Organizational ambidexterity and synergistic effects of plural organizational forms: a search for balance between standardization and innovation

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ORGANIZATIONAL AMBIDEXTERITY AND SYNERGISTIC EFFECTS OF PLURAL ORGANIZATIONAL FORMS: A SEARCH FOR BALANCE BETWEEN STANDARDIZATION AND INNOVATION

by

Jaeyoung Kang

A Dissertation
Submitted to the University at Albany, State University of New York in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

School of Business
Organizational Studies
2010
Organizational Ambidexterity and Synergistic Effects of
Plural Organizational Forms:
A Search for Balance between Standardization and Innovation

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ACKNOWLEDGEMENTS

This journey toward completion of my dissertation could not have been possible without great support and guidance from a number of people. They all deserve my sincere gratitude.

First, I offer my utmost gratitude to my committee chair, Dr. Cecilia Falbe who showed continued support and guidance for my research and dissertation. It was through Dr. Falbe’s careful guidance that my initial interest in dissertation topic has been further developed. Your warm encouragement, unwavering support, and invaluable advice during my graduate study helped me finish this work. Thank you for being a wonderful chair.

Next, I would like to extend my gratitude to my dissertation committee members. Dr. Van Ness is an amazing teacher, scholar, and supporter. I had the great fortunate to meet him while studying in University at Albany. He not only provided me with opportunities to advance my research capabilities but also showed what the attitude of great teacher should be in class. Dr. Paul Miesing was interested in helping me to develop high-quality research. Dr. Miesing was the first person who introduced new interesting articles relevant to my research. He helped me with his ability to present complex relationships in a way that is easy to understand.

Beyond my committee members, I would like to thank other faculty who has contributed to development of my research. Especially, it was my honor to learn from Dr. Yukl. I was inspired by his dedication toward high-quality research and deep insights into current research topics. As a Ph. D. program coordinator, he always showed a relentless interest in my progress and gave me encouragement.

My experience in U-Albany would not have been complete without the constant interactions with and encouragement from my friends in the Ph.D. program. I would like to
thank to Eric Larsen, Michel John, Melissa Mann, Brian Lyons, Clifton Mayfield, Sam Ferrara, Cuneyt Gozu, Mark O’Donell, and other friends for their friendship and encouragement in hard time. I would like to express my gratitude to Lauri Mosall for her great assistance with administrative issues. I could overcome numerous administrative burdens with a great help from Lauri.

I am grateful to church members at Korean Presbyterian Church in Albany for sharing their time with me and giving me advice. It’s good to have helpful neighbors Specially, Jeff & Ruth deserve great thanks. God showed his love through them. I would like to extend my gratitude to aunt-in-law & uncle-in-law in New Jersey for their care for my family. With their help, I could go through hard time studing abroad. I would like to thank my mother-in-law and father-in-law who kept praying for my family and my future.

I am deeply thankful to my family. I am eternally grateful to my parents for their unconditional support, understanding, and for making me the person I am today. My father showed his love with a great encouragement and support. My father would have been proud to witness my attainment of the Ph. D. degree. My mother provided a great support and showed endless love and belief so that I could attain Ph. D. degree. My brother, Jaeseok took over my part of the responsibilities in looking after the family without raising singling complaint. Thank you for your unceasing support.

I would like to express my deepest gratitude to my wife, Hyunsook. She put up with many difficulties including moving to strange places, living with tight budget, and taking care of kids. I would like to thank my daughters, Janice and Joyce who tolerated my moodiness and made me smile on my face in hard time.

I am fortunate to receive a great support from so many people. Although I could not list here all, I deeply thank all the people who helped me complete this dissertation and attain
Ph.D. degree. Thank you. Most important of all, I would like to thank my God and Savior Jesus Christ for He guides me and helps me in the endeavors.
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ABSTRACT

This dissertation was motivated to answer the following questions: (1) Why are the plural organizational forms (company-owned units and franchised units) used in a chain, what is the effect of the plural organizational form on chain performance, and what factors influence the optimal combination of the plural organizational forms? Drawing on the organizational ambidexterity theory, I argue the plural organizational forms enable chains to maintain standardization across multiple units and facilitate innovation for the adaptation to changing environment simultaneously. Thus, the plural organizational forms can contribute to chain performance by reconciling and harnessing these conflicting demands. I suggest that there is an optimal combination of two organizational forms that maximizes the synergistic effects. I predict that there will be an inverted U-shaped relationship between the proportion of franchised units and chain performance. Second, I suggest that organizational and industrial contexts such as chain size, chain age, industry uncertainty, and industry competitiveness can influence the optimal combination of the plural organizational forms. I argue that as organization size and age increase, chains have more difficulties in generating and implementing innovative ideas. Chains can address this problem by increasing franchised units which generate more innovations. Thus, I predict that as organization size and age increase, the optimal level of combination will be found at a higher proportion of franchised units. I also suggest as industry uncertainty increases, franchisees can contribute to chain performance by identifying customer’s new demands and preferences. I propose two conflicting hypotheses regarding industry competitiveness. Chains can survive high competition either by facilitating innovation through franchised units or by enhancing efficiency through company-owned units. I test these hypotheses with longitudinal data from restaurant chains. The results show the proportion of
franchised units has an inverted U-shaped relationship with chain performance. The results also reveal that as organization size and industry uncertainty increase, the optimal combination of plural organizational forms is found at a higher proportion of franchised units. With the increase of industry competitiveness, chain performance is maximized at a lower proportion of franchised units. This dissertation concludes with a discussion of implications, limitations, and further research.
CHAPTER I: INTRODUCTION

Scholars in organizational theory and strategic management have had a special interest in the choice of proper organizational governance form (i.e. hierarchy, hybrid, and market) and its implication for firm performance (Barney, 1991; Coase, 1937; Penrose, 1959; Pfeffer & Salancik, 1978; Williamson, 1975, 1985, 1999). Most of the theories have been interested in explaining how firms choose a suitable organizational form that will enhance organization efficiency, competitive advantage, and long term survival (Williamson, 1991; Barney, 1991; Pfeffer & Salancik, 1978). The assumption of this approach is that one organizational form is superior to other forms. For example, transaction cost economics maintains that the appropriate organizational form will be chosen by transaction costs that are determined by asset specificity, uncertainty, and frequency of transactions (Williamson, 1985). However, the choice of organizational form is not always exclusive. It is found that some organizations use plural organization forms. Plural organizational form is defined as coexistence of distinct and different organizational forms operated by an organization to perform the same function (Bradach & Eccles, 1989). Use of the plural organizational forms is prevalent in the chain industry, for example, restaurants and hotel chains operate both franchised units and company-owned units simultaneously. Although the franchising literature has provided some explanations for the plural organizational forms, further investigation with a new perspective will enhance our understanding of the plural form of organization. The objective of this research is to propose a new perspective to answer the question: “why are the plural organizational forms used?” and empirically test the argument with data from restaurant industry.
Franchising is a method of doing business by which one firm (the franchisor) sells the other firm (the franchisee) the right to market goods or services under its brand name and using its business practices (Combs, Michael, & Castrogiovanni, 2004). The unit or the operational establishment under the franchising operation is called the franchised unit. The unit owned by the franchisor and managed by its employees is company owned unit. The franchising system refers to the franchisor and all units both franchised and company owned units (Elango & Fried, 1997). The US Department of Commerce divides franchising systems into two categories. Product/trade-name franchising is a relationship between the supplier and dealer (U.S. Department of Commerce, 1988). Franchisors work as a supplier and grant franchisees the right to use its trademark. Franchisees play a role as a dealer that distributes supplier’s goods. Gas service stations, automobile dealerships, and soft-drink bottlers are typical examples of product/trade-name franchising. Business format franchising is an ongoing relationship between franchisors and franchisees that not only involve product, service, and trademark, but also the entire concept of business format (U.S. Department of Commerce, 1988). This type of franchising is widely used in hotel, restaurant, and other service industries. Franchisees in business format franchising create products or services and serve customers following operating routine and guidance provided by franchisors. This study focuses on business format franchising.

Business format franchising is operated under contracts between franchisor and franchisee. Generally, franchisees not only invest their capital in the unit but also pay initial fee and ongoing scheduled fee. Initial payment is a lump-sum fee to the franchisor paid within a specified time period from the date when contact is signed (Sen, 1993).
Franchisees also contract to pay an ongoing-fee that includes a royalty fee and an advertising fee. Royalty fee, in most case is a fixed percentage of franchised unit sales (Lafontaine, 1992). Typically four percent of unit sales is paid to franchisor as a royalty in restaurant industry (Bracach, 1997). Advertising fee is paid to promote chain-level advertising. In return, franchisor’s responsibilities include training, co-op advertising, site-selection and lease negotiation assistance, data processing assistance, centralized purchasing, initial store opening, inventory control, the publication of an informational newsletter, and the organization of regional and national meetings (Sen, 1993). Franchisees use the chain’s trademark and business format and receive the unit’s profits (Bradach, 1997).

**Statement of Problem**

With the increased popularity of franchising system, franchising literature has studied several issues. Of particular interest is the motivation for chains to adopt the franchising system (Combs et al., 2004). Among several theoretical perspectives that have been adopted to explain the use of franchising system, agency cost theory and resource scarcity theory have been predominant approaches to study this issue (Combs & Ketchen, 2003). These theories have shed some light on our understanding about the use of the franchising system.

Agency theory maintains that chains adopt franchising system to reduce monitoring cost which is generated by agency problem between chain owners and employees (Shane, 1996). Chain can franchise units to reduce monitoring costs by aligning the franchisee’s interest to be in line with that of franchisor (Shane, 1996). The franchising contract provides franchisees with a good incentive to work hard by allowing
residual claims to the unit’s profit. Franchisors also benefit from an increased royalty stream. Chain owners franchise these units that generate high monitoring cost and are less likely to cause the free-riding problem of franchisees (Combs et al., 2004).

The resource scarcity argument is that chains franchise units to gain access to managerial, financial, and local knowledge (Katz & Owen, 1992; Oxenfeldt & Kelly, 1969). Resource scarcity maintains that small chains which lack these resources will franchise more units to overcome the problem (Caves & Murphy, 1976).

Although these theories have enhanced our understanding of the use of the franchising system, some research issues are not fully explored. This research examines some of these issues such as the synergistic effect of plural form of organization. Most previous research on motivation of franchising has focused on explaining why franchisors select either company-owned units or franchised units. The decision between two organizational forms has been considered as a way of substituting one for another (Botti, Briec, & Cliquet, 2009). With this assumption, previous research has tried to identify criteria to determine whether chains franchise a new unit or not. Scant attention, however, has been paid to synergetic effects from the simultaneous use of the plural organizational forms and its implication for chain performance. Although some scholars studied this issue (Bradach, 1997; Bürkle & Posselt, 2008; Hsu & Jang, 2009; Sorenson & Sørensen, 2001), the synergistic benefits from plural organizational forms have not explained by a fully developed theoretical perspective. Combs and Ketchen (2003) argue that one reason for our limited understanding of franchising issues is due to lack of diverse theoretical perspectives. Richer understanding can be gained through multiple
lenses provided by diverse theories to examine phenomenon (Allison, 1971). Therefore, it is necessary to develop a new theoretical perspective to address this issue.

Second, few franchising studies provide empirical evidence that shows an inverted-U shaped relationship between franchised units to total units and chain performance that shows there is an optimal level of franchised units to maximize synergistic effect. Lafontaine and Kaufmann (1994) found that franchisors intend to continue mix of franchised units and company-owned units to take advantage of plural form benefits. Franchisors also have a target level of franchised units in chain. Bradach (1997) provides in-depth case study that suggests synergistic effect of plural form. Sorenson & Sørensen, (2001) provide evidence of the trade-off between exploration and exploitation but do not empirically test the inverted U-shaped relationship. More rigorous empirical tests of an inverted U-relationship can provide more compelling evidence that supports the synergistic benefit argument of plural organizational form.

Third, Lafontaine and Kaufmann (1994) found although franchisors have their target level of franchised units in chain, the level varies across franchisors. An implication is that the optimal level of franchised units can vary depending on contextual factors. Few efforts, however, have been made to address this issue. The identification of contextual factors that influence optimal level of franchised units in a chain can provide meaningful implication for the strategic choice of mix of franchised and company-owned units.

Research Objectives

The study aims to enhance our knowledge of the synergistic benefits of plural organizational forms and its implication for performance in chain industry. First, I will
propose organizational ambidexterity theory as a theoretical foundation to explain synergistic benefits of plural forms. The basic argument for the synergistic effect of plural form is that when these two organizational forms are properly mixed, the chain can benefit from the plural forms (Sorenson & Sørensen, 2001). This study posits that organization ambidexterity theory can work as an underpinning theoretical framework to explain the underlying relationship between plural organizational forms and its performance implication. I will argue that the existence of plural forms can deal with two major challenges in chains: (1) standardization across multiple units and (2) innovation for adaptation. Drawing on organizational ambidexterity theory, I will delineate how the plural form of organization can help chains to achieve balance between standardization and innovation which are often conflicting.

