Employment Modes from Strategic Management Context

Abstract

The current study contributes to core competency workforce in human resource management and strategy research by using configurational approach in different employment modes. We argue core competency employees are no longer internal employees in the organizations because of different organizational strategies perspective. We investigate different organizational strategies might influence to allocate the core competency workforce from relational (commitment-based, control-based) and transactional (knowledge- based, process-based) perspectives.

Keywords: Organizational Strategy, Employment Modes, Core Competency Workforce, Human Capital

Introduction

There is a rapidly increasing use of external labor arrangements such as workers from temporary help services and limited-duration direct hires. The growth of external labor arrangement use suggests the need for a theory to explain the sorts of jobs that should be externalized. Ettorre(1994)suggested that overuse of external labor arrangements may reduce an organization’s core competencies, and (Pfeffer 1994)argued that “the recent trend toward using temporary help, part-time employees and contract workers, particularly when such people are used in core activities.” In particular, as business closures and unemployment levels rise amid a protracted global economic downturn, we are seeing a rise in “external” forms of employment. “External employment” refers to temporary, casual, and part-time work. Those employed in these kinds of jobs generally do not enjoy standard benefits such as pensions, health insurance, and social security. A sign of the trend is the growing inclination of companies to hire temporary or contract workers to replace permanent employees as they search for ways to lower operating costs. Mile and Snow(1984) noted that while certain human resource practices might be centralized or standardized for all employees, others might be customized to match the specific requirements of particular employee groups. These distinctions are, in fact, crucial aspects of a firm’s strategic approach to human resources. Other investigators have also found that organizations apply different modes of employment for strategic reasons. According to the statistical survey report of Taiwan government (2007), 94% of enterprises had employed contingency workers in the year 2006. Specifically, 97% of the companies in the service industry utilize casual employees. Moreover, statistics compiled by the cabinet-level Directorate General of Budget (2008), Accounting and Statistics (DGBAS) showed that 6.24% of Taiwan’s workers, or some 650,000 people, are “external workers,” who on average earn 47.6% of normal workers’ salaries. A similar situation is emerging in Mainland China, where a change in legislation governing employment contracts was announced in June 2007. A primary component of this new legislation focuses on the casual employment mode. Along this line, core competency employees are no longer internal employees in the organizations because of different organizational strategies perspective. Hence, our study tries to investigate how the organizational strategies influence to allocate the core competency workforce among employment modes from relational and transactional perspective.

The Relationship between Employer and Employee

From agency theory, the relationship between employer and employee are treated as principal and agent. This relationships should reflect efficient organization of information and risk-bearing costs (Eisenhardt, 1989).The difficulties that arise under conditions of incomplete and asymmetric information when a principal hires an agent, such as the problem that the two may not have the same interests, while the principal is hiring the agent to pursue the interests of the former. Thus, there are various mechanisms may be used to try to align the interests of the employee with those of the employer such like commissions, profit sharing, efficiency wages, performance measurement or fear of firing. This means these methods such as deferred compensation and structures such as tournaments are often more suitable to create the incentives for employees to contribute what they can to output over longer periods. On the other hand, some employees are often paid according to hours of work rather that by direct measurement of results is that it is more efficient to use indirect systems of controlling the quantity and quality of effort due to variety of informational and other issues such like turnover costs was determined the optimal minimum length of relationship between employers and employees.

From social exchange theory, one of the basic views is that relationships develop over time into trust, loyal and mutual commitments. The organizational relationship between employer and employee focuses on expectations of reciprocity. There are three types of reciprocity: a) Reciprocity as a transactional pattern of interdependent exchange which means the outcomes are based on a combination of both parties efforts and involves mutual and complementary arrangements. This emphasizes contingent interpersonal transactions (Das & Bing-Sheng, 2002) such like extra bonus or vacation from employer if the employees did additional work. b) Reciprocity as a folk belief involves the cultural expectation that people get what they deserve(Gouldner, 1960). c) Reciprocity as a norm and individual orientation which describes how one should behave and those who follow these norms are obligated to behave reciprocally. Hutchison (1997) found that individuals with a strong exchange orientation are more likely to return a good deed than those low in exchange ideology. For example, in their investigations of perceived organizational support and absenteeism, they found exchange ideology strengthens the relationship of perceived organizational support with felt obligation, citizenship behavior and effort and performance. Obviously, these investigations of how exchange orientation influences organizational relationships is great importance, especially, the social exchange theory that develop between employees and their employing organization in relational- based relationships.

