	②	③	④	⑤	⑥	⑦
No. of shared knowledge database (gigabytes) (#)	①	②	③	④	⑤	⑥	⑦
No. of educational programs available (#)	①	②	③	④	⑤	⑥	⑦
No. of virtual courses available (#)	①	②	③	④	⑤	⑥	⑦
No. of employees who have taken education programs (#)	①	②	③	④	⑤	⑥	⑦
No. of employees who have taken virtual courses (#)	①	②	③	④	⑤	⑥	⑦
Investment on education programs ($)	①	②	③	④	⑤	⑥	⑦

Investment on online educational courses ($)	①	②	③	④	⑤	⑥	⑦
No. of forums on the discussion board of intranet (#)	①	②	③	④	⑤	⑥	⑦
No. of participants on the discussion board of intranet (#)	①	②	③	④	⑤	⑥	⑦
No. of replies on the discussion board of intranet (#)	①	②	③	④	⑤	⑥	⑦
No. of interdepartmental meetings (#)	①	②	③	④	⑤	⑥	⑦
No. of intradepartmental meetings (#)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Flexible Adaptability>	**← Strongly Disagree**						**Strongly Agree→**
Difference between the forecast and the actual value of key external value drivers (#)	①	②	③	④	⑤	⑥	⑦
Difference between the forecast and the actual value of key internal value drivers (#)	①	②	③	④	⑤	⑥	⑦
Ratio of project success (%)	①	②	③	④	⑤	⑥	⑦
Achievement ratio of objectives (%)	①	②	③	④	⑤	⑥	⑦
No. of success cases shared on the intranet (#)	①	②	③	④	⑤	⑥	⑦
No. of failure cases shared on the intranet (#)	①	②	③	④	⑤	⑥	⑦
No. of views of the success and failure cases on the intranet (#)	①	②	③	④	⑤	⑥	⑦
No. of updated knowledge documents (#)	①	②	③	④	⑤	⑥	⑦
Proportion of updated knowledge documents (%)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Part 4-2> Divide 100 points among the above two factors based on its contribution on a firm's organizational learning capital. (Make the total 100 points).

Knowledge sharing ( ), Flexible adaptability ( )

<Part 5-1> INFORMATION SYSTEM CAPITAL:

It is defined as a firm's capacity with regard to the integrated and cooperating set of software directed information technologies supporting individual, group, organizational, or societal goals.

Please indicate the degree to which each of the following indicators is <u>appropriate and valid</u> for measuring a casual dining restaurant firm's '*Information System Capability*'.

<Efficiency of Information System>	**← Strongly Disagree**						**Strongly Agree→**
Reduction of work process time attributable to the investment on information sys. (#)	①	②	③	④	⑤	⑥	⑦
Cost saving attributable to the investment on information sys. ($)	①	②	③	④	⑤	⑥	⑦
Revenue increase attributable to the investment on information sys. ($)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Investment & Expenditure on Information System>	**← Strongly Disagree**						**Strongly Agree→**
Investment on informational sys. infrastructure ($)	①	②	③	④	⑤	⑥	⑦
Expenditure on informational sys. infrastructure ($)	①	②	③	④	⑤	⑥	⑦
Residual value of investment on informational sys. ($)	①	②	③	④	⑤	⑥	⑦
Wages of staff involved in information systems planning and development ($)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Maintenance of Information System>	**← Strongly Disagree**						**Strongly Agree→**
No. of calls (or requests) due to troubles (#)	①	②	③	④	⑤	⑥	⑦
Average problem solution time (#)	①	②	③	④	⑤	⑥	⑦
No. of employees who have taken training on information sys. (#)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Part 5-2> Divide 100 points among the above three factors based on its contribution on a firm's information system capital. (Make the total 100 points).

Efficiency of info system ( ), Investment & expenditure on info system ( ), Maintenance of Info system ( )

<Part 6-1> INTELLECTUAL PROPERTY CAPITAL

It is defined as the sum of knowledge assets such as patents, copyrights, trademarks, brands, registered design, trade secrets and processes whose ownership is granted to the company by law.