Second, Combs, Michael and Castrogiovanni (2004) argue that less attention has been paid to the financial performance implication of choice of organizational form. This study aims to address this point. This study will argue that proper combination of franchised units and company-owned units will help chains to maintain balance between standardization and innovation that influence chain level performance. I will propose that there is an optimal level of proportion of franchised units to total units that maximizes the synergetic effect of plural organizational forms. I hypothesize that there will be a negative curvilinear (inverted U-shaped) relationship between the proportion of franchised units to total units and chain-wide performance and test this hypothesis with the sample from the restaurant industry.

Third, this study will identify factors that influence this optimal level of proportion of franchised units that maximizes chain performance. I will argue that the
relative importance of standardization and innovation can depend on organizational and industrial factors that chains face. Optimal proportion of franchised units can change as organizational and industrial situations change. I will suggest organizational and industrial contexts as moderators that influence the right mix of plural organizational forms. This study will develop hypotheses that investigate how organization age, organization size, industry uncertainty, and industry competitiveness affect the optimal level of proportion of franchised units that maximizes synergy effect of plural organizational form.
CHAPTER II: Literature Review

The second chapter reviews the previous franchising literature related to research topics of this dissertation. The research topics are (1) why chains use the franchising system and (2) how franchising system influences chain performance. This first section introduces the main theoretical framework used to explain the reasons why chains use the franchising system and summarize previous empirical findings. The second section reviews research that has investigated the effect of franchising system on chain performance. I finish this chapter by identifying some limitations of previous theories and positing need of new theory to explain the synergistic benefits of plural organizational form.

Development of the Franchising System

In this section I review literature concerning the question: the reason for use of franchising system. I will first introduce agency theory and resource scarcity theory which have been widely used to answer this question. I also review empirical findings based on these theoretical perspectives.

The franchising system has been widely used as a way to expand business by entrepreneurs who developed successful business system (Combs & Ketchen, 2003). With the increase of franchising system, academic research has focused on what leads chains to develop franchising system (Combs et al., 2004).

Resource scarcity

Resource scarcity theory has been proposed to investigate the development of the franchising system (Caves & Murphy, 1976; Oxenfeldt & Kelly, 1968; Rubin, 1978).
Oxenfeld and Kelly (1969) propose that chains adopt the franchising system to access scarce resources. They posit that chains prefer company ownership because they expect higher rates of return from company-owned units (Hunt, 1973). However, small and young chains have incentives to operate franchised units because it facilitates growth of chains. Small chains have a disadvantage over large-scale chains in terms of economies of scale (Caves & Murphy, 1976). Rapid growth is required for small chains so that they can reach at least the minimum efficient economies of scale in the area of advertising and purchasing (Hunt, 1973; Norton, 1995; Caves & Murphy, 1976). Economies of scale can make their business more profitable and help chains survive in a competition against established competitors. The desire to achieve economies of scale forces the chain to grow at a rate beyond what can be achieved through development of only company-owned units (Caves & Murphy, 1976).

Oxenfeldt and Kelly (1969) suggest that chains adopt the franchising system to overcome resource constraints that inhibit rapid growth especially in the early stages of chain’s life cycle. Franchising system can be used as a means to acquire financial resources, managerial resources, and local market knowledge (Martin & Justis, 1993; Minkler, 1992; Norton 1988; Oxenfeldt & Kelly, 1969). Small and young chains do not have easy access to capital markets because the financial market demands high risk premium due to a small chain’s higher risk of failure (Norton, 1995). Small and young chains can obtain financial resource from franchisees that will facilitate growth of chain (Caves & Murphy, 1976). Franchisees provide investment in the outlet through the purchase of fixed assets (Lafontaine & Kaufmann, 1994). In addition, franchisees provide financial resources needed to help chains expand in the form of an initial franchise fee.
and ongoing royalties. Franchisees also provide managerial resources. Because franchisees invest their money to operate their own store, people who are confident in their management skills will purchase franchise (Shane, 1996). Franchising enables small chains which lack managerial resources to attract qualified managers who will operate their units. When chains pursue geographic expansion, the adaptation to local market is necessary. Small chains which have operated in an area may not have knowledge about diverse markets which are geographically dispersed. Franchising system can allow franchisees who have knowledge about local market to use their knowledge to satisfy local needs (Oxenfeldt & Kelly, 1969).

Some scholars have examined the change of the proportion of franchised units based on resource scarcity theory (Combs & Castrogiovanni, 1994; Combs & Ketchen, 1999; Kaufmann & Dant, 1996; Norton, 1995). Age, chain size, chain growth rate, and capital scarcity are the most widely used variables to test resource scarcity arguments (Combs & Ketchen, 2003). Resource scarcity theory predicts that chain age and size are negatively related to the proportion of franchised units. When chains are small and young, they will franchise more to acquire resources that facilitate growth of chain. As chains become established, they will have sufficient financial and human resources (Oxenfeldt & Kelly, 1969). Empirical research on this prediction is mixed. Earlier studies provided some evidence that supports this prediction. Hunt (1973) found as chains become larger and older the chains increase the proportion of company-owned units in fast food franchising. Anderson (1984) also showed that the percentage of company-owned units increases over a period of ten years. Sen (1998) also investigated the contribution of franchised units to chain growth. The result showed that as chain size increases, chains
have a lower use of franchising as an expansion strategy. However, Alon (2001) found no support for resource scarcity proposition. The proportion of franchised units increases as chain size increases (Alon, 2001). Growth rate is also negative related to the proportion of franchised units (Alon, 2001). These findings are contrary to resource scarcity explanation for use of franchising. Chain age is not related to the proportion of franchised unit (Alon, 2001). Lafontaine and Shaw (2005) examined the change of proportion of company-owned units over time. The percentage of company-owned units decreases during the first seven or eight years in franchising but it stabilizes after the period (Lafontaine & Shaw, 2005). This finding fails to support the resource scarcity prediction that chains operate more company-owned units when they are established.

Castrogiovanni, Combs, and Justis (2006) examined the change of the proportion of franchised units in chains. They found a cubic pattern in change of proportion of franchised units. The average proportion of franchised units increases dramatically in the initial years, reaching a peak at 10 years (Castrogiovanni, Combs, & Justis, 2006). The proportion of franchised units decreases from 10 through 21 years of age then arises again after 21 years. This finding partially supports resource scarcity explanation. Consistent with resource scarcity prediction, chains increase percentage of franchised units for early growth. However, resource scarcity theory does not offer explanation for the increase of the proportion of franchised units after 21 years. Combs and Ketchen (2003) conducted meta-analysis to test the resource scarcity argument. The result of meta-analysis does not provide support for the resource scarcity argument (Combs & Ketchen, 2003). Chain size, chain age, and chain growth rate are positively related to the proportion of franchised units.
Capital scarcity has received special attention in research. Although access to capital has been proposed as an explanation for use of franchising system, some scholars criticized the explanation (Kaufrann & Dant, 1996). Rubin (1978) argue that franchisees are a costly source of capital because they bear the greater risk that comes from owning only one or several units, whereas investors as a lender or stockholder can diversify their risk among multiple units or whole chains (Brickley & Dark, 1987; Norton, 1995). Because franchisees take high risk, they will demand a greater return on their capital investment (Norton, 1995).

Combs and Ketchen (1999) provided a counter argument to this criticism. First, because franchisees own and operate their own units, they do not confront agency cost that results from the separation of ownership and control. Franchisees can maximize their own interests by operating their units. Second, franchisees have private information concerning their management skills that is not available to lenders or stockholders (Shane, 1996). Thus, they can reduce the concern of adverse selection that occurs in capital market due to the imperfect information about the true risk of the chains (Akerlof, 1970).

The empirical findings on this relationship are also mixed. Supporting resource scarcity argument, franchisors select capital access as one of main reasons to initiate franchising system (Dant, 1995). Combs and Ketchen (1999) found evidence that supports the resource scarcity explanation. When the agency variables are controlled for, price-to-earnings ratio and liquid capital are negatively related to expansion through franchising. In others words, chains which lack capital choose franchising over company ownership as a means of expansion. On the other hand, Minkler and Park (1994) found
that the real interest rate is positively related to proportion of company-owned units. They argue that chains increase company-owned units because capital is more readily available to a franchisor than franchisees in a tight credit market. LaFontaine (1992) found that the required capital to open new unit is negatively related to the use of franchised units which is contrary to the resource scarcity explanation. Although less capital is required to open new units, chains franchise more units. Meta-analysis fails to find supporting evidence for resource scarcity (Combs & Ketchen, 2003). Combs & Ketchen (2003) argue that capital scarcity can be a motivation to initiate franchising system, but not a growth strategy after initial base has been established.

In summary, resource scarcity theory provides a solid argument regarding why chains adopt franchising system. However empirical research has not provided strong support for this argument especially when chains are more established. These findings indicate that the resource scarcity explanation may be valid only at the early stages of explanation when chains initiate franchising system (Combs et al. 2004).

**Agency Theory**

One of the most prevalent explanations for use of the franchising system is agency theory (Combs et al., 2004). Agency theory posits that an agency relationship occurs when one party (the principal) delegates authority to another party (the agent) to perform work for the principal (Fama & Jensen, 1983; Jensen & Meckling, 1976).

Agency theory assumes that people are bounded-rational and self-interested. Given the assumptions about people, the agency problem can occur when desires or goals of agent differ from those of principle and it is hard or expensive for the principal to
verify what the agent are actually doing (Eisenhardt, 1989). In other words, agency theory posits that agents will pursue their own interests compensating for principals’ interests unless principals are able to verify that agents behave for the interests of principals (Eisenhardt, 1989). Under situation where principals cannot be sure if agents act in principals’ interests, principals will face two types of problems: moral hazard and adverse selection (Jensen & Meckling, 1976).

Moral hazard refers to lack of effort on the part of agent (Eisenhardt, 1989). Agents may not put forth necessary effort to achieve principals’ goals when principals cannot detect what the agents are doing. In the franchising literature, Shane (1996) suggests owners face two type of moral hazard: sub-optimal effort and misdirected effort when they hire employees to operate company-owned units. Sub-optimal effort means since employees get a fixed salary, they will put forth only as much effort as is necessary to obtain the salary. They do not have the incentive to put forth extra effort to maximize store profit. Misdirected effort means that employees will try to pursue personal goals such as leisure time (Shane, 1996).

Adverse selection refers to the misrepresentation of ability by the agent (Eisenhardt, 1989). Potential employees differ in their training, skill, and ability. Principals will face problems in selecting the most qualified employees because less qualified potential employees have more incentive to misrepresent their skills, training, and ability to acquire employment (Coyte, 1984). Adverse selection becomes more severe when it is difficult for the principals to accurately assess employee’s skills and abilities at the time they are hired or are working (Eisenhardt, 1989).
Agency theory suggests a behavior-based control system and an outcome-based control system to reduce the agency problems (Eisenhardt, 1989). One is to develop systems that enhance principal’s ability to monitor agent’s behavior. Investment in information system, budgeting system, and reporting procedure can make easier for the principal to ensure that agent works appropriately. The other option is the use of outcome-based contract (Fama & Jensen, 1983). Principals can form a contract that makes sure that the interests of the agent are well aligned to those of the principal. This kind of control usually reduces principals’ monitoring cost and shifts risk from the principal to the agent (Eisenhardt, 1989).

**Use of the franchising system to reduce the agency problem**

Scholars argue that chains use the franchising system as a mechanism to reduce the agency problem (Brickley & Dark, 1987; Combs & Ketchen, 2003; Shane, 1996). Franchising is an outcome-based control system that turns unit operators into residual claimants (Norton, 1988).

Use of franchising system can reduce agency problems which can arise in selecting and monitoring chain unit by replacing employees who receive relatively fixed salaries with franchisees who can claim the residual profits of a unit they operate (Brickley & Dark, 1987). The franchising system reduces the adverse selection problem. It is more likely that individuals who are more qualified will work as franchisees because their compensation is directly to their capabilities (Spence, 1973). Franchise candidates do not have an incentive to misrepresent their capabilities to purchase a franchised unit. Therefore, chains can reduce the cost of gathering information to select people who run a chain unit.
The franchising system can reduce moral hazard problem because franchisees have a strong incentive to work hard to increase their benefits (Alchian & Demsetz, 1972). Franchisees do not shirk because they put their own capital at risk as an owner-manager of a unit and they are motivated to maximize their profits which are closely tied to their efforts (Rubin, 1978). As a result, chains do not have to monitor their behavior closely and chains can reduce monitoring cost (Shane, 1996).

However, the franchise system does not eliminate all types of agency problems. The presence of externality such as brand reputation can create free ridding problem (Michael, 2000; Shane, 1996). In chain system, all units operate under a shared trademark. Thus, individual effort to increase brand reputation can create externality (Michael, 2000). The effort can affect customer’s perception of all other units operating under the same trademark. Since franchisees do not fully appropriate all their benefits from their investment and they can receive benefit from other unit operator investment and effort, franchisees can choose to free ride on others rather than to invest (Combs et al. 2004). This free ride problem can lead to chain wide under investment (Combs et al, 2004).