Employment Contract

Regarding the employment contract, individual contracts form a major method of restructuring incentives, by connecting as closely as is optimal the information available about employee performance, and the compensation for that performance. Prendergast (1999) mentioned the ability of employees to bear risk and the ability of employees to manipulate evaluation methods, the structural details of individual contracts vary widely because of differences in the quantity and quality of information available about the performance of individual employees. These mechanisms include discretionary bonuses, promotions, profit sharing, efficiency wages, deferred compensation are used in the context of different types of employment modes. For example, salesmen often receive some or all of their remuneration as commission, production employees are paid an hourly wage, while office workers are typically paid monthly or semimonthly. These two different parts of economy called the “primary” and “secondary” sectors.

Typically, the secondary sector is characterized by short-term employment relationships, little or no prospect of internal promotion and the determination of wages primarily by market forces. Usually, this kind of occupations consists primarily of low or unskilled jobs. These jobs are linked by the fact that they are characterized by “low skill levels, low earnings, easy entry, job impermanence, and low returns to education or experience.” For instance, in a number of service jobs such as food service, employees in some countries are paid mostly with tips. The use of tipping is a strategy on the part of the owners or managers to align the interests of the service employees with those of the owners. In doing so, the service employees have an incentive to provide good customer service which could benefiting the company’s business.

On the other hand, in a primary sector the workforce as a whole is motivated to serve their employer because of wages, health benefit, and pension and job security. Job market consists of majority blue collar and white collar jobs. The primary sector usually includes the higher-grade, higher-status, and better-paid jobs, with employers who offer the best terms and conditions. These jobs are generally considered to be the occupational labor-markets, some industrial labor-markets. The primary sector is sometimes sub-divided into an upper and lower level. The primary workers are trying to prove themselves to their employers by portraying their skills and educational credentials.

Employment Modes Theoretical Background

The transaction costs perspective focuses on characteristics missing from previous research on external labor arrangements: the characteristics of a transaction. There are costs associated with managing employee through market arrangements (transaction costs) which firms center on securing the most efficient form of organizing employment versus within hierarchical arrangements (bureaucratic cost) which firms attempt to minimize ex ante and ex post costs associated with managing employment (Williamson,1975). The characteristics of the position may play an important role in the firm's determining whether it should use market-mediated mechanism (external employee arrangements) or hierarchical mechanisms (permanent employment relationships) to govern the transaction. Teece(1984) framed the make or buy decisions a special case of market failures. In an attempt to identify the most efficient form of organizing employment, organizations either rely upon the market to govern a transaction or they govern this process internally. From transaction cost perspective, internalization of employment is appropriate when it allows organizations to more effectively monitor employee performance and ensure that their skills are deployed correctly and efficiently (Williamson,1975).

From human capital perspective, the decision to internalize or externalize employment rests on a comparison of the expected returns of employee productivity. Quinn(1992) and Venkatesan(1992) have argued that firms should base employment sourcing decisions on the degree to which skills contribute to the core capabilities of the firm. Organizations develop resources internally only when investments in employee skills are acceptable in terms of future productivity (Becker, 1964). If employee productivity is not expected to exceed investment costs, organizations likely will secure these skills from the labor market (Lepak & Snell, 1999).

Employment Modes in HR Configuration

Organizations are exploring the use of different employment modes to allocate work to reach both efficiency and flexibility(Powell, 1990). The management of human capital often can be broken down into "make or buy" decisions (Miles &Snow,1984) . Such like firms may externalize employment by outsourcing certain functions to market-based agents and on the other hand, they may internalize employment and build the employee skill base through training and development initiatives. The benefits of internal employment include greater stability and predictability of a firm's stock of skills and capabilities(Pfeffer, 1988),better coordination and control(Williamson, 1981),better specialization and lower transaction cost(Williamson, 1975). On the contrary, externalization enable organizations to decrease overhead and administrative cost, balance workforce requirements(Pfeffer 1994) and improve organizational flexibility(Miles, 1992).

Moreover, both internal and external employment modes have their own associated cost. Internalization increase the stability of a firm's stock of human capital, but it also incurs bureaucratic costs stemming from administering the employment relationship(Rousseau, 1995). However, internationalization constrains an organization's ability to adapt to environmental changes, especially, those that demand for human capital. On the other hand, externalization has to suffer the higher turnover costs.