Please indicate the degree to which each of the following indicators is <u>appropriate and valid</u> for measuring a casual dining restaurant firm's '*Intellectual Property*'.

<Patent Assets>	**← Strongly Disagree**						**Strongly Agree→**
Total number of patents legally protected (#)	①	②	③	④	⑤	⑥	⑦
Number of new patents filed (#)	①	②	③	④	⑤	⑥	⑦
Average periods legally protected (#)	①	②	③	④	⑤	⑥	⑦
Market value of IPs ($)	①	②	③	④	⑤	⑥	⑦
Revenue from IPs ($)	①	②	③	④	⑤	⑥	⑦
Percentage of revenue from IPs (%)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Franchising Assets>	**← Strongly Disagree**						**Strongly Agree→**
Total number of franchising contracts (#)	①	②	③	④	⑤	⑥	⑦
Number of new franchising contracts (#)	①	②	③	④	⑤	⑥	⑦
Average period of contracts left (#)	①	②	③	④	⑤	⑥	⑦
Cash flow from franchising ($)	①	②	③	④	⑤	⑥	⑦
Percentage of cash flow from franchising (%)	①	②	③	④	⑤	⑥	⑦
Revenue from franchising ($)	①	②	③	④	⑤	⑥	⑦
Percentage of revenue from franchising (%)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Part 6-2> Divide 100 points among the above two factors based on its contribution on a firm's information system capital. (Make the total 100 points).

Patent assets ( ), Franchising assets ( )

<Part 7> Please indicate the degree to which each of the following capitals contribute on a firm's market value.

	← Low Contribution									**High contribution→**
Innovativeness capital	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Organizational process capital	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Organizational culture capital	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Organizational learning capital	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Information system capital	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Intellectual property capital	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

Please go back and check that all questions have been answered.
Thank you for your participation!!!

Appendix B: Questionnaire for the Delphi Survey

Mar 27, 2011

Mr. (or Ms.) :

We appreciate your willingness to assist for the survey. This research is purposed to identify the key organizational-centric intangible assets and develop their measurement in the context of casual dining restaurant industry, focusing on more applicable objective measurement indicators directly relevant to the casual dining restaurant industry. We hope this project may contribute to developing the hospitality industry as well as your firm.

The questionnaire is comprised of 6 sections according to the dimensions of organization-centric intangible assets: innovation, organizational process, organizational culture, organizational learning, information system, and intellectual property. In each section, measurement indicators for the respective dimension, developed in the context of the casual dining restaurant industry, are provided. Please indicate your level of agreement with the measurement indicators for the corresponding intangible assets.

Please feel free to express your opinion in an open manner. There is no right or wrong answers in this survey. We want to know your personal opinion. All of your answers will be kept strictly confidential and will be used only in combined statistical form. We appreciate your cooperation again. And if you have any questions with regard to this survey, please feel to email or call me.

Sincerely yours,

Gyumin Lee,
Ph.D. Candidate
Department of Hospitality & Tourism Management
Virginia Tech
Email: gmlee@vt.edu
Phone: 1-540-808-8667 (USA)

<Part 1-1> INNOVATION CAPITAL:

It is defined as a firm's accumulated capacity of the creation of new knowledge and ideas to facilitate new business outcomes, aimed at improving internal business processes and structures and to create market driven products and services. Please indicate the degree to which each of the following indicators is appropriate and valid for measuring a casual dining restaurant firm's '*Innovative Capability*'.