Chains can also confront a problem that some franchisees offer poor quality of products or services to customer (Michael, 2000). Since franchisees are motivated to increase their profits rather than to maintain brand quality, their effort to increase unit’s margin can tarnish reputation of trademark. For example, a fast food chain in a location where customers do not visit the unit frequently, the franchisee has inventive to provide low quality products (Brickley & Dark, 1987). This low quality can disappoint customers and reduce the value of chain and its trademark (Caves & Murphy, 1976).
Accordingly, agency theory argues that the chain can select organizational form by considering the monitoring cost and cost caused by free-riding problem (Combs & Ketchen, 2003). When the reduced monitoring cost exceeds the potential cost by free-riding problem, the chain will decide to franchise. Otherwise, chains use company ownership.

**Empirical findings**

The franchising literature provides some evidence that supports the agency-based arguments as a mechanism to explain the use of franchise. Researchers have attempted to identify factors that increase monitoring costs to test agency theory argument. The most studied factors include geographic dispersion, local managerial expertise, valuable franchisor input, franchisee fee, royalty rate, and outlet size (Combs & Ketchen, 2003). Researchers argue that when chain units are dispersed over a greater geographical area, it will increase monitoring costs due to the increase of travel-related expenses (Carney & Gedajlovic, 1991). Thus, the chain will prefer to franchise rather than develop company-owned units (Combs & Castrogiovanni, 1994; Norton, 1988). As local market expertise becomes more important the monitoring cost is increased. Chain owners who lack local market information cannot assess the unit manager’s quality of decision making. Under this situation, chains are more likely to prefer the franchising system over company-owned units (Bradach, 1997). With the franchised units, chain can reduce moral hazard problem.

While franchising can reduce monitoring costs, it also creates another type of agency problem (Combs et al., 2004; Shane, 2006). Franchisors confront the risk that franchisees show opportunistic behavior. For example, some franchisees provide low
quality products or services to increase their own profits but the efforts can tarnish chain-wide reputation (Michael, 2000). On the other hand, franchisees are also exposed to a risk that their franchisor does not make effort to promote its brand name (Scott, 1995).

Scholars have examined factors that reduce agency problem caused by the franchising system. Research has investigated franchisor input, franchise fee, and royalty rate as factors that influence opportunistic behavior by franchisees (Combs & Ketchen, 2003). Franchisor input refers to the franchisor’s effort and investment to promote brand and improve the products or services (Kaufmann & Stanworth, 1995). As franchisors increase their efforts to enhance brand reputation, franchisees will have more incentive to reduce their investment and free ride on franchisor’s effort. Thus, as chains make more efforts to increase brand reputation, they have a greater incentive to have company-owned units (Michael, 1998). Barthélémy (2008) empirically shows that the brand name is negatively related to the proportion of franchised units in a chain. High franchisee fee is expected to increase franchisee’s perception of opportunism risk (Sen, 1993). Franchising fee is a highly specific investment for franchisees. Fewer franchisees will purchase the franchising because the loss that can be caused by franchisor’s opportunistic behaviors becomes greater as the franchising fee increases. Shane (1998a) tests this prediction but does not provide supporting evidence for this prediction. High rate ongoing royalty, if it is not so high, is expected to reduce franchisor’s opportunistic behavior because high rate royalty encourage chain to build more franchising units (Shane, 1998a). Chain’s efforts to enhance brand reputation will increase franchisees sales which is the basis of royalty that chains receive (Sen, 1993). Shane (1998a), however, shows a negative relationship between royalty rate and proportion of franchised units which does not support this
Outlet size which is related to initial investment is proposed to reduce the use of the franchising system because it can increase franchisee’s perception of opportunism risk (Combs & Ketchen, 2003). The large amount of capital required to build a big outlet can be lost by the franchisor’s opportunistic behavior. It also decreases monitoring cost because of economies of scale (Klein, 1995). The marginal cost of observing the unit can be lowered with the increase of unit size to be monitored (Lafontaine, 1992). An empirical result shows the initial investment is positively related to the proportion of franchised units.

Combs and Ketchen (2003) conducted meta-analysis to examine the predictions grounded in agency theory. The results reveal that, among geographic dispersion and local managerial expertise which increase monitoring cost, only geographic dispersion is positively related to use of the franchising system. They select franchise input, franchise fee, and royalty fee as factors which are related to franchisor or franchisee opportunistic risk and provide a supporting evidence only for the hypothesis related to valuable franchise inputs including advertising spending as a percent of sales and consumer reports quality rating. Outlet size measured by outlet start-up cost or outlet sales is also negatively related to use of the franchised units.

In summary, agency theory has improved our understanding of the propensity to franchise (Combs et al., 2004). Agency theory provides some criteria that can be used for the selection of a proper organizational form. Agency theory maintains that chains can select either company-owned unit or franchised unit based on the monitoring cost and fee-riding cost. However, this theory does not explain why chains have franchised units near chain headquarters which do not cause a high monitoring cost and why company-
owned-units and franchised units operate in the same area that have a similar monitoring cost (Gillis & Combs, 2009). This problem occurs because agency theory assumes that the existence of plural organizational forms is just a result of cumulative choices of organizational form at the unit level (Botti, et al. 2009). Agency theory does not explain how each organizational form can benefit each other and contribute to the development of chains.

**Implication for Chain Performance**

The review of franchising literature provides diverse reasons for the use of franchising system in chain. It implies that chains use franchising system because it creates benefits for chains and consequently influences its performance. It is critical to understand how the use of franchising system contributes to the chain performance. While prior research has focused on the motivation to use franchise, relatively little attention has been paid to the implication of franchising system for chain performance (Combs et al. 2004).

Combs, Michael, and Castrogiovanni (2004) point out two problems that limited the study on chain performance. One is the limitation of theoretical scope. Although agency cost theory and resource scarcity theory can provide some implications for firm performance, they do not explicitly explain how franchising system helps chains to create competitive advantage and gain superior performance. The other problem is lack of performance information available (Combs et al., 2004). Firm performance can be measured in different ways: (1) survival of a chain; (2) growth of chain units; and (3)
financial measures. Due to the lack of public data, most early studies on the performance issue focused on survival of chain and change of the number of chain units.

Recently, scholars have begun to address these problems. More diverse theoretical perspectives including organizational learning, knowledge management, and resource-based theory are adopted to explain the performance difference among chains with financial performance measures. Below, I will review previous research which focused on the effect of franchising system on chain performance.

Early studies on the performance issue are grounded in agency theory. Agency theory posits that the right contract between principal and agent will reduce monitoring cost and assumes that the right choice of organization governance form increases efficiency (Shane, 1996). Shane (1996) drew on agency theory and found that use of the franchising system enhanced growth and survival rate of chains. Franchising system enables chains to reduce agency problem. Chain owners do not have to monitor all activities in franchising units because franchisees are motivated to work hard to gain their own profit, which allows chains to reduce monitoring cost. This fast growth helps chains achieve economies of scale in purchasing materials, handling administrative overhead, and promoting their brand names. The economies of scale through franchising system increase the probability of chain survival. Shane (1998b) also identified some factors that control agency cost in franchising operations that decrease chain failure. The study showed that passive ownership, business complexity, and mastering franchise system increase the failure of chains. Chains that are owned by passive investors who hire a manager to operate a franchised unit do not benefit from provision of residual claimancy on the profits. New franchise systems with a complex business concept suffer from high
monitoring cost because it is difficult and costly for principal to specify agent’s behavior under all contingencies. Master franchise agreement that grants the right of development to an individual (Dandridge & Falbe, 1994) also increase agency cost. The franchisor’s inability to foresee all possible mechanisms for franchisee shirking will increase monitoring cost and the opportunity for franchising shirking. The study also found that more cash investment of franchisees, franchisees with industry and work experience, and geographic concentration of units decrease monitoring cost and subsequently decrease the failure rate of chains.

Sorenson and Sørensen (2001) use the organizational learning perspective to explain how the choice of governance structure influences chain performance. They argue that the choice of governance structure affects the types of effort exerted by company unit managers or franchisees. Company-owned units contribute to the increase of performance in homogeneous market because employee managers have a strong incentive to exactly follow existing operating procedure. As chains expands geographically, franchised units increase sales growth. Franchisee’s effort to adapt to local market can increase sales growth of the chain. Sorenson and Sørensen (2001) also find that company-owned units decrease variation in chain performance but this stability declines more rapidly in company-owned units as market becomes more varied. This research shows that franchisees and employee managers have different incentives and contributes to chain performance in different ways.

Srinivasan (2006) examines the effect of proportion of franchised units on intangible value measured by Tobin's q. Srinivasan (2006) identifies four different segments in restaurant industry with the criteria of organization characteristics and
The results reveal that plural organization forms do not offer unilateral benefits to all chains in restaurant industry. Increase in proportion of franchised units has a negative effect on Tobin’s q for the poorly performing chains. On the other hand, the chains proportion of franchised units is positively associated with the intangible value for the chains which are large and have large advertising stock. It implies that poorly performing chains which do not have ability to manage franchised units cannot create synergistic benefits.

Barthélemy (2008) employs resource-based view to investigate the effect of interaction of resources and governance on chain performance. Brand name and business practice tacitness which are suggested as critical resource are not related to high performance. When these resources are combined with the right choice of organizational form, the resources can contribute to the chain performance. As brand name is more valuable and business practice is more tacit, company-owned units increase chain performance.

The literature review reveals that two theories: resource scarcity theory and agency theory have been dominant in franchising research. Although these theories have improved our understanding of the choice of organization form, there are some issues unanswered by these theories. Some scholars proposed synergistic benefits from plural organizational forms. The resource scarcity theory and agency theory do not provide explanation for the synergy effect. A new theoretical perspective can help us improve our understanding of this issue. The literature review indicates the need for effort to understand how plural organizational forms contribute to chain performance. A study based on solid theoretical foundation is required to understand the relationship between
plural organizational forms and chain performance. In the next section I will propose a new theoretical perspective to account for the use of plural organizational forms and show how the plural organizational forms can create synergistic benefits and contributes to chain performance.
CHAPTER III: THEORY AND HYPOTHESES

This chapter presents hypotheses that establish the causal linkage among plural organizational forms, chain performance, and organizational and industrial contexts. Building on the review of organizational ambidexterity and evolutionary economics, I posit that plural organizational form is a structural mechanism that allows chains to pursue disparate demands: (1) standardization across multiple units and (2) chain-level innovation for adaptation to changing environment. This paper describes how the combination of franchised units and company-owned units deals with the conflicting demands on the chain and proposes that proper use of these organizational forms can create synergies that benefits chains. Thus, I propose that the proportion of franchised units will have a negative curvilinear relationship with chain performance suggesting that there is an optimum level of proportion of franchised units that maximizes chain performance. Second, I argue that this balance between franchised units and company-owned units are not static. The right combination of the plural organizational forms can be contingent on contextual factors. I predict that organizational and industrial contexts will moderate this curvilinear relationship. I develop hypotheses regarding the influence of organization size, organization age, industry uncertainty, and industry competitiveness on the change of optimal combination of the plural organizational forms. Figure 1 displays the research model and proposed relationship in this study.
Organizational Ambidexterity

**Origin & definition**

This study draws on the organizational ambidexterity as a theoretical framework to investigate how chains reconcile these two conflicting demands and increase chain performance. Duncan (1976) first suggested the term of organizational ambidexterity. Duncan (1976) suggested that firms can manage conflicting demands from alignment and adaptation with dual structure. Some units focus on alignment and some others deal with adaptation. Traditionally, organizational ambidexterity refers to an organization’s ability to pursue two disparate things at the same time (Gibson & Birkinshaw, 2004). In this study, organizational ambidexterity is defined as a firm’s ability to simultaneously balance different activities in a trade-off situation (Rotheaermel & Alexandre, 2009).
Development of the literature

Since Duncan (1976) first suggested the term of organizational ambidexterity, the concept of organizational ambidexterity has been used in a variety of organizational literature (Raisch & Birkinshaw, 2008). Organizational learning scholars have been interested in how to achieve the balance between exploitation and exploration (March, 1991). Scholars in the technological innovation literature distinguished incremental innovation from radical innovation and examined how to pursue two types of innovation simultaneously (Dougherty, 1992; Nadler & Tushman, 1997; Tushman & Anderson, 1986). In organizational adaptation literature, attention has been paid to the balance between organization continuity and change (Brown & Eisenhardt, 1997; Leana & Barry, 2000; Meyer & Stensaker, 2006; Tushman & Romanelli, 1985). Scholars in this literature examined how organizations can overcome organizational inertia while keeping continuity (Levinthal & March, 1993). Similar concepts have been used in strategic management literature. For example, Hamel and Prahalad (1993) argued that managing tension between the need to exploit existing capabilities and the research for new ones is a key strategic challenge for the development of sustainable competitive advantage.