How various combinations of employment modes lead to competitive advantage usually is the question to identify the configurations of staffing, training, appraisal and reward practices that are appropriate for the types of human capital embodies within those employment modes. However, the current researches still tend to take a holistic view of employment and human capital, emphasizing on the extent to which a set of practices is used across all employees of an organization as well as the consistency of these practices across organizations. There is the possible existence of different employment practices for different employee groups within an organization to be unnoticed(Lepak & Snell, 1999). In this study, we would like to argue the most appropriate mode of investment in human capital will vary for different types of human capital rather than a sing “optimal” HR architecture for managing all employees. Lepak and Snell(1999) used the dimensions of value and uniqueness of human capital and identified four different employment modes(1.internal development, 2.acquisition, 3.contracting, 4.alliance) as carrying with different form of employment relationship. In figure 1, from inducements-contributions perspective, the HR configurations maintain equity between the employee and the organization in terms of what each contributes and receives learned that patterns of HR configurations helped to define the employment mode, maintain the employment relationship and support the strategic characteristics of human capital.

The Classification of Employment Mode

From the value and the uniqueness of human capital, Lepak &Snell(1999) divided the employment modes into four types. The model identifies HR practices, employment modes (internalized, externalized), and employment relationships (transactional, relational)(Reiche, 2008) for different employee based on the degree to which their human capital is strategically valuable and unique. In particular, in the HR architecture, core employees who own valuable and firm-specific human capital provide the core knowledge base, which is a primary source of competitiveness. Internal partners (traditional employees) provide knowledge that is not mainly unique yet is strategically valuable to the firm so that the firm has an incentive to employ them internally. External (alliance) partners possess knowledge that is unique in some ways but not directly instrumental for creating customer value. Therefore, firms tend to externalize these employees. Contract employees are usually flexibility concern, have knowledge that is neither of particularly high strategic value to a firm nor unique, thus becoming major for outsourcing(Reiche, 2008).

Employment Modes and Employment Flexibility

Lepak and Snell(1999,2002) suggested that firms might rely on four distinct types of employment modes(arrangements)(figure 2). First, knowledge-based employment refers to an internal employment arrangement in which firms place an emphasis on developing and cultivating the knowledge, skills, and abilities of employees over time. As these employees possess specialized skills that are critical, firms are encouraged to maintain a long-term commitment to their development and provide them with considerable autonomy to use their competencies. Second, employees in a job-based employment mode are acquired from the labor market to contribute immediately by performing a specific set of tasks. While valued contributors, the requisite skills to perform their jobs are not specific to any particular firm and, consequently, job-based employees are often expected to be productive without additional firm investments. Firms typically retain job-based employees on a full-time basis but hold them accountable for meeting relatively clear performance objectives for a well-defined range of tasks. Third, contract work refers to relationships in which external individuals are contracted to perform tasks with limited scope, purpose, and duration. Firms might intend to hire these individuals on a full-time but not permanent basis. Fourth, alliances refer to relationships in which firms establish ongoing partnerships with independent/autonomous external parties. Compared to the limited scope of contract workers, partners are utilized to apply their specialized knowledge to perform tasks in some customized capacity. Because of this, alliances often assume a longer time horizon and tend to have a more relational exchange than that of contract work (Lepak & Snell, 1999).

Figure 2 Summary of the HR Architecture

Uniqueness of human capital	Externalized	Internalized	
High	Business Level Strategy: **Prospector** HR Strategy: **Change Creator** Human Capital: **Creating** Employment Mode: **Alliance** Employment relationship: **Partnership** HR configuration: **Collaborative** HR practice focus ✧ Job enrichment ✧ Job autonomy ✧ Teamwork ✧ Employee participation/empowerment ✧ Joint performance evaluations ✧ Firm specificity of training ✧ Promotions	Business Level Strategy: **Defender** HR Strategy: **Commitment Maximizer** Human Capital: **Developing** Employment Mode: **Internal development** Employment relationship: **Organization Focused** HR configuration: **Commitment** HR practice focus ✧ Review of candidates' personal attributes/interest ✧ Training with general content ✧ Mentoring programs ✧ Nurturing of a strong corporate culture that stresses interpersonal relationships ✧ Distributive and procedural justice ✧ Seniority-base pay ✧ Career planning and internal labor markets ✧ Attractive working conditions	Relational
Low	Business Level Strategy: **Reactor** HR Strategy: **Cost Minimizer** Human Capital: **Contracting** Employment Mode: **Contracting** Employment relationship: **Transactional** HR configuration: **Compliance** HR practice focus ✧ Pay/benefits contingent on task and contextual performance ✧ Allocation of office space ✧ Reduction of role ambiguity/conflict	Business Level Strategy: **Analyzer** HR Strategy: **Stable Operator** Human Capital: **Acquiring** Employment Mode: **Acquisition** Employment relationship: **Symbiotic** HR configuration: **Market Based** HR practice focus ✧ Assessment of candidates' job mobility ✧ Tailoring of jobs to employee skills ✧ Realistic job previews ✧ Timely performance feedback ✧ Flexible and organic work structure	Transactional
	Low — **Responsive nature**	**Preventive nature** — High	