<Innovativeness of Menu – Annual>	← Strongly Disagree						Strongly Agree→
Number of newly introduced menu items (#)	①	②	③	④	⑤	⑥	⑦
Sales increase attributable to new menu items ($)	①	②	③	④	⑤	⑥	⑦
Number of ideas suggested for menu items (#)	①	②	③	④	⑤	⑥	⑦
Ratio of adopted ideas out of total suggested ideas for menu items (%)	①	②	③	④	⑤	⑥	⑦
Average time required to introduce a new menu item over the last three years (#)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Innovativeness of Service Operation - Annual>	← Strongly Disagree						Strongly Agree→
Number of newly introduced services (#)	①	②	③	④	⑤	⑥	⑦
Number of new ideas suggested for services (#)	①	②	③	④	⑤	⑥	⑦
Ratio of adopted ideas out of total suggested ideas for service (%)	①	②	③	④	⑤	⑥	⑦
Average time required to introduce a new service over the last three years (#)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<R&D Management – Annual>	← Strongly Disagree						Strongly Agree→
Number of new menu items developed by R&D related departments (#)	①	②	③	④	⑤	⑥	⑦
Ratio of adoption of menu items developed by R&D related departments (%)	①	②	③	④	⑤	⑥	⑦
Ratio of R&D investment to revenue (%)	①	②	③	④	⑤	⑥	⑦
Number of employees in R&D-related departments (#)	①	②	③	④	⑤	⑥	⑦
Average tenure of R&D staffs (#)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Part 1-2> Please indicate the degree to which each of sub-dimensions contribute on a firm's 'Innovation Capital'.

	← Low Contribution									High contribution→
Innovativeness of Menu	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Innovativeness of Service Operation	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
R&D Management	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

<Part 2-1> ORGANIZATIONAL PROCESS CAPITAL:

It is defined as a firm's accumulated capacity with regard to patterns of interaction, coordination, communication, and decision making that a firm uses to transform resources into customer value. Please indicate the degree to which each of the following indicators is appropriate and valid for measuring a casual dining restaurant firm's '*Organizational Process Capability*'.

<Service Operation Management Process – Annual>	← Strongly Disagree						Strongly Agree→
Average time required from order to service (#)	①	②	③	④	⑤	⑥	⑦
Number of customers served per employee (#)	①	②	③	④	⑤	⑥	⑦

Average cooking time required per menu item (#)	①	②	③	④	⑤	⑥	⑦
Number of accidents (#)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Procurement & Inventory Management Process – Annual>	**← Strongly Disagree**						**Strongly Agree→**
On-time rate of delivery (%)	①	②	③	④	⑤	⑥	⑦
Order fill rate (=rate of order completion) (%)	①	②	③	④	⑤	⑥	⑦
Line item fill rate (=rate of completion of line items in order) (%)	①	②	③	④	⑤	⑥	⑦
Backorder rate (=rate of orders waiting to be filled) (%)	①	②	③	④	⑤	⑥	⑦
Average length of contracts with external suppliers (#)	①	②	③	④	⑤	⑥	⑦
Food cost ratio (%)	①	②	③	④	⑤	⑥	⑦
Inventory turnover rate (%)	①	②	③	④	⑤	⑥	⑦
Number of suppliers (#)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Sales & Marketing Management Process – Annual>	**← Strongly Disagree**						**Strongly Agree→**
Sales management: Achievement ratio of sales plan (%)	①	②	③	④	⑤	⑥	⑦
Sales management: Average sale performance per an employee ($)	①	②	③	④	⑤	⑥	⑦
Promotion: Revenue increase attributable to sales promotions ($)	①	②	③	④	⑤	⑥	⑦
Promotion: Ratio of promotion expenditure to the increased revenue (%)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Human Resources Management Process – Annual>	**← Strongly Disagree**						**Strongly Agree→**
Ratio of job offer acceptance (%)	①	②	③	④	⑤	⑥	⑦
Average number of industry-relevant certificates per person (#)	①	②	③	④	⑤	⑥	⑦
Average expenditure for training per person ($)	①	②	③	④	⑤	⑥	⑦
Average time taken for supplementing the vacancy personnel (#)	①	②	③	④	⑤	⑥	⑦
Labor cost ratio (%)	①	②	③	④	⑤	⑥	⑦
Investment in reward / performance-recognition programs ($)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Part 2-2> Please indicate the degree to which each of sub-dimensions contribute on a firm's 'Organizational Process Capital'.