Trade-offs between efficiency and flexibility has been a central topic in organization design literature (Thompson, 1967). Scholars studied how mechanistic structures that promote efficiency and organic structures that support flexibility can be combined to deal with the paradox to reconcile short-term efficiency and long-term innovation (Adler, Goldoftas, & Levine, 1999; Burns & Stalker, 1961; Sheremata, 2000).

Antecedents of organizational ambidexterity
Main argument of organizational ambidexterity is that organization’s ability to reconcile and harness the conflicting demands can improve its performance (Rothaermel & Alexandre, 2009). Scholars have studied how organizations can be ambidextrous dealing with trade-off situations. Three approaches have been proposed to achieve organizational ambidexterity (Raisch & Birkinshaw, 2008). The first approach to ambidexterity is the use of organizational structure. Conflicting demand is coped with by creating separate organization units (Duncan, 1976). Separate organization units are developed to address specific task in organization. For example, small and decentralized units with loose process are in charge of more explorative tasks. In contrast, big and centralized units with tight process are in charge of more exploitative tasks (Benner & Tushman, 2003; Tushman & O’Reilly, 1996). As an alternative structure for ambidexterity, some scholars proposed parallel structures that allow people to work in a structure depending on the organization requirement (Bushe & Shani, 1991; McDonough & Leifer, 1983). In other words, one person can work in a primary structure for routine and exploitative tasks and work in a complementary structure such as project team for more creative and explorative tasks (Goldstein, 1985). The parallel structures coexist within a business unit so that a person can work for both units to satisfy competing demands.

Gibson and Birkinshaw (2004) suggested the concept of contextual ambidexterity. They argued that organization context can make it possible for organization unit to meet competing demands such as alignment and adaptability. Organization context can encourage individuals to make their own decision as to how to divide their time to cope with conflicting demands between alignment-oriented activities and adaptation-oriented
activities (Gibson & Birkinshaw, 2004). Organization context is the systems, processes, and beliefs that affect individual’s behaviors in an organization (Ghoshal & Bartlett, 1994). Disciplines, stretch, support, and trust have been suggested as four behavior-framing attributes that facilitate contextual ambidexterity (Ghoshal & Bartlett, 1994; Gibson & Birkinshaw, 2004). Encouraging these organizational contexts can help each individual in an organization to develop a capacity to deal with conflicting demands (Gibson & Birkinshaw, 2004).

Leadership scholars have argued that senior leaders play an important role in fostering organizational ambidexterity (Gibson & Birkinshaw, 2004). Leadership processes are regarded as a supporting factor for implementing structural and contextual ambidexterity (Gibson & Birkinshaw, 2004; Smith & Tushman, 2005; Tushman & O’Reilly 1997). Gibson & Birinshaw (2004) argued that role of senior executives is important in making organization context effective for developing ambidexterity. Smith and Tushman (2005) argued that the locus of paradox to deal with ambidexterity resides either with the senior leader or with the entire top management team. They suggested a model that describes leadership team design and leader coaching style for balancing strategic contradiction through paradoxical cognition in leadership team. Lubatkin, Simsek, Ling, and Veiga (2006) examined role of top management team’s behavior integration in facilitating organization ambidexterity in small-medium enterprises. They found that collaborative behavior, information exchange, and joint decision making in top management teams increase the pursuit of ambidextrous orientation which leads to better performance. Beckman (2006) studied the relationship between top management team members’ prior affiliation and their behavior in exploitation and exploration. The result
shows firms with founding teams who have both common and diverse prior company affiliations have higher level of performance. Beckman (2006) explained firms with common and diverse prior company affiliation benefits from innovation that stems from diverse prior company affiliation and efficiency that is promoted by shared affiliation.

This study argues that plural organizational forms can work as a mechanism that makes chains ambidextrous by enabling them to maintain balance between standardization across multiple units and development of innovation for the adaptation to changing environment. I will describe how the balance between standardization and innovation can influence chain performance drawing on evolutionary economics argument.

**Plural Organizational Forms and Chain Performance**

In this section, I propose that evolutionary economics can help us understanding how plural organizational forms can influence chain performance. I will describe how organization routine concept can be applied to explain the development of chains and how the two major challenges faced by chains are related to exploitation and exploration of organization routine. I argue that company-owned units can be used as a structure that enhances efficiency through standardization which is related to exploitation of current superior organization routine and franchised units can employed as a mechanism to maintain a fit with its environment through innovation which is related to exploration of new routines.

*Chains and organization routine*
Nelson and Winter (1982) suggested that the knowledge on how to coordinate firm’s activities is embedded in organizational routines. Routines are conceived of as a complex web of relationships which connect specific resources to produce products or services (Argote & Ingram, 2000). Some scholars suggest a routine view of chain drawing on evolutionary economics (Knott, 2003; Knott & McKelvey, 1999; Winter & Szulanski, 2001). From the perspective of evolutionary economics, the chain system is replication of managerial practice and standard operating procedures (Knott & McKelvey, 1999).

Knott (2003) describes how an entrepreneur develops a new business model and replicates the business model in other geographic market. A new set of organization routines are developed by an entrepreneur who is a potential franchisor. The entrepreneur further develops and refines the organization routine. Recognizing the successful development of business model, the entrepreneur tries to replicates this organization routine to exploit it (Knott, 2003). Organization routines can facilitate the knowledge transfer from original site to new sites. The original business model can be a model which refers to working example of an organizational routine (Nelson & Winter, 1982). The organization routine plays a role as templates which provide details and nuances of how the work is done, in what sequence, and how various components and subroutines are interconnected (Jensen & Szulanski, 2007).

**Routine and performance**

Organization routines vary across firms. Among them, a certain organization routine is more effective in producing products and services. The superior organizational routine can be a source of competitive advantage (Hitt & Ireland, 1985; Mahoney &
Pandian, 1992). Replication of the superior organizational routine is a means to leverage superior knowledge embedded in organization routine (Nelson & Winter, 1982). When organization routines are copied more exactly, the original routine can serve as a reference for diagnosing and solving problems (Winter & Szulanski, 2001).

In addition to the development of superior organization routines, organization theorists have maintained that it is essential for organizations to fit their environment (Hannan & Freeman, 1977; Nelson & Winter, 1982). Evolutionary economics assumes that organizations can change their routines through deliberate efforts to adapt to new environment (Nelson & Winter, 1982). Organizations look for new practices in the neighborhood of an organization’s routines (Cyert & March, 1963; Stuart & Podolny, 1996). Engagement in exploration is more likely to increase the possibility that the organization will adapt to changing environments because adaptation requires accurate, timely information about external threats and opportunities which can be obtained through explorative efforts (March, 1991). Taken together, organizations need to make their efforts to both exploit current organization routines and explore new routines to be a successful organization over time. Organizations need to maintain balance between exploitation and exploration for long-term organizational survival (Levinthal & March, 1993; March, 1991).

**Ambidexterity through plural organizational forms**

The balance between exploitation of current organizational routines and exploration of new routines is also critical to chains (Sorenson & Sørensen, 2001). Bradach (1997) points out maintaining uniformity across units and adapting the system to new threats and opportunities as main challenges chains face. The exploitation of current
organization routines enables firm to standardize their operating system and increase its efficiency (Kaufmann & Eroglu, 1999). First, standardization can be a means of cost minimization through economies of scale of purchasing, marketing, and implementation. When every unit is operating under the same system, it is easier to monitor whether they are conforming to its operation rules. Second, standardization enables chains to build and maintain consistent and distinct image among customers. It is important to maintain a uniform image across units because customers expect the same quality of one unit in others operating units under the same trademark (Dandridge & Falbe, 1994; Michael, 2000). In addition to standardization, chain-wide adaptation is also required. Like all other organizations interacting with their environment, chains should be able to adapt to new opportunities and threats to ensure sustainability over time (Bradach, 1997). For example, as customers become more concerned with their health, chains should develop new menu items to satisfy their needs. It means that chains should be able to deal with these conflicting demands of standardization and innovation effectively to survive and succeed.

As described above, chains experience tension between the accurate replication of business model and chain-level adaptation to changing environment over time. This tension is often conflicting because strict adherence to the original business model inhibits the organizational level adaptation and too often changes in organizational routines decrease the effectiveness and efficiency of replication of the organization routines.

The main argument of this study is that plural organizational form can address these two conflicting demands properly and contributes to chain level success. Use of
company-owned units is more effective in terms of accurate replication of organization routines. It has been argued that hierarchy-based organizational form is superior to hybrid-based relationship in transferring knowledge and routines from origin units to target units (Kogut & Zander, 1992). An identity as a member of a organization makes it easier for organization members to transfer their knowledge embedded in organization routine than hybrid and market mechanisms (Kogut & Zander, 1996). This identity can improve coordination, communication, and learning in organization (Kogut & Zander, 1996). Hierarchy enables organization to use strong power which is given by the contract between employees and organization (Williamson, 1991). This strong governance mechanism allows organizations to monitor employees’ activities more closely. Thus, when company-owned units are used as an organization governance form, it can help the chain to replicate the original organization routine in new units and maintain consistency across units. Michael (2000) shows that the high percent of franchising is related to low quality of products or service in restaurant and hotel chains. This finding indicates that lack of strong control mechanism makes it harder for chains to monitor other unit’s activities and increases variation among different units. Franchisee’s opportunistic behavior including free-riding problems can hinder organizations from providing same high-quality products or services which are developed by franchisors. Ingram and Baum (1997) show that the hotels operated through chain have lower failure rate than the hotels that are not affiliated. The accurate replication of organization routine helps chains to maintain uniformity across multiple units. Firms can gain benefits from exploitation of firm capabilities through large-scale replication of original business model.
While company-owned units can be used a mechanism to provide more consistent products or services, franchised units can be a superior way for explorative efforts which will promote changes in organization routines to adapt to changing environment. Chain-level adaptation refers to the adaptation to macro environment changes. Bradach (1997) maintain that the chain-wide adaptation is one of major challenges for chains. Chain-level adaptation is necessary to ensure the sustainability of the chain by taking advantage of new opportunities and neutralizing potential threats created by environmental change over time. For example, changes in customer taste and public regulation, national wide economic recession, and increased concern about health may require this chain-wide adaptation for all units in a chain. Franchisees who receive residual claims have high-powered incentives to create and experiment with new ideas to enhance these types of adaptation. Sorenson and Sørensen (2001) also maintain that while company-owned units are more effective for exploitation, franchised units can better engage in exploration. They argue that franchisees’ tendency to tolerate risk and to operate under a long-term horizon for performance make them more readily engage in exploring new ideas and innovation.

Bradach (1997), through his qualitative case study, shows that use of plural organizational forms helps chains to obtain both uniformity and chain-level adaptation by helping each organizational form to overcome some of weaknesses of the other mechanism. Bradach (1997) suggests that four processes: modeling, ratcheting, socialization, and mutual learning can help chains to achieve the uniformity and system-wide adaptation. First, company-owned units can provide a standard model which facilitates franchisees’ accurate replication of the business. Chains can increase
uniformity across units through this modeling process (Bradach, 1997). In ratcheting process, chains can enhance control over both franchised units and company-owned units. Franchised units can be a benchmark for the performance of company-owned units which has less incentive to manage effectively. Chains also persuade franchisees to change operating processes with the data gained from company-owned units. The control through ratcheting process helps chains to increase their performance by helping each organizational form to take advantage of the strengths of the other organizational form (Bradach, 1997). In socialization process, plural organizational forms enable chains to train people in company-owned units before they are become franchisees. This socialization process is important because chains can increase the diffusion of a common operating system and control over the franchises which makes it easier for the franchisees to adopt future changes suggested by a chain (Bradach, 1997). The plural organizational forms can create synergistic effect through the mutual learning process (Bradach, 1997). Plural organizational forms contribute to increasing uniformity and innovation in the process of generating, selecting, and retaining new ideas (Bradach, 1997). Franchisees can generate more ideas for new products and services because they are motivated to increase their profits by identifying new opportunities. Franchises’ efforts to satisfy diverse customers result in generating new ideas. Some ideas which are proven by franchisees can be used for a chain-wide adaptation. In selection step, chain can benefit from the plural organizational forms. Franchisors will have a better understanding of how the new ideas work when they test the ideas in company-owned units. Chains can test new ideas in different ways and obtain rich information from company-owned units because employee managers are not tied to the unit’s financial performance. Franchises
can provide more honest opinions for franchisors in the idea selection process. Compared to the employee managers who are often afraid of telling what they think to their boss, franchisees can tell franchisors their opinions honestly (Bradach 1998). When chains attempt to retain new ideas in all units, the data from company-owned units can be used to persuade franchisees to adopt the new ideas. When economic value and operational viability are tested by company-owned units, franchisees are more likely to adopt the new ideas which will promote chain-wide adaptation and uniformity across units (Bradach, 1998).