Value of human capital

Lepak & Snell(1999) and Reiche(2008)

In addition, there are two dimension of employment flexibility (Sanchez, Truxillo, & Bauer, 2000):coordination flexibility and resource flexibility. Coordination flexibility consists of the extent to which firms can reconfigure, resynthesize, and redeploy the chain of resources. Organizations may realize enhanced firm performance from a greater use of external employment (contract work and alliances) as a method to enhance flexibility to access and utilize human capital. With external employment, firms may adjust the number and/or types of skills within their firm to cope with fluctuations in product or service demands. The ability to quickly assemble needed levels and types of human capital would logically be related to the efficiency by which firms utilize their human capital and, as a result, enhanced firm performance. This flexibility to access and configure the human capital pool as needed is not likely to be as readily possible with an internal workforce possessing a relatively fixed skill set as well as expectations of continued employment. On other hand, resource flexibility also refers to the costs and difficulty of switching the use of a resource from one alternative use to another as well as the time required to switch from one use to another. Wright and Snell(1998) suggested that organizations might attain resource flexibility when their employees are able to perform a wide variety of tasks and assume different responsibilities. Knowledge-based employees may be characterized by broad latitude and discretion as well as developmental investments needed to ensure employee multi-skilling and self-direction.

Organizational Strategy and Human Resources Strategy

Mile and Snow(1978) proposed a typology of strategic types based for the most part on the organization’s orientation toward product-market development. They suggested four strategic types: Defenders, Prospectors, Analyzers and Reactors. In 1984, they also tried to link product-market strategies and human resources management systems.

Aaccording to Michael Porter(1984), a firm must formulate a business strategy that incorporates either cost leadership, differentiation or focus in order to achieve a sustainable competitive advantage and long-term success in its chosen arenas or industries. He mentioned organization might use “hybrid strategy”-above two kinds of strategies to survive in this turbulent environment. Same as the human resource strategy in one organization, especially the strategies between skilled and non-skilled employees might have different practices. Organization treat skilled employees usually based on relational perspective (change creator and commitment maximizer) because of they have firm specific assets. On the other hand, the non-skilled employees usually categorize in transactional perspective (cost minimizer and stable operator).

A Configurational Core-Periphery Model

To overcome these challenges, some authors have recently tried to shed new light on the fundamental question of how organizational configurations are structured and what is the relationship between their elements. For instance, Siggelkow (2002) has argued that it is necessary to develop a better understanding of what the nature of core elements in organizational configurations is. In pointing out that the organizational literature contains no agreement as to what particular elements constitute the organization‘s core, he notes that there is agreement that core elements feature a high interdependency with other organizational elements and exert a large influence on future organizational elements. He accordingly defines ―coreness as connectedness and an organizational core element as ―an element that interacts with many other current or future organizational elements (Siggelkow, 2002). Core elements of a configuration are thus surrounded by a series of elaborating or peripheral elements that reinforce the central features of the core (Grandori & Furnari, 2008).

The Core Competence Workforce

Siggelkow (2002) has argued that it is necessary to develop a better understanding of what the nature of core elements in organizational configurations is. In pointing out that the organizational literature contains no agreement as to what particular elements constitute the organization‘s core, he notes that there is agreement that core elements feature a high interdependency with other organizational elements and exert a large influence on future organizational elements. He accordingly defines “coreness as connectedness and an organizational core element as”, an element that interacts with many other current or future organizational elements (Siggelkow, 2002). Core elements of a configuration are thus surrounded by a series of elaborating or peripheral elements that reinforce the central features of the core (Grandori & Furnari, 2008).

Generally, human capital is one of an organization’s intangible assets. It is basically all of the competencies and commitment of the people within an organization i.e. their skills, experience, potential and capacity. It is the skills and knowledge gained by a worker through education and experience. The human capital asset captures all the people oriented capabilities for a business to be successful. Human capital arrangement among employment modes to sustain the core competence became a very important issue for an organization.