	← Low Contribution									**High contribution→**
Service Operation Management Process	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Procurement & Inventory Management Process	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Sales & Marketing Management Process	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Human Resources Management Process	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

<Part 3-1> ORGANIZATIONAL CULTURE CAPITAL:

It Is defined as a firm's accumulated capacity with regard to patterns of shared values and beliefs over time which produces behavioral norms that are adopted in solving problems. Please indicate the degree to which each of the following indicators is appropriate and valid for measuring a casual dining restaurant firm's '*Organizational Culture Capability*'.

<Leadership Culture – Annual>	← Strongly Disagree						Strongly Agree→
Number of leadership-promoting activities (or programs) supported by a company (#)	①	②	③	④	⑤	⑥	⑦
Ratio of leadership program participants out of total employees (%)	①	②	③	④	⑤	⑥	⑦
Investment in leadership-related programs or activities ($)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Employees' Membership Culture – Annual>	← Strongly Disagree						Strongly Agree→
Average years of tenure (#)	①	②	③	④	⑤	⑥	⑦
Annual turnover rate (%)	①	②	③	④	⑤	⑥	⑦
Number of pep rallies to strengthen the unity (#)	①	②	③	④	⑤	⑥	⑦
Investment on reward programs or activities ($)	①	②	③	④	⑤	⑥	⑦
Number of employees who received company-presenting awards (#)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Service-oriented Culture – Annual>	← Strongly Disagree						Strongly Agree→
Average number of visits per customer (#)	①	②	③	④	⑤	⑥	⑦
Average time required for handling a complaint (#)	①	②	③	④	⑤	⑥	⑦
Length of years since establishment of customer relationship management system (#)	①	②	③	④	⑤	⑥	⑦
Number of customers in customer relationship management system (#)	①	②	③	④	⑤	⑥	⑦
Revenue per service employee ($)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Teamwork Culture – Annual>	← Strongly Disagree						Strongly Agree→
Number of collaborative projects (#)	①	②	③	④	⑤	⑥	⑦
Number of teamwork-orientation programs and activities (#)	①	②	③	④	⑤	⑥	⑦
Investment in teamwork-related programs or activities ($)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Part 3-2> Please indicate the degree to which each of sub-dimensions contribute on a firm's 'Organizational Culture Capital'.

	← Low Contribution									High contribution→
Leadership Culture	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Employees' Membership Culture	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Service-oriented Culture	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Teamwork Culture	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

<Part 4-1> ORGANIZATIONAL LEARNING CAPITAL:

It is defined as a firm's accumulated capacity with regard to the continuous testing of experience and its transformation into knowledge available to whole organization and relevant to their mission. Please indicate the degree to which each of the following indicators is <u>appropriate and valid</u> for measuring a casual dining restaurant firm's '*Organizational Learning Capability*'.

<Knowledge Sharing - Annual>	← Strongly Disagree						Strongly Agree→
Number of shared (knowledge) documents in the intranet (#)	①	②	③	④	⑤	⑥	⑦
Number of shared knowledge database (gigabytes) (#)	①	②	③	④	⑤	⑥	⑦

Number of (or online) education programs available (#)	①	②	③	④	⑤	⑥	⑦
Number of employees who have taken (or online) education programs (#)	①	②	③	④	⑤	⑥	⑦
Investment in education programs ($)	①	②	③	④	⑤	⑥	⑦
Ratio of replies on the intranet discussion board out of all employees (%)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Flexible Adaptability - Annual>	**← Strongly Disagree**						**Strongly Agree→**
Frequency of evaluation of strategic planning (#)	①	②	③	④	⑤	⑥	⑦
Change of market share (%)	①	②	③	④	⑤	⑥	⑦
Promotion objective achievement ratio (%)	①	②	③	④	⑤	⑥	⑦
Frequency of customer preference survey (#)	①	②	③	④	⑤	⑥	⑦
Ratio of sales from newly introduced menu items compared to total sales (%)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Part 4-2> Please indicate the degree to which each of sub-dimensions contribute on a firm's 'Organizational Learning Capital'.

	← Low Contribution									**High contribution→**
Knowledge Sharing	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Flexible Adaptability	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

<Part 5-1> INFORMATION SYSTEM CAPITAL:

It is defined as a firm's capacity with regard to the integrated and cooperating set of software directed information technologies supporting individual, group, organizational, or societal goals. Please indicate the degree to which each of the following indicators is <u>appropriate and valid</u> for measuring a casual dining restaurant firm's '*Information System Capability*'.