In summary, drawing on organizational ambidexterity and evolutionary economics arguments, this study provides rationales for the first hypothesis. As shown above, organizational ambidexterity argues the conflicting demands can be satisfied by several mechanisms. The balance of the conflicting requirements can lead to superior firm performance (Lubatkin, Simsek, Ling. & Veiga, 2006; Tushman & O’Reilly, 1996; He & Wong, 2004; Gibson, & Birkinshaw, 2004). This paper proposes the right combination of plural organizational forms can be a mechanism that makes chains ambidextrous by increasing efficiency through standardization and enhancing adaptability through innovation. This paper explains this causal mechanism based on evolutionary economics showing that how the ambidexterity contributes to chain performance. The possession and replication of superior organization routines enables the chain to satisfy customer’s demands better than other competitors so it can be a source of competitive advantage that leads to higher performance. In addition, timely change of the organizational routine to maintain fit with changing environment is also required for the organization success (Nelson & Winter, 1982). This paper suggests that plural
organizational forms can be a mechanism to exploit current routines and explore new routines.

Taken together, I argue that too low a proportion of franchised units in a chain decreases the chain’s ability to adapt to change in environments and can have a negative effect on firm performance. In contrast, too high a proportion of franchised units in chains can inhibit the uniformity across units which will also have a negative effect on chain performance. Therefore, I can expect that there is an optimal level of combination of company-owned units and franchised units in chain which can maximize whole chain performance by achieving uniformity and chain-wide adaptation. These arguments lead to the following hypothesis. This hypothesized relationship is displayed in Figure 2.

_Hypothesis 1: The proportion of franchised units to total units will have a negative curvilinear (inverted U-shaped) relationship with chain performance_
Organizational Context as a Moderator

Organization size

Organizational theorists have been interested in the effects of organization size on diverse organizational dimensions (Camisón-Zornoza, Lapiedra-Alcamí, Segarra-Cipres, & Boronat-Navarro, 2004). The effect of organization size on innovation has been one of the main topics in organization theory literature (Camisón-Zornoza, et al. 2004, Damanpour 1992; Audretsch & Acs 1991; Hitt, Hoskisson, & Ireland, 1990). There have
been conflicting arguments and findings on the relationship between organization size and innovation (Camisón-Zornoz, et al. 2004). First, some scholars argue that large organizations have more diverse resources and capacity (Nord & Tucker 1987). Large organizations have more professionals, research capabilities, marketing skills, financial resources, greater technical know-how, and technical knowledge (Damanpour, 1992; Damanpour & Evan 1984). These resources enable large organizations to create and adopt more innovations (Kimberly & Evanisko, 1981; Nord & Tucker 1987). Another advantage of large organizations is that they can take on greater risks than small organizations. Greater resources can provide large organizations with more leeway to tolerate potential loss from the unsuccessful innovations (Damanpour, 1992; Hitt et al. 1990).

Other organizational scholars argue that organization size can have a negative effect on innovation. Small organizations are more flexible and have less difficulty in accepting and implementing new ideas (Damanpour, 1996). It is argued that large organizations are less committed to innovation because they have more formalized and bureaucratic structure (Hitt et al., 1990). On the other hand, collaboration among different parts of organization can be easily achieved in small organizations (Nord & Tucker, 1987). They argue that the positive relationship between size and innovation is due to that the research did not use a relative measure of innovation (Hage, 1980). In other words, considering the size and resources, small organizations are more productive in innovation than large organization.

According to the previous two arguments regarding the effect of size on innovation, it can be inferred that large organizations have more potential for innovation
than small organizations but their organizational structural characteristics such as formalization and bureaucracy prevent them from utilizing their innovation potential. Franchised units can address this problem in chains. Franchised units do not belong to the organizational hierarchy. They are relatively free from the problems associated with formalization and bureaucracy. Organizational literature suggests that large organizations make diverse structural arrangement including skink works and venture units which are separated from large organizations to overcome the bureaucratic procedures (Falbe, Dandridge, & Kumar, 1999). Franchised units can play the same role in overcoming bureaucracy and facilitating innovation and adaptation to changing environment. Franchisees, as entrepreneurs, are more likely to pursue new market opportunities and provide new ideas for chains. Therefore, as organization size increases, entrepreneurial effort of franchisees combined with franchisor resources and support will contribute to increasing chain performance. Based on this argument, I predict that as chain size increases, the optimal proportion of franchised units will be found at a higher level. This hypothesis is illustrated in Figure 3.

Hypothesis 2: Others factors being equal, organization size will moderate the inverted U-shaped relationship between the proportion of franchised units to total units and chain performance. While the inverted U-shaped relationship still exists, as organization size increases, chain performance will be maximized at higher proportion of franchised units.


**FIGURE 3**

Hypothesized Role of Organization Size as a Moderator

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*Organization age*

Organization theory literature has been interested in the effect of organization age on organization growth and survival. Stinchcombe (1965) proposes the term of liability of newness to explain the observation that new organizations experience higher rates of failure than old organizations. Stinchcombe (1965) posits that efficient organization requires trust among members, development and refinement of roles and routines, learning about relevant environment, and development of relationship with existing organizations. Since it takes time to develop the system, new organization will experience
more failure (Stinchcombe, 1965). Drawing on evolutionary argument, Hannan and Freeman (1984) argue that social selection processes favor organizations with more reliability and accountability. Because these reliability and accountability can be developed through repeated interactions over time, it is argued that organization age will have a positive relationship with its survival (Aldrich & Marsden, 1988; Singh & Lumsden, 1990).

On the other hand, other scholars argued that organization survival and growth rate will decrease with age (Barron, West, & Hannan, 1994; Ranger-Moore, 1997). They point out that the most previous research has neglected the time-varying effects of size. The firm size which tends to be positively correlated with age can influence the organization survival. The failure of including of the size variable can distort the effect of age on organizational survival or growth. Some research which includes size as time-varying control shows that there is a negative relationship with organizational survival and organization growth (Baum, 1996; Barron et al., 1994). Barron, West, and Hannan (1994) suggest two reasons why old organization will have more organizational failure. The first is the combination of organizational inertia and environmental change. As organizations get older, due to the tendency that organizations keep its initial imprints, organizations becomes “locked in” to the strategies and structures the organizations adopted in its founding stage. The strategies and structure shaped by prevailing social and cultural understanding can be appropriate when an organization develops. However, the changing environment requires new strategy and structure. If the organization inertia becomes too strong, organization’s effort to change its strategy and structure will be
limited so old organizations will suffer from the misfit with its environment and experience more failure (Barron et al., 1994).

Barron, West, & Hannan (1994) also argue that as organizations age, they accumulate rules, routines, and structures. These rules, routines, and structures impede the change of organization in a timely manner, responding to the environmental change. It is also argued that accumulating rules, routines, and structures simply reduce the efficiency of organization by imposing an overhead cost (Barron et al., 1994). Falbe, Dandridge, and Kumar (1999) argued that the entrepreneurial activities tend to disappear as organizations become older. Top managers tend to ignore external information and to be detached from people who are closely connected to environment (Aldrich & Auster, 1986).

This study argues that the franchising system is a way to overcome the organization inertia and to cause the change of organization rules, routine, and structures. Franchisees are not employees hired by chains. They are less influenced by the organizational culture and social interaction in organization. They can develop different ideas about how business routines can be improved because they can look at business system or organization routines with different perspective from those in chains. Therefore, the more franchised units will be beneficial to chains as chains become older. Based on this argument, this study proposes that although the inverted-U shaped relationship between the proportion of franchised units to total units and chain performance still exist, as chain age increases, the optimal proportion of franchised unit that maximizes chain performance will be higher. This hypothesis is depicted in Figure 4.
Hypothesis 3: Others factors being equal, organization age will moderate the inverted U-shaped relationship between the proportion of franchised units to total units and chain performance. While the inverted U-shaped relationship still exists, as organization age increases, chain performance will be maximized at higher proportion of franchised units.

FIGURE 4

Hypothesized Role of Organization Age as a Moderator
**Industrial Context as a Moderator**

The industrial context has been investigated as one of the critical contingencies in organization theory and strategic management (Lumpkin & Dess, 2001; Porter, 1980). This study examines how industrial context influences the optimal level of franchised units to total units that maximize chain performance. Industry context consists of multiple constructs (Dess & Beard, 1984). This study uses two characteristics of industrial context: industry uncertainty and industry competitiveness following previous research (Jansen, van den Bosch, & Volberda, 2006).

**Industry uncertainty**

This paper specifically focuses on the unpredictability which is related to the uncertainty that erodes the ability of managers to predict future events as well as their impact on the organization (Khandwalla, 1977). This study proposes that the optimal proportion of franchised units is influenced by industry uncertainty. Uncertainty is caused by diverse factors including changes in technologies, variations in customer preferences, and fluctuations in product demand or supply of materials (Jansen et al., 2006). In a stable environment where it is relatively easy to predict customer demands and preferences, organizations can take advantage of the existing knowledge assets, routines, and capabilities (Wang, 2008). Standardized products or services can help customers be familiar with the products or services and help chain attract more customers. Customers who have positive experience in a outlet are more likely to visit other outlets with a prototype customers developed (Kaufmann & Eroglu, 1998).

On the other hand, when chains operate in an uncertain environment, the excessive standardization may impede the innovation and adaptation to environmental
change. In an uncertain environment where customer’s demands and needs change unpredictably, maintaining the existing routines and products is more likely to result in misfit between chain’s existing routines and products and customer needs (Sirmon, Hitt, & Ireland, 2007). The focus on standardization through company-owned units can lead to the obsolescence of current routines and products. When industry environment becomes more uncertainty, organizations need to develop new products or services through exploratory innovations to reduce threat of obsolescence (Sorensen & Stuart, 2000). This effort for innovation will increase firm performance by developing new products or services that will satisfy customers needs (Lumpkin & Dess, 2001).

Franchised units can help chains to deal with this uncertainty. Franchisees have more of an entrepreneurial orientation than company-owned unit managers (Phan, Butler, & Lee, 1996). Lumpkin and Dess (2001) argue that proactiveness of entrepreneurs will be positively related to performance in uncertain environment. Proactiveness is more related to exploration of resources and the creation of new niches (Lumpkin & Dess, 2001). The proactiveness is more beneficial when the industry is characterized with uncertainty and unpredictability because franchisee will try to find out new opportunities to increase their benefits. Therefore, as industry uncertainty increases, the emphasis on innovation through franchised units can benefit chains by identifying new customer demands and preferences and renewing their routines and products. This argument can suggest that as industry uncertainty increases, the optimal proportion of franchised units that maximizes chain performance will be found at a high level. Figure 5 shows this hypothesized relationship.
Hypothesis 4: Others factors being equal, industry uncertainty will moderate the inverted U-shaped relationship between the proportion of franchised units to total units and chain performance. While the inverted U-shaped relationship still exists, as industry uncertainty increases, chain performance will be maximized at a higher proportion of franchised units.

FIGURE 5

Hypothesized Role of Industry Uncertainty as a Moderator
Industry competitiveness

The second industrial context this paper investigates is industry competitiveness. Industry competitiveness is one of the main contexts examined in strategic management and industrial organization literature (Robinson & McDougall, 1998). Industry competitiveness is the extent to which external industry environment is characterized by intense competition (Matusik & Hill, 1998). High industry competitiveness is associated with unfavorable business climate (Zahra, 1996). It is related to intense competition for limited resources or market opportunities (Miller & Frieson, 1982). Competitive environments cannot provide sufficient resources and capacity needed to support a large number of organizations (Dess & Beard, 1984).

Organization literature provides two different arguments regarding organization’s reaction to the competitive environment. Some studies suggest that organizations that face increased competition will increase their entrepreneurial efforts (Zahra 1993; Zahra & Covin, 1995). Severe competition forces manager to work on innovation in both product and process and try to differentiate themselves from competitors (Zahra, 1993). The entrepreneurial activities will keep the organization competitive over competitors through the form of experimentation and innovation (Tuunanen & Hyrsky, 2001). Falbe, Dandridge, and Kumar (1999) argue that chains facing severe competition are more likely to pursue entrepreneurial strategies and encourage innovation on their products, service, or process. This argument can lead to the following hypothesis. This hypothesis is depicted in Figure 6.
Hypothesis 5a: Others factors being equal, industry competitiveness will moderate the inverted U-relationship between the proportion of franchised units to total units and chain performance. While the inverted U-shaped relationship still exists, as industry competitiveness increases, chain performance will be maximized at a higher proportion of franchised units.

FIGURE 6

Hypothesized Role of Industry Competitiveness as a Moderator

[Diagram showing the relationship between the proportion of franchised units and chain performance, distinguishing between low and high competitiveness.]
Other scholars argue that competitive environment is related to pressures for high efficiency and lower price (Matusik & Hill 1998). In competitive environment, extensive risk taking and strong emphasis on novelty can be reduced due to the pressure for efficiency (Jansen et al, 2006; Miller & Friesen, 1983). Standardization enables chains to enhance their efficiency. Standardized routine, process, and system make it easier for chains to monitor outlet and reduce monitoring cost (Kaufmann & Dant, 1999). When competitive conditions are demanding, the free-riding problem that is caused by the franchisee becomes more severe. Under severe competitive conditions that forces franchisees to lower the prices of products or service, franchisees try to find ways to reduce their cost. These efforts often result in low quality of the products or services because franchises have less incentive to enhance and maintain chain’s reputation (Michael, 2000). For this reason, increase of more franchised units in competitive environment can have a negative effect on its brand image and sales in the long run. Thus, as industry competitiveness increases, the optimal proportion of franchised units can be found at a lower level. This argument can lead to the following hypothesis. Figure 7 illustrates this hypothesis.