Furthermore, Reiche (2008)) presented four different types of retention practice, building on the difference of human capital between responsive versus preventive practices and practices in transaction versus relational employment relationships. Effective retention calls for diverse bundles of practices to sufficiently respond to variations in turnover past history across different time frames and different employment relationships. Implicit to the classification of retention practices is the notion that bundles of HR practices result in more salient outcomes in terms of employee behavior and organizational performance as it can be assumed that these practices display synergies, thus making a bundle greater than the sum of its parts(Delery & Doty,1996). The labor market perspective concentrates on turnover predictors that are primarily determined by the organization’s external environment and includes factors such as unemployment rate or alternative job opportunities (Gerhart & Milkovich, 1990). In contrast, the psychological perspective focuses on employees within the organizational context and their individual turnover decisions, thus investigating turnover previous circumstances that are more readily within an organization’s tendency and ability to apply them(Maertz & Campion, 1988).

Hypothesis: 1 The organizations have different strategy perspective emphasis on allocating different human capital as a core competence.

Hereby we integrate the idea from Lepak and Snell(1999),Reich(2008) and Mile Snow(1984) into the following figure 3 to explain the relationship between organizational strategy and HR practices by adopting transactional and relational perspective in each employment mode. These relationships were based on transaction cost theory and social exchange theory to fulfill the gap which some scholars (Lepak&Snell,1999;Reich,2008) only discussed one kind of relationship (transactional or relational) in each employment mode.

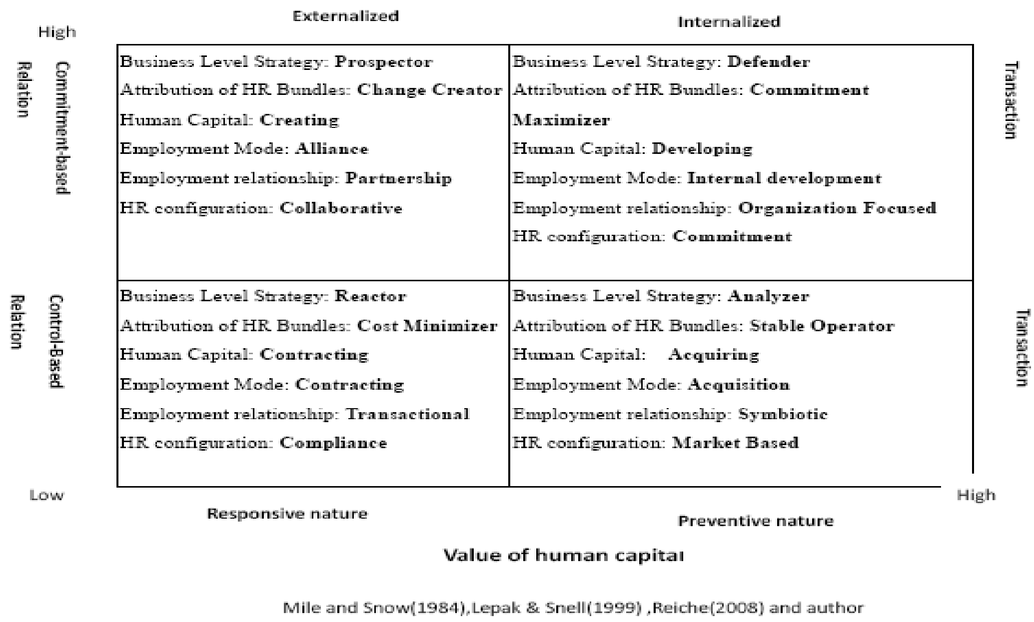

Figure 3 Employment Modes and Organizational Strategy

Commitment-based Relation and Knowledge-based Transaction

Change-creating organization is usually continually search for product and market opportunities and regularly experiment with potential responses to emerging environmental change. To face this kind of rapid change, the recruitment strategy is emphasized on “buy”(Williamson,1975) in the market because of the human capital that is unique in some way. Performance appraisal is based on result-oriented procedure and performance. Leonard-Barton (1995) mentioned some unique forms of human capital are less codified and transferable than generic skills. However, the management difficulty was faced to internalize this kind of human capital because of the uniqueness is not be likely to expend resources for training and developing partners. Lepak and Snell(1999) showed to solve this paradox, the organizations are simultaneously encouraged to use external and internal employment modes. Internalization is prohibitive from a cost standpoint and complete contracting involves risks of opportunism, some form of alliance between parties may provide a hybrid employment mode that unifies internalization and externalization and overcomes these problems. Collaboration and information sharing are also likely to be necessary in this situation.