<Investment & Expenditure on Information System - Annual>	**← Strongly Disagree**						**Strongly Agree→**
Investment in informational system infrastructure ($)	①	②	③	④	⑤	⑥	⑦
Expenditure in informational system infrastructure ($)	①	②	③	④	⑤	⑥	⑦
Wages of staff involved in information systems planning and development ($)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Maintenance of Information System - Annual>	**← Strongly Disagree**						**Strongly Agree→**
Number of requests for fix or repair (#)	①	②	③	④	⑤	⑥	⑦
Average time of problem solution (#)	①	②	③	④	⑤	⑥	⑦
Number of employees who have taken training on information system (#)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Part 5-2> Please indicate the degree to which each of sub-dimensions contribute on a firm's 'Information System Capital'.

	← Low Contribution									**High contribution→**
Investment & Expenditure on Information System	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Maintenance of Information system	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

<Part 6-1> INTELLECTUAL PROPERTY CAPITAL

It is defined as the sum of knowledge assets such as patents, copyrights, trademarks, brands, registered design, trade secrets and processes whose ownership is granted to the company by law. Please indicate the degree to which each of the following indicators is appropriate and valid for measuring a casual dining restaurant firm's '*Intellectual Property*'.

<Patent Assets - Annual>	← Strongly Disagree						Strongly Agree→
Total number of patents legally protected (#)	①	②	③	④	⑤	⑥	⑦
Number of new patents filed (#)	①	②	③	④	⑤	⑥	⑦
Average (remained) length of patents (#)	①	②	③	④	⑤	⑥	⑦
Cash flow from patents ($)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Franchising Assets - Annual>	← Strongly Disagree						Strongly Agree→
Total number of franchising contracts (#)	①	②	③	④	⑤	⑥	⑦
Growth rate of franchising contracts (%)	①	②	③	④	⑤	⑥	⑦
Average (remained) length of franchising contracts (#)	①	②	③	④	⑤	⑥	⑦
Cash flow from franchising ($)	①	②	③	④	⑤	⑥	⑦
Bankruptcy rate of franchising properties (%)	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦
	①	②	③	④	⑤	⑥	⑦

<Part 6-2> Please indicate the degree to which each of sub-dimensions contribute on a firm's 'Intellectual Property Capital'.

	← Low Contribution									High contribution→
Patent Assets	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Franchising Assets	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

<Part 7> Please indicate the degree to which each of the following capitals contribute on a firm's market value.

	← Low Contribution									High contribution→
Innovativeness capital	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Organizational process capital	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Organizational culture capital	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Organizational learning capital	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Information system capital	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Intellectual property capital	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

Part 8. General Information

1. What is your gender? (1) Female (2) Male

2. What year were you born in? ( )

3. What is your education level? ( ) (ex. 4 years' college, graduate school etc)

4. How long have you worked for the current company? ( )

5. How long have you worked in the restaurant (or relevant) industry? ( )

6. What is your position? ( ) (ex, manager, assistant manager, employee, etc)

7. What is your current job in your company?

8. Please provide your primary job experience regarding the restaurant industry.

( )
( )
( )
( )
( )
( )

Please go back and check that all questions have been answered.
Thank you for your participation!!!

Appendix C: IRB Approval Letter

Office of Research Compliance
Institutional Review Board
2000 Kraft Drive, Suite 2000 (0497)
Blacksburg, Virginia 24060
540/231-4606 Fax 540/231-0959
e-mail irb@vt.edu
Website: www.irb.vt.edu

MEMORANDUM

DATE: March 21, 2011

TO: Vincent Magnini, Gyumin Lee

FROM: Virginia Tech Institutional Review Board (FWA00000572, expires October 26, 2013)

PROTOCOL TITLE: Identification of Organization-centric Capital in the Hospitality Industry

IRB NUMBER: **11-093**

Effective March 21, 2011, the Virginia Tech IRB PAM, Andrea Nash, approved the new protocol for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report promptly to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at http://www.irb.vt.edu/pages/responsibilities.htm (please review before the commencement of your research).