Hypothesis 5b: Others factors being equal, industry competitiveness will moderate the inverted U-shaped relationship between the proportion of franchised units to total units and chain performance. While the inverted U-shape still exists, as industry competitiveness increases, chain performance will be maximized at a lower proportion of franchised units.
FIGURE 7

Hypothesized Role of Industry Competitiveness as a Moderator

Chain Performance

Proportion of Franchised Units

Optimal level in high competitiveness

Optimal level in low competitiveness

0%

100%

Competitiveness: Low

Competitiveness: High
CHAPTER IV: METHODS

Sample

The hypotheses are tested in the restaurant industry where many chains use both company-owned units and franchised units simultaneously. The sample consists of chains that were publicly traded in the New York Stock Exchange (NYSE), the American Stock Exchange (AMEX), and the National Association of Securities Dealers Automated Quotations (NASDAQ) from 2004 to 2008. North American Industry Classification System (NAICS) was used to identify restaurant companies. Companies under NAICS code 722110 (full-service restaurants) and 722211 (limited service restaurants) were included in the sample. Some pure franchisee companies were excluded from the sample considering the research question of this study. Companies which had less than 10 outlets were excluded from the sample because their sales mainly come from a different industry. The dataset includes a total of 74 chain companies. This paper uses longitudinal data from 2004 to 2008. The number of observations used for data analysis was 308. I gathered 5 years’ data from 2004 to 2008. So firm-year observations could be 370 (74*5) at maximum. However, some firms have only a few years’ data. For example, if a company started to be traded in a stock market from 2007, we have only two years’ data for the company. This reduces the sample size to 308.

This sample consists of only publicly-traded chains. Although it can cause an external validity problem, we believe that this sample is appropriate to test the hypotheses. We test synergistic benefits from use of plural organizational forms. I expect the synergistic benefits generally occur in big chains. In addition, chain performance is measured by financial performance. This information is only available for publicly-traded firms.
The restaurant industry is more appropriate for this research for two reasons. First, the franchising system is prevalent in the restaurant industry. Large number of chains using franchising provides significant variation in the proportion of franchised units which helps to obtain more reliable empirical test. Second, the restaurant industry is appropriate to test the hypotheses presented above. Unlike the retail industry which is product/trade-name franchising, the restaurant industry operates business format franchising. The importance of replication of organization routines and exploration of new organizational routines is more salient in business format franchising.

Financial information was collected from the Standard and Poor’s COMPUSTAT database which is widely used to gather financial data. Data on industrial context: industry sales change and industry market share concentration were also collected from COMPUSTAT database. I gathered data on the number of franchised units, company owned units, and chain age from annual reports and 10K.

Variables

**Sales growth**: The dependent variable in this study is sales growth of chains. Sales growth is calculated as the percent changes in the chain sales from previous year to current year. Yin and Zajac (2004) found that percent change in store sales is a highly relevant performance measure in the restaurant industry. Company owned unit managers are evaluated and rewarded based on the unit’s sales (Yin & Zajac, 2004). The franchising contract that royalties are tied to the franchised unit’s sales makes franchisors direct their franchisees in a way to increase sales of franchised units (Phan et al., 1996). It means that franchisors are interested in franchisee’s sales because franchisors receive
royalties based on franchisee’s sales. As franchisee’s sales increase, franchisors receive more royalty. Usually franchisees pay three to five percent of franchisee’s sales as royalty. Sales growth can be a good dependent variable because both franchisees and franchisors are interested in increasing sales.

**Proportion of franchised units to total units:** The key independent variable in this study is the proportion of franchised units to total units. This variable is developed to measure organizational ambidexterity. Generally, two main approaches have been used to operationalize this construct. One approach is to classify different organization structures. Scholars measure how two different structures are developed to deal with disparate demands such as exploration and exploitation (Duncan, 1976; Tushman & O’Reilly, 1996). Another approach is to survey managers to find out how they perceive organizational characteristics that underlie organizational ambidexterity. He and Wong (2004), for example, measured how CEOs divide their efforts and resources between innovation activities with explorative versus explorative objectives. Each approach has its advantages and disadvantages to measure organizational ambidexterity. This research follows the former approach because the categorization of structure approach makes it easy to design longitudinal research which allows us to examine research questions in this study.

This research uses squared-term of proportion of franchised units to check synergistic benefits of two organizational forms. Previous research often uses absolute difference of two variables (Cao, Gedajlovic, & Zhang, 2009; He & Wong, 2004). This approach assumes that balance is achieved when two measures such as exploration and exploitation have a same value. This study aims to show that a proper combination
between standardization and innovation exists. This study maintains that the combination does not have to be equal efforts of standardization and innovation. The right combination can be found at other points, for instance, 40 percent of franchised units and 60 percent of company-owned units. This study further examines this optimal combination is influenced by contextual factors such as organization size, organization age, industry uncertainty, and industry competitiveness. The change of optimal combination can be detected by inclusion of squared term. Thus, this research includes the squared term of proportion of franchised units to examine the hypotheses developed above. The inclusion of squared term is a widely used approach to test the curvilinear relationship (Jaccard, Turrisi, & Wan, 1990).

The information on company owned units and franchised units is from chains’ annual reports and 10Ks. The proportion of franchised units was calculated by dividing the number of franchised units by total number of units in each year. If a chain uses only company-owned units, the value will be 0. If all units are franchised, the value will be 1.

**Organization size:** Organization size can be measured with different measures including total assets and the number of employees. The franchising literature has used the number of total units to measure organization size (Alon, 2001; Falbe et al., 1999; Lafontaine, 1992; Shane, Shankar, & Aravindakshan, 2006). Combs and Ketchen (2003) review measures for organization sizes in the franchising literature and suggest that the number of total units in chains has a high level of construct validity. While the use of proportion of franchised units and total units in a same model might concern for double usage problem, following previous research, this study measures chain size as the total number of units in a chain system (Barthélemy, 2008).
**Organization age:** Organization age is measured as the number of years since the system’s establishment. The information on age was collected from annual reports, 10Ks or the chain’s website.

**Industry uncertainty:** Industry uncertainty is calculated following the approach suggested by Dess and Beard (1984) and validated by Keats and Hitt (1988). This study uses industry sales data to calculate industry uncertainty. Industry uncertainty is measured with variation of industry sales. First, the net sales for all companies in NAICS code 722110 and 722211 were summed for each year between 2004 and 2008. This paper uses previous five years of the six-digit NAICS industry-level sales data to estimate industry uncertainty for the sixth year. For example, the industry uncertainty for 2005 was calculated with the industry-level sales data from 2000 through 2004. I regressed five year’s industry sales on year using the following the equation $y_t = b_0 + b_1t + a_t$, where $y$ is industry sales, $t$ is year, and $a$ is the residual. Industry uncertainty was measured by standard error of the regression coefficient ($b_1$) divided by industry-average sales over the five year period that used in the equation (Cannella, Park, & Lee, 2008; Nadkarni & Barr, 2008). Larger value of the measure indicates the greater unpredictability and high uncertainty in industry.

**Industry competitiveness:** A common measure of industry competitiveness is the k-firm concentration ratio (CRk) (Tremblay, Iwasaki, & Tremblay, 2005). The industry concentration ratio is defined as the market share of the k largest companies in the industry. The market share of k largest companies is bounded from 0 to 100 percent. As the value approaches 0, it means that dominant companies do not exist and many companies compete in a market. As the industry concentration approach 100%, a few
large companies command a large portion of market. It indicates less severe competition in the industry. So when the industry concentration values are entered into the equation, I reversed the sign of the values so that high value can represent high level of competition.

This paper used CR4 which is measured as the largest four chains’ concentration ration in the restaurant industry for each year.

**Control variable:** This paper uses total sales as a dependent variable. The sales growth amount is expected to be influenced by total sales amount of previous year. It is expected that the companies with large amount of previous sales will have small amount of sales growth. The restaurant’s service type is also used as control variable. Two types of restaurants: full service restaurant and limited service restaurant are included in the sample. The service type was controlled with a dummy variable. Full-service restaurant is assigned one and limited-service restaurant is given zero.

**Analysis**

Estimation model: I collected data from 74 firms in restaurant industry over 5 years from 2004 to 2008. This dataset has panel data structure. This type of dataset is also called longitudinal data or time series cross section data because of its multiple observations across multiple years. This longitudinal design enables us to examine the hypotheses regarding organizational and industrial contexts.

Before the statistical testing of hypotheses, I checked related assumptions of statistical models. First, I checked normality assumption. I found some variables are negatively skewed. I used logarithmic transformation for previous year’s sales and total number of units to obtain normality. I checked for multicollinearity in the model with
variance information factors (VIFs). When I enter interaction terms in the equation, I found the multicollinearity problem. The largest VIF is greater than 10 which is the rule-of-thumb cut-off point (Cohen, Cohen, West, & Aiken, 2003). To resolve this problem, I centered all variables in interaction terms by subtracting the mean value of each variable (Aiken & West, 1991). After this mean-centering, the largest VIF drops to 6.42 which is below the rule-of-thumb cut-off of 10 (Cohen et al., 2003). Next, heterogeneity effects of actor and time are checked. The purpose of this is that each chain or each year can have a significant impact on the dependent variable. If so, we need to include dummy variables to control for each chain or year specific effects. Two ordinary square least (OLS) models were compared to check the heterogeneity effects of actors (chains) and time (year) respectively. The comparison of two models with chain dummy variables and without them shows that firm heterogeneity effect exists \( F(73, 223) = 8.19, p < .000 \). This finding rejects the hypothesis that there is no chain-specific effect on sales growth. This comparison is made to time (year) variable. The F-test shows that no time effect exists \( F(4, 292) = 0.54, P < .7047 \). We cannot reject that there is not a chain performance difference across sample years. This result shows that we need to include chain dummy variables to control for chain-specific effects in the model. Inclusion of chain-specific dummy variables removes variances among chains which come from chain-specific characteristics that are not of interest. It means that we can control for the time invariance unobserved heterogeneity among chains. For example, chain performance can be influenced by ability of top managers. If we assume that there was no change in CEO during analyzed period, ability of CEO can influence chain performance. Inclusion of the chain dummy variable makes it possible to control for this chain-specific, time invariant
Next, heteroskedasticity assumption was checked with Breusch-Pagan, Cook-Weisberg test. This test shows that the variance is not constant across chains (chi-square (1) = 528.01, p < .000). One way to correct the heteroskedasticity problem is to transform specific variable which causes heteroskedasticity problem with square roots (Worrall & Pratt, 2004). I corrected this problem with xtpcse command Stata provides. The xtpcse model uses panel corrected standard error as well as squared root of a specified variable to correct heteroskedasticity problem (Worrall & Pratt, 2004). Next I checked autocorrelation problem. Panel data is likely to have autocorrelation problem. Autocorrelation problem occurs when value of current year is influenced by value of previous year. Durbin-Watson statistic shows that this model has autocorrelation problem since this statistics (0.7187) is far from 2. Therefore, the model needs to consider this autocorrelation. This paper included previous year’s sales as a lagged variable in the estimation model to control for this autocorrelation effect.

Researchers developed fixed effects and random effects model to analyze panel data. Fixed effect model assumes that each firm has some special characteristics of its own. Dummy variables were used to take into account these effects (Gujarati, 2003). On the other hand, random effects model regards this firm specific effect as a deviation from constant mean value (Gujarati, 2003). Several conditions can be considered for choosing an appropriate estimation model. Normally, fixed-effects models are preferred in panel data analyses (Greene, 2003). As shown above, the fixed effects model enables us to parcel out the effect of unobserved chain-specific factors, such as the quality of the chain’s business format and obtain unbiased estimates of the relationship between the
proportion of franchised units and chain performance (Griliches 1986). The Hausman test has been used to help researchers to select appropriate model. The result of Hausman test also shows that the coefficients obtained from fixed effects model is not same those from random effect model (chi-square (9) = 136.02, p < .0000). This result also indicates that fixed effects model is preferred to random effects model.
CHAPTER V: RESULTS

Table 1 displays means, standard deviations, and correlations for all variables used in this study. The results show several variables are significantly correlated at .01 level. In particular, the correlation between previous sales and total number of units is very high (.87) because as number of units increase, sales also increase. We need to pay attention to this high correlation because it can cause multicollinearity problem. Multicollinearity can inflate standard errors of independent variables which make them statistically insignificant or lead to unstable coefficients of independent variable (Cohen et al., 2003). So, when a high correlation between independent variables is found, we need to make sure if there is multicollinearity problem. One way to detect if there is multicollinearity problem is to check VIF (Cohen et al., 2003). As I showed above, the highest VIF value of the model was 6.42 which is less than the cut-off of 10. This indicates that the high correlation between previous sales and total number of units does not cause serious multicollinearity problem.