Hypothesis 1A: Change-Creating Organizations will be higher than other organizations in terms of alliance human capital as a core competence.

Commitment-maximizing organization characteristics include a limited product line; single, capital-intensive technology; a functional structure and skills in production efficiency and process engineering. As a result of this narrow focus, the organizations rarely need to make major adjustments in their technology, structure or methods of operations (Mile and Snow,1984). This kind of organization are more likely to employ people internally when their skills are firm specific (Williamson,1985). The recruitment is emphasized on "make'. Performance appraisal is process-oriented procedure and compensation is oriented toward position in organization. Employment relationship is organization focused. This kind of relationship can be viewed as encouraging significant mutual investment on the part of employers and employees in developing critical firm skills. By investing in employee development and allowing employees greater participation in decision making, organizations can foster a higher level of ongoing commitment from employees (Lepak &Snell,1999). By doing so, organizations establish organization-focused relationships in order to elicit a wide range of employee behaviors and increase employee incentives to engage in firm-specific learning.

Hypothesis 1B: Commitment-maximizing organizations will be higher than

other organizations in terms of internal developing human capital as a core competence.

Control-based Relation and Process-based Transaction

Stable-operating organization operates in two types of product-market domains- one relatively stable, the other changing. In their stable areas, these organizations operate routinely and efficiently through use of formalized structures and processes. Analyzer characteristics include a limited basic product line; search for a small number of related product and market opportunities. To balance two side of market, human capital contains core skills that are essential for competitive advantage, it by no means characterizes all forms of human capital or utilized by firms to function effectively. To cost control both side, hence, human capital they allocated are valuable but not unique or specific to a firm. Selecting skilled employees directly from the market may also allow firms to realize significant savings in developmental expenditures while gaining instant access to a wide variety of capabilities that may incur positive returns on investment (Becker, 1964). Rousseau (1995) mentioned this kind of employees typically do not seek or receive lifelong employment with particular firm because these employees are often trained in a particular occupation or profession, they can effectively sell their talents to a variety of organizations which they can contribute and receive the highest returns on their human capital investment. By no means, these types of employees are perhaps less committed to the organization and more focused on their career (Lepak & Snell,1999).

Hypothesis 1C: Stable-operating organizations will be higher than other organizations in terms of acquiring human capital as a core

competence.

Cost-minimizing organization is usually in the passive position to the market. They waited for other competitors to response the market change**.** These organizations contains human capital that is generic and of limited strategic value. Leonard-Barton(1995)describes this as ”public knowledge” skills that can be purchased easily on the open labor market. It could minimize the cost because of alternative sources for these skills exist, organizations may decrease employment costs by contracting externally (Williamson,1975).Leasing working arrangements and other forms of contract work often fall within this category. Performance appraisal and rewards are likely to be job-based(Mahoney, 1989) In terms of employment relationships, Rousseau(1995) suggests that when employees have limited association with a firm and have explicit performance expectations, their psychological contract may be term transactional.

Hypothesis 1D: Cost-minimizing organizations will be higher than other organizations in terms of contracting human capital as a core competence.

Methods

A system can reach the same final state, from different initial conditions and by a variety of different paths (Katz & Kahn, 1978). Therefore, we try to adopt three kinds of analysis to offer a clearer configurational structure in our study. The first is inductive in nature and primarily uses cluster analysis to derive an empirical solution (Ketchen, Thomas, & Snow, 1993). The second approach is deductive and uses deviation score analysis to examine the fit with a theoretically defined profile (Doty, Glick, & Huber, 1993). Which approach and analytical method provides superior results has been contested in the literature.

Furthermore, both cluster analysis and deviation score approaches face difficulties regarding their ability to provide insights into the causal nature of the configuration, that is, they are not well suited to shed light on just what aspect of a configuration leads to core competence(Fiss, 2008). For instance, cluster analysis assigns cases to clusters based on their similarity along a number of characteristics regardless of the relationship between these characteristics and outcomes of interest. However, in situations where not all characteristics included in the analysis are in fact causally relevant regarding the outcome, cluster analysis will not be able to distinguish between these characteristics. If cases are similar along causally irrelevant characteristics but differ along a few but causally important characteristics, cluster analysis will nevertheless usually assign these cases to the same cluster, resulting in undesirable causally heterogeneous clusters that are undesirable. Accordingly