PROTOCOL INFORMATION:
Approved as: **Exempt, under 45 CFR 46.101(b) category(ies) 2**
Protocol Approval Date: **3/21/2011**
Protocol Expiration Date: **NA**
Continuing Review Due Date*: **NA**
*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

FEDERALLY FUNDED RESEARCH REQUIREMENTS:
Per federally regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals / work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.

Date*	OSP Number	Sponsor	Grant Comparison Conducted?
3/21/2011		Darden Restaurants Foundation	Not Required (not federally funded)

*Date this proposal number was compared, assessed as not requiring comparison, or comparison information was revised.

If this IRB protocol is to cover any other grant proposals, please contact the IRB office (irbadmin@vt.edu) immediately.

cc: File

Appendix D: Permission Letters for the Usage of Figures and Tables

From: Baruch Lev
To: Gyumin Lee
Subject: Re: Permission Request for Use of "Figures" in your Book
Date: Wednesday, June 29, 2011 11:19:57 AM

You can use the figures but only in the dissertation.Any other use requires a new permission.
Baruch

On 6/28/2011 11:39 PM, Gyumin Lee wrote:

> Dear Dr. Lev,
>
> My name is Gyumin Lee, a PhD candidate in Virginia Tech University, USA.
>
> I have introduced your study in the section of literature review in my PhD dissertation. May I use your figures 'The Value Chain Scoreboard (p. 111)' and 'The Ascendancy of Intangibles' in your book, 'Intangibles'?
>
> I finished my defense at Virginia Tech last week and am working on my ETD. My Dissertation Title is "Identification of Organizational Capital in the Hospitality Industry" I would like to have your permission e-mail to show Virginia Tech that I am allowed to use it for the academic purpose.
>
> Thanks and looking forward to hearing from you soon,
>
> Sincerely,
>
> Gyumin Lee
> PhD Candidate
> Department of Hospitality and Tourism Management
> Pamplin College of Business
> Virginia Tech, Blacksburg, VA, 24061

From: Andriessen, Daan
To: Gyumin Lee
Subject: RE: Permission Request for Use of "Figures" in your Book
Date: Wednesday, June 29, 2011 2:06:15 AM

Dear Gyumin Lee,

I hereby grant you permission to use 'Financial Valuation, Value Measurement, Value Assessment, and Measurement' from Making Sense of Intellectual Capital and 'Five Types of Intangibles' from Weightless Wealth.

Met vriendelijke groet / kind regards

Daan Andriessen

Lector Intellectual Capital

Hogeschool INHolland

Email: daan.andriessen@inholland.nl<mailto:daan.andriessen@inholland.nl>

Bel: +31 6 52375658

Van: Gyumin Lee [gmlee@vt.edu]
Verzonden: woensdag 29 juni 2011 5:26
Aan: Andriessen, Daan
Onderwerp: Permission Request for Use of 'Figures' in your Book

Dear Dr. Andriessen,

My name is Gyumin Lee, a PhD candidate in Virginia Tech University, USA.

I have introduced your study in the section of literature review in my PhD dissertation. May I use your figure named 'Financial Valuation, Value Measurement, Value Assessment, and Measurement'(p, 15) in your book, Making Sense of Intellectual Capital ? And can I use another figure named 'Five Types of Intangibles'(p, 3) in your book, Weightless Wealth as well?

I finished my defense at Virginia Tech last week and am working on my ETD. My Dissertation Title is "Identification of Organizational Capital in the Hospitality Industry" I would like to have your permission e-mail to show Virginia Tech that I am allowed to use it for the academic purpose.

Thanks and looking forward to hearing from you soon,

Sincerely,

Gyumin Lee

From: Goran Roos
To: "Gyumin Lee"
Subject: RE: Permission Request for Use of "Figure" in Your Research
Date: Wednesday, June 29, 2011 4:18:01 AM

Hi Gyumin,

You have my permission. Please send me a copy of your dissertation.