Table 1 shows previous sales is about 1.2 billion dollars and average age of chains is about 33 years. It also shows that average chain unit is 2,217. These indicate that most chains in the sample are established chains as I expected. The five years average of industry uncertainty is .01. A study shows that average industry uncertainty of 11 industries is .05 (Cannella et al., 2008). Figure 8 displays how industry uncertainty has changed from 2004 through 2008. There have not been big changes in uncertainty level. The results represent that restaurant industry is fairly stable.
## TABLE 1
Descriptive Statistics and Pairwise Pearson Correlations

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sales growth</td>
<td>11.09</td>
<td>20.39</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Previous sales</td>
<td>1256.57</td>
<td>2945.92</td>
<td>-0.06</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Chain age</td>
<td>33.57</td>
<td>18.63</td>
<td>-0.12 *</td>
<td>0.23 **</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Chain size</td>
<td>2217.29</td>
<td>6178.34</td>
<td>-0.03</td>
<td>0.87 **</td>
<td>0.30 **</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Proportion of franchised unit</td>
<td>33.11</td>
<td>33.53</td>
<td>0.00</td>
<td>0.21 **</td>
<td>0.42 **</td>
<td>0.38 **</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Industry uncertainty</td>
<td>0.01</td>
<td>0.01</td>
<td>0.05</td>
<td>0.03</td>
<td>0.05</td>
<td>0.04</td>
<td>0.05</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Industry concentration</td>
<td>0.49</td>
<td>0.03</td>
<td>-0.02</td>
<td>-0.07</td>
<td>-0.08</td>
<td>-0.06</td>
<td>-0.05</td>
<td>-0.55 **</td>
<td>1.00</td>
</tr>
<tr>
<td>8</td>
<td>Full service</td>
<td>0.71</td>
<td>0.45</td>
<td>0.00</td>
<td>-0.33 **</td>
<td>-0.20 **</td>
<td>-0.41 **</td>
<td>-0.40 **</td>
<td>-0.08</td>
<td>-0.07</td>
</tr>
</tbody>
</table>
FIGURE 8
Changes in Industry Uncertainty

FIGURE 9
Changes in Industry Concentration
Industry competitiveness was measured by the four largest chains in restaurant industry. The average of the five years industry concentration was .49. Figure 9 displays that industry concentration increase recently. According to the industry concentration classification suggested by Bain (1959) shown in Table 2 The industry concentration moved from moderate low concentration to moderate high concentration.

### TABLE 2

**Industry Concentration Classification System**

<table>
<thead>
<tr>
<th>Class</th>
<th>Category cut off</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oligopoly:</td>
<td>76-100</td>
</tr>
<tr>
<td>High:</td>
<td>65-75</td>
</tr>
<tr>
<td>High-moderate:</td>
<td>50-64</td>
</tr>
<tr>
<td>Low-Moderate:</td>
<td>35-49</td>
</tr>
<tr>
<td>Low:</td>
<td>20-34</td>
</tr>
<tr>
<td>Atomistic:</td>
<td>1-19</td>
</tr>
</tbody>
</table>

Table 3 reports the results of empirical tests. This study used fixed effect model with sales growth as a dependent variable. Model 1 reports the results with control variables. Model 2 displays the result with the proportion of franchised units to total units. Hypothesis 1 predicts that the proportion of franchised units has a negative curvilinear (inverted U-shaped) effect on sales growth. The squared-term of proportion of franchised units was entered in Model 2. The results in the model 2 shows the coefficient of the squared-term of proportion of franchised units is negative and statistically significant ($\beta =$
Figure 10 displays the negative curvilinear relationship between the proportion of franchised units and sales growth. It presents the optimal level of franchised units is found at a medium level. The negative curvilinear relationship was found in model 3 through model 7 when other variables were entered to check moderating effects. This results support Hypothesis 1.

**FIGURE 10**

Relationship between Proportion of Franchised units and Chain Performance
<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
<th>Model 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>146.09**</td>
<td>157.90***</td>
<td>192.12***</td>
<td>45.06*</td>
<td>436.25***</td>
<td>177.18***</td>
<td>428.44***</td>
</tr>
<tr>
<td>Firm dummy</td>
<td>Included</td>
<td>Included</td>
<td>Included</td>
<td>Included</td>
<td>Included</td>
<td>Included</td>
<td>Included</td>
</tr>
<tr>
<td>Previous sales</td>
<td>-19.46***</td>
<td>-31.77***</td>
<td>-41.34***</td>
<td>-44.69***</td>
<td>-32.29***</td>
<td>-41.01***</td>
<td>-57.06***</td>
</tr>
<tr>
<td>Full service</td>
<td>-101.61***</td>
<td>114.70**</td>
<td>87.71*</td>
<td>253.91***</td>
<td>-204.95***</td>
<td>130.11***</td>
<td>-62.16</td>
</tr>
<tr>
<td>Proportion of franchised Units (PFU)</td>
<td>-0.66***</td>
<td>-0.59**</td>
<td>-0.80***</td>
<td>-0.67***</td>
<td>-0.73***</td>
<td>-1.12***</td>
<td></td>
</tr>
<tr>
<td>PFU squared (H 1)</td>
<td>-0.04***</td>
<td>-0.04***</td>
<td>-0.04***</td>
<td>-0.03***</td>
<td>-0.04***</td>
<td>-0.03***</td>
<td></td>
</tr>
<tr>
<td>Chain size</td>
<td>23.23**</td>
<td>0.63**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chain size × PFU (H 2)</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Chain age</td>
<td>2.48**</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chain age × PFU (H 3)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Industry uncertainty</td>
<td>336.55*</td>
<td>223.92</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry uncertainty × PFU (H 4)</td>
<td>13.81*</td>
<td>7.96*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry competitiveness</td>
<td>-106.78**</td>
<td>36.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry competitiveness × PFU (H 5)</td>
<td>-1.83*</td>
<td>-2.23*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wald Chi square (χ²)</td>
<td>108147.75***</td>
<td>416424.54***</td>
<td>246260.49***</td>
<td>109631.21***</td>
<td>345507.97***</td>
<td>264149.03***</td>
<td>58081.26***</td>
</tr>
<tr>
<td>R²</td>
<td>0.4900</td>
<td>0.6277</td>
<td>0.6924</td>
<td>0.6417</td>
<td>0.6543</td>
<td>0.6453</td>
<td>0.7446</td>
</tr>
<tr>
<td>Δ R²</td>
<td>.1377***</td>
<td>.0647***</td>
<td>.014**</td>
<td>.0266**</td>
<td>.0176**</td>
<td>.1169**</td>
<td></td>
</tr>
</tbody>
</table>

a The R square change is compared to that of the model 1 (control model).
b The R square change is compared to that of the model 2 (basic model).
N = 308,
\[ p < .10, \quad *P < .05, \quad **p < .01, \quad ***p < .00 \]
Model 3 tests the moderating effect of organization size on the relationship between the proportion of franchised units and sales growth. More specifically, Hypothesis 2 predicts that the optimal proportion of franchised units will be found at a higher level as organization size increases. The results in Model 3 support this hypothesis. The coefficient of interaction term of organization size and proportion of franchised units is positive and significant ($\beta = .63, p<.01$). Figure 11 shows how this positive coefficient of the interaction term of organization size and the proportion of franchised units influences sales growth. The solid line in Figure 11 shows the curvilinear relationship between proportion of franchised units and sales growth when organization size is low (one standard deviation less than the mean). The dotted line in Figure 11 illustrates curvilinear relationship when the organization size is high (one standard deviation above the mean). This graph shows as the organization becomes larger, optimal proportion is found at a higher proportion of franchised units. Model 7 which includes all variables also provides the same result. The interaction term of organization size and proportion of franchised units is also positive ($\beta = .66, p<.001$). The results provide supporting evidence for Hypothesis 2.

Hypothesis 3 predicts that organization age will moderate the optimal proportion of franchised units that maximizes sales growth. This hypothesis is tested in Model 4. The result does not support Hypothesis 3. The coefficient of interaction of organization age and proportion of franchised units is not statistically significant. The result in model 7 also does not provide empirical support for Hypothesis 3.
Hypothesis 4 predicts that industry uncertainty will increase the optimal proportion of franchised unit. Model 5 tests this hypothesis with the interaction term of industry uncertainty and proportion of franchised units. The result in Model 5 provides support for Hypothesis 4. The coefficient of the interaction term is positive and statistically significant ($\beta = 13.81$, $p < .05$). It means that as industry uncertainty increases, the optimal proportion of franchised units that maximizes chain performance can be found at a higher level. Figure 12 displays that as industry uncertainty increases, the optimal proportion of franchised units is found at a higher level. The solid line represents the relationship between proportion of franchised units and sales growth when the industry uncertainty is low (one standard deviation below the mean). The dotted line
indicates the change of sales growth with the increase of proportion of franchised units when the industry uncertainty is high (one standard deviation above the mean). The comparison of the graphs shows that how optimal proportion of franchised units changes as industry uncertainty increases. The result in Model 7 also supports Hypothesis 4. The interaction term of industry uncertainty and proportion of franchised units is positive and statistically significant ($\beta = 7.96, p<.05$).

**FIGURE 12**

**Industry Uncertainty as a Moderator**

![Graph showing sales growth vs. proportion of franchised units for low and high uncertainty]

Hypothesis 5 concerns how industry competitiveness influences the optimal proportion of franchised units. I proposed two alternative hypotheses based on different arguments. The result in Model 6 supported Hypothesis 5b. The coefficient of the
interaction term of industry competitiveness and proportion of franchised units is negative and statistically significant ($\beta = -1.83 .81, p<.05$). It means that as industry becomes more competitive, the increase of franchised units can decrease chain performance so the optimal level of proportion of franchised units is found at a lower level. This result is displayed in Figure 13. The solid line represents the relationship between the proportion of franchised units and sales growth when industry competitiveness is high (one standard deviation below the mean). The dotted line shows the change of sales growth when industry competitiveness is high (one standard deviation above the mean). It shows that the optimal proportion of franchised units moves left toward a lower proportion of franchised units as industry competitiveness increases. It means that the synergy effect of franchised units and company owned unit is maximized at a lower level of franchised unit as industry competitiveness increases. Model 7 in Table 3 also provide the same result. The interaction term of industry competitiveness and proportion of franchised unit is negative and strategically significant ($\beta = -2.25, p<.05$). The results support Hypothesis 5b. A summary of empirical results is presented in Table 4 Except Hypothesis 2 and 5a, other hypotheses are supported.
FIGURE 13

Industry Competitiveness as a Moderator

Sales Growth %

0% Proportion of Franchised Units 100%

Competitiveness:
Low

Competitiveness:
High
<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Hypothesis prediction</th>
<th>Hypothesis direction</th>
<th>Empirical results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>The proportion of franchised units to total units will have a negative curvilinear (inverted U-shaped) relationship with chain performance</td>
<td>Negative</td>
<td>Supported</td>
</tr>
<tr>
<td>H2</td>
<td>While the inverted U-shaped relationship still exists, as organization size increases, chain performance will be maximized at a higher proportion of franchised units.</td>
<td>Positive</td>
<td>Supported</td>
</tr>
<tr>
<td>H3</td>
<td>While the inverted U-shaped relationship still exists, as organization age increases, chain performance will be maximized at a higher proportion of franchised units.</td>
<td>Positive</td>
<td>Not supported</td>
</tr>
<tr>
<td>H4</td>
<td>While the inverted U-shaped relationship still exists, as industry uncertainty increases, chain performance will be maximized at a higher proportion of franchised units.</td>
<td>Positive</td>
<td>Supported</td>
</tr>
<tr>
<td>H5a</td>
<td>While the inverted U-shaped relationship still exists, as industry competitiveness increases, chain performance will be maximized at a higher proportion of franchised units.</td>
<td>Negative</td>
<td>Not supported</td>
</tr>
<tr>
<td>H5b</td>
<td>While the inverted U-shaped relationship still exists, as industry competitiveness increases, chain performance will be maximized at a lower proportion of franchised units.</td>
<td>Positive</td>
<td>Supported</td>
</tr>
</tbody>
</table>
CHAPTER VI: DISCUSSION

Empirical Findings and Interpretation

The study investigates how plural organizational forms create synergistic effects and what factors influence the optimal combination of plural organizational forms. The hypotheses proposed above were tested with data from restaurant industry where the use of plural organizational forms is prevalent. Generally, the results provide empirical support for the hypotheses. The first major finding is that the proportion of franchised units to total units has an inverted U-shaped relationship with chain performance. This result supports the argument that there is an optimal combination of franchised units and company-owned units. This finding is consistent with the synergistic benefit argument (Bradach, 1997; Lafontaine & Shaw, 2005). The finding in this research shows that when plural organizational forms are properly integrated, the chain can create synergistic benefits.

Organizational ambidexterity theory suggests that organization’s ability to pursue two different activities in trade-off situations can increase organization performance (He & Wong, 2004; O’Reilly & Tushman, 2008; Rothaermel & Alexandre, 2009). This research suggests that plural organizational forms can be another mechanism that facilitates organizational ambidexterity. The plural organizational forms have characteristics in common with structural differentiation. Structural differentiation enables organizations to pursue ambidexterity by developing two different structures to deal with conflicting demands (Gibson & Birkinshaw, 2004). Similar to the structural differentiation mechanism, plural organizational forms enable chains to deal with conflicting demands with two different organizational forms. Franchised units are more
effective in generating new ideas whereas company-owned units are superior to franchised units in replicating organization routines for standardization and enhancing efficiency (Bradach, 1998).

Plural organizational forms are different from the structural differentiation in some ways. Most structural differentiation mechanisms reside within the organization boundary (Raisch & Birkinshaw, 2008). Plural organization forms, instead, are combination of hierarchy and hybrid organizational form. In other words, while traditional structural mechanisms were suggested to deal with conflicting demands within organization boundary, plural organizational forms resolve the paradoxical tasks by collaborating with organizations outside organization boundary. The collaboration across organizational boundaries can decrease the risk of obsolescence compared to the internal knowledge development (Eisenhardt & Martin, 2000). Strategic alliances literature found empirical evidence that external knowledge can contribute to the exploration of new capabilities (Lavie & Rosenkopf, 2006; Rothearmel & Alexandre, 2009; Rothearmel & Deeds, 2004). However, the collaboration across organizational boundaries also provides challenges. Unlike internal structural differentiation controlled by hierarchy, the success of external collaboration depends on mutual trust (Bradach & Eccles, 1989). Distrust and conflict between collaboration partners can make it difficult to integrate knowledge from different organizations (Puranam & Srikanth, 2007). Michael (2000) argue that trust and conflict management are critical to maintaining collaborative relationship between franchisors and franchisees.

This finding represent that the organizational ambidexterity perspective provides an explanation for the synergistic benefits. The inverted U-shaped relationship cannot be
explained by agency theory or resource scarcity theory. The agency theory argument predicts that chains select franchised units or company-owned units to minimize cost created by agency problem (Shane, 1996). Therefore, if each chain rationally selects new unit’s organizational form to minimize monitoring cost and free-riding cost, performance may not be influenced by the proportion of franchised units in a chain. That is, regardless of the proportion of franchised units, the performance should be constant. Resource scarcity theory also does not explain this negative curvilinear relationship. Resource scarcity theory posits that a chain can gain higher rate of return from company-owned units (Hunt, 1973). Chain franchise new units to overcome disadvantage in economics of scale (Caves & Murphy, 1976). As chains are established, resource scarcity theory predicts that chains open company-owned units and existing franchised units would be replaced by company-owned units (Dant & Kaufmann, 2003). Especially, when we consider that the sample used for this study are publicly traded, established firms, chain performance should be higher as proportion of company-owned units increases. Signaling theory views the operation of company-owned units as a means to credibly signal their own confidence in the profit potential and the viability and robustness of their systems (Gallini & Lutz, 1992). Although this theory provides an account of existence of plural organizational form, it cannot explain the chain performance difference across different proportion of franchised units in a chain.

Second, this study examined organizational and industrial contexts that influence balance between standardization and innovation. This paper investigated organization size, organization age as organizational context and industry uncertainty and industry competitiveness as industrial context. I hypothesized and found that organization size
moderates the inverted U-shaped relationship between the proportion of franchised units and chain performance. As organization size increases, the right combination of plural organizational forms that maximizes chain performance was found at a higher portion of franchised units. This finding shows that higher percentage of franchised units can benefit chain performance. It indicates that more explorative efforts through franchised units help chains to acquire new information and ideas from franchisees who are motivated to find out more opportunities (Bradach, 1997; Darr, Argote, & Epple, 1995; Kaufmann & Eroglu, 1999). This result is consistent with the argument that as organization size increases, organizations have more difficulty in generating and implementing innovation within organization due to increased bureaucratic structure (Hitt et al., 1990). Franchisees that facilitate the external knowledge acquisition are more likely to help chains to create and implement new ideas (Bradach, 1997).

Another organizational context investigated in this paper was organization age. I predicted that as organization age increases, chain performance will be maximized at a higher proportion of franchised units. The results of this study did not support this hypothesis. One potential explanation for this finding is what makes organizations locked into current routine can be not organization age but lack of franchising history. In other words, if a chain adopts franchising system in the early stage of the organization life cycle, the chain does not suffer from organization inertia that prevents adoption of new ideas. Chains with a long history of franchising experience have developed organizational routines that gather information from franchisees about customer demands for products and services (Mitsuhashi, Shane, & Sine, 2008). As chains initiate franchising system
early, the chains are less likely to have characteristics that old organizations possess. This potential explanation can be tested by controlling for franchising experience effect.

This paper also examined industrial context to see whether optimal proportion of franchised units is influenced by the industrial factors. As hypothesized, this paper found that industry uncertainty moderates the inverted U-shaped relationship between proportion of franchised units and chain performance. With the increase of industry uncertainty, chain performance is maximized at a higher proportion of franchised units. This finding has useful implication for franchising and dynamic capabilities research. Organization theory and strategic management theories have been interested in how organizations can respond to the industry change. This finding highlights entrepreneur role of franchisees. Kaufmann and Dant (1999) argue that compared to the employee manager, franchisees have more entrepreneurial characteristics. Franchisees invest their money to open their own units. They risk their resources devoted to development of local market (Kaufmann & Dant, 1999). So franchisees are more dedicated to development of new ideas and try to find out new ways to satisfy customers which are work of entrepreneurs. Under high industry uncertainty, this entrepreneurial effort becomes more critical to the chain success. Franchisors are expected to be more proactive in taking advantage of new opportunities (Kaufmann & Dant, 1999). The increased industry uncertainty also makes it difficult for chains to monitor employee managers. With the high level of industry uncertainty, it becomes harder for chain owners to monitor employee manager’s activities and detect their shirking. This research indicates that franchised units can work as a mechanism to deal with industry uncertainty. This finding also offers evidence on dynamic capabilities argument. Scholars argue that dynamic
capabilities which integrate, build, and reconfigure organization competence is essential to organization success in rapidly changing environment (Eisenhardt & Martin, 2000; Teece, Pisano, & Shuen, 1997). The finding shows that as industry uncertainty increases, more explorative effort conducted by franchisees can help chains to change and reconfigure knowledge, routine, and process in chains. This study suggests that chains can develop dynamic capabilities with right combination of franchised units and company-owned units.

Results from the industry competitiveness hypothesis indicate that as industry becomes more competitive, optimal combination of plural organizational forms is found at a lower level of franchised units. It implies that under severe competition, the chain can increase its efficiency with increase of company-owned units. Michael (2000) found that proportion of franchised units is negatively related to quality of the products of services. Franchisees are expected to put forth more effort because they are residual claimants of the unit (Lafontaine, 1992). However, the presence of externality such as brand name reputation for quality makes it difficult for franchisees who make individual effort for quality improvement to appropriate the gain from the investment in quality (Michael, 2000). The brand is shared with other units because customers assume that all other units will provide same quality of products and service. The externality problem encourages free-riding behavior of franchisees. This problem could be more severe when industry competition becomes more intense. With the pressure from severe competition, franchisees can focus on unit’s profit at the compensation of chain profit. Instead of making efforts to promote and develop brand name reputation which will require higher cost, franchisees will have more incentive to free-ride on other unit’s
efforts or reduce cost by use of low quality inputs (Caves & Murphy, 1976). The opportunistic efforts will reduce quality of the products or services and will harm brand name reputation (Michael, 2000). Innovation literature also provides similar findings. Focus on efficiency rather than new opportunity development is associated with high industry competitiveness (Matusik & Hill, 1998). More exploitative effort rather than explorative effort increases firm performance in high competitive industry (Jansen et al, 2006).

Contributions

This study has implications for both the franchising literature and organizational ambidexterity literature. First, this study contributes to the franchising literature by introducing a new perspective to examine development of franchising system. As Combs, Michael, and Castrogiovanni (2004) suggested, diversity of theoretical framework to investigate franchising system can enhance our understanding of the diverse issues. Organizational ambidexterity theory suggested in this paper can provide a plausible explanation of plural organizational forms. Beyond explanation suggested by agency theory or resource scarcity theory, organization ambidexterity theory can offer a unique account for the use of plural organizational forms. This theoretical perspective argues that organizations can deal with conflicting demands in several ways (Raisch & Birkinshaw, 2008). In this study, I proposed that plural organization forms can handle conflicting challenges faced by chains and used organizational ambidexterity theory as an underpinning theory to explore the explanatory mechanism. Drawing on organization ambidexterity argument, this study showed how these two different organizational forms can contribute to the success of chains.
This study also offers empirical evidence of the relationship between proportion of plural organizational forms and chain performance. While scholars have proposed that plural organizational forms can create synergistic benefits, few studies provided empirical evidence for the synergistic benefits of plural organization forms. This paper found an inverted U-shaped relationship between proportion of franchised units and chain performance. This empirical evidence is complementary to the case study and preliminary evidence suggested by scholars (Bradach, 1997; Sorenson & Sørensen, 2001).

This study also contributes to the organizational ambidexterity literature. This paper improves our understanding of contingent factors that determine the most effective blend of two different organizational forms over time. Much of this literature focuses on the identification of antecedents of organizational ambidexterity and implication to performance (Gibson & Birkinshaw, 2004; He & Wong, 2004; Lubatkin et al. 2006; Smith & Tushman, 2006). Fewer studies have investigated moderators which influence balance in organizational ambidexterity (Raisch & Birkinshaw, 2008). The study answers this call by examine organizational and industrial contexts as moderators that influence organizational ambidexterity. The findings in this research indicates that organization size, industry uncertainty, and industry competitiveness moderates the optimal proportion of franchised units.

Limitations

This study has several limitations. First, this study focuses on only differentiation mechanism in organizational ambidexterity. The findings show the importance of plural organizational forms in dealing with conflicting challenges faced by chains. The results
of this research indicate the plural organizational form works a differentiation mechanism that creates different competencies and addresses conflicting demands. This differentiation mechanism helps organization maintain ambidexterity (Gilbert, 2005). Scholars also point out the importance of integration mechanism (Lubatkin et al., 2006; Smith & Tushman, 2005). While differentiation mechanism such as structural differentiation is necessary, it is not sufficient for the development of ambidextrous organizations (Raisch, Birkinshaw, Probst, & Tushman, 2009). Differentiation creates different competencies that address disparate requirements, whereas integration mechanisms focus on how organizations integrate different activities in one business unit (Raisch et al., 2009). The existence of an integration mechanism plays a complementary role and helps an organization to fully take advantage of created different competencies (O’Reilly & Tushman 2008, Teece 2007). Scholars have invested the role of top managers as an integration mechanism (Gibson & Birkinshaw, 2004; Lubatkin et al., 2006; Smith & Tushman, 2005). This research does not assess the role of integration mechanism in chains. Future research might benefit from examining integration mechanism as well as differentiation mechanism. The role of top managers and board directors can be investigated as an integration mechanism.

This research drew sample from only one industry. Although single-industry design can control for the potential industry effects (Roquebert, Phillips, & Westfall, 1996), caution should be used in generalizing beyond the restaurant industry. In addition, we use only publicly trade firms which are usually large and have enough. This also limits the external validity of our findings. Future research can test the findings in other industries or small size chains.
This paper uses sales growth as a dependent variable. While this performance measure is directly related to the topic of this research, organizational performance is multidimensional. Use of other performance variable such as return on asset, return or investment, or Tobin’s Q can provide additional insight into the performance implication of plural organizational forms.

**Conclusion**

The purpose of this study was to enrich our understanding of the use of plural organizational forms. This study examined how plural organizational forms create synergistic benefits and influence chain performance. While prior research has focused on the motivation for the use of franchising system, this paper aimed to explore how these two different organizational forms deal with different challenges in chains and influence chain performance.

This paper addressed three research gaps by linking franchising to the organization ambidexterity literature. First, although scholars recognized synergistic benefits from plural organization forms (Bradach, 1997; Bürkle & Posselt, 2008; Hsu & Jang, 2009; Sorenson & Sørensen, 2001), their arguments were not based on strong theoretical foundation. This study introduced organizational ambidexterity theory as an underpinning theoretical perspective to explain synergistic benefits of plural organizational forms. Second, few research studies provide a pattern of the relationship between plural organizational forms and chain performance. This study tested a negative curvilinear relationship between the proportion of franchised units and chain performance. This study provided empirical evidence that supports synergistic benefits from plural
organizational forms. Third, this research showed that the balance between standardization and innovation is not static. The findings show that the optimal combination of plural organizational forms depends on organizational and industrial contexts. This study advances our understanding of the dynamic pattern of synergistic benefits from plural organizational forms.
REFERENCES