Kind Regards
Göran

From: Gyumin Lee [mailto:gmlee@vt.edu]
Sent: 29 June 2011 08:54
To: goran.roos@intcap.com
Subject: Permission Request for Use of 'Figure' in Your Research

Dear Dr. Roos,

My name is Gyumin Lee, a PhD candidate in Virginia Tech University, USA.

I have introduced your study in the section of literature review in my PhD dissertation. May I use your figure (The IC distinction tree) and tables (Examples of indicators) in your book, 'Intellectual Capital: Navigating in the new business landscape' ?

I finished my defense at Virginia Tech last week and am working on my ETD. My Dissertation Title is "Identification of Organizational Capital in the Hospitality Industry" I would like to have your permission e-mail to show Virginia Tech that I am allowed to use it for the academic purpose.

Thanks and looking forward to hearing from you soon,
Sincerely,

Gyumin Lee
PhD Candidate
Department of Hospitality and Tourism Management
Pamplin College of Business
Virginia Tech, Blacksburg, VA, 24061

From: Leif Edvinsson
To: Gyumin Lee
Subject: Re:Permission Request for Use of "Figures" in your Book
Date: Thursday, June 30, 2011 2:03:30 AM

Hello, You are most welcome to use and refer to that. See also www.NIC40.org as a next level of usage
Best wishes
Leif

> -----Original Message-----
> From: "Gyumin Lee" <gmlee@vt.edu>
> To: <leif.edvinsson@unic.net>
> Date: Tue, 28 Jun 2011 23:29:31 -0400
> Subject: [***SPAM*** Score/Req: 10.1/5.0] Permission Request for Use of 'Figures' in your Book
>
> Dear Dr. Edvinsson,
> My name is Gyumin Lee, a PhD candidate in Virginia Tech University, USA.
>
> I have introduced your study in the section of literature review in my PhD dissertation. May I use your figure named "Skandia Value Scheme" of your book, 'Intellectual Capital'?
>
> I finished my defense at Virginia Tech last week and am working on my ETD. My Dissertation Title is "Identification of Organizational Capital in the Hospitality Industry" I would like to have your permission e-mail to show Virginia Tech that I am allowed to use it for the academic purpose.
>
> Thanks and looking forward to hearing from you soon,
>
> Sincerely,
>
> Gyumin Lee
> PhD Candidate
> Department of Hospitality and Tourism Management
> Pamplin College of Business
> Virginia Tech, Blacksburg, VA, 24061

From: Bontis, Nick
To: gmlee@vt.edu
Subject: Re: Permission Request for Use of "Figure" in Your Research
Date: Wednesday, June 29, 2011 9:06:26 AM

Absolutely. Cheers, Nick

www.NickBontis.com/Research.htm

Sent from Nick's BlackBerry Torch 9800 world smartphone.

From: Gyumin Lee
To: Bontis, Nick
Sent: Wed Jun 29 01:03:56 2011
Subject: Permission Request for Use of 'Figure' in Your Research

Dear Dr. Bontis,

My name is Gyumin Lee, a PhD candidate in Virginia Tech University, USA.

I have introduced your study in the section of literature review in my PhD dissertation. May I use your figure and table, 'Conceptualization of Intellectual Capital'?

I finished my defense at Virginia Tech last week and am working on my ETD. My Dissertation Title is "Identification of Organizational Capital in the Hospitality Industry" I would like to have your permission e-mail to show Virginia Tech that I am allowed to use it for the academic purpose.

Thanks and looking forward to hearing from you soon,

Sincerely,

Gyumin Lee
PhD Candidate
Department of Hospitality and Tourism Management
Pamplin College of Business
Virginia Tech, Blacksburg, VA, 24061

From: Patrick Sullivan
To: Gyumin Lee
Subject: Re: Permission Request for Use of "Figure" in Your Research
Date: Wednesday, June 29, 2011 12:26:02 PM

Dear Mr. Lee:

I see no problem. You have my permission to use the material. Please ensure that the full cite of the source is used. The publishers are always happy to have my work quoted so long as they are mentioned in the cite as well.

Good Luck

PS. I would love to read a copy of your thesis when it is completed
On Jun 29, 2011, at 9:17 AM, Gyumin Lee wrote:

> Dear Dr. Sullivan,
> Thank you so much for such a quick reply.
> Well, I introduced you in my dissertation as a leading scholar in terms of Intellectual Capital Management. I explained your theory using the three figures in the attached e-file. They are from the following two references.
>
> -Sullivan, P. J., & Sullivan, P. S. (2000). Valuing intangibles companies: an intellectual capital approach. Journal of Intellectual Capital, 1, 328-340.
> -Sullivan, P. (2000). Value driven intellectual capital: How to convert intangible corporate assets into market value: John Wiley & Sons, Inc. New York, NY, USA.
>
> Please see the attached word e-file. I really appreciate.
> Looking forward to hearing from you soon,
>
> Sincerely yours,
>
> Gyumin Lee

From: Patrick Sullivan [mailto:psullivan@icmgllc.com]
Sent: Wednesday, June 29, 2011 11:55 AM
To: Gyumin Lee
Subject: Re: Permission Request for Use of 'Figure' in Your Research

Dear Mr. Lee:

I am flattered by your request and would like to respond positively. But before I can do so, I need to know to which study of mine you are referring.

Best Regards
On Jun 28, 2011, at 10:19 PM, Gyumin Lee wrote:

> Dear Dr. Sullivan,
>
> My name is Gyumin Lee, a PhD candidate in Virginia Tech University, USA.

I have introduced your study in the section of literature review in my PhD dissertation. May I use your figures, 'Sources of value and conversion mechanisms in the knowledge' and 'A model of a knowledge company', in you research "Valuing intangibles companies: an intellectual capital approach
company published in Journal of Intellectual Capital?

I finished my defense at Virginia Tech last week and am working on my ETD. My Dissertation Title is "Identification of Organizational Capital in the Hospitality Industry" I would like to have your permission e-mail to show Virginia Tech that I am allowed to use it for the academic purpose.

Thanks and looking forward to hearing from you soon,

Sincerely,

Gyumin Lee
PhD Candidate
Department of Hospitality and Tourism Management
Pamplin College of Business
Virginia Tech, Blacksburg, VA, 24061

From: Karl-Erik Sveiby
To: Gyumin Lee
Subject: Re: Permission Request for Use of "Figure" and "Table" in your Book
Date: Friday, July 08, 2011 1:45:00 AM

Dear Mr Lee,
It is OK to reproduce the picture and the table.
Best regards
Karl-Erik Sveiby

On 2011-07-06 21:27, Gyumin Lee wrote:

> Dear Dr. Sveiby
> First of all, I really appreciate your reply. I included one table and one figure adjusted from your book.
> Please see the attached e-file.
> Thanks,
>
> Gyumin Lee
>
> ---
>
> **From:** Karl-Erik Sveiby [mailto:karl-erik.sveiby@hanken.fi]
> **Sent:** Wednesday, July 06, 2011 9:23 AM
> **To:** Gyumin Lee
> **Subject:** Re: Permission Request for Use of 'Figure' and 'Table' in your Book
>
> Der Mr Lee,
> Which figure and table are you referring to?
> Best regards
> Karl-Erik Sveiby
>
> On 2011-06-29 06:15, Gyumin Lee wrote:
> Dear Dr. Sveiby,
>
> My name is Gyumin Lee, a PhD candidate in Virginia Tech University, USA.
>
> I have introduced your study in the section of literature review in my PhD dissertation. May I use your figure and table in your book, 'The New Organizational Wealth'?
>
> I finished my defense at Virginia Tech last week and am working on my ETD. My Dissertation Title is "Identification of Organizational Capital in the Hospitality Industry" I would like to have your permission e-mail to show Virginia Tech that I am allowed to use it for the academic purpose.
>
> Thanks and looking forward to hearing from you soon,
>
> Sincerely,
>
> Gyumin Lee
> PhD Candidate
> Department of Hospitality and Tourism Management
> Pamplin College of Business
> Virginia Tech, Blacksburg, VA, 24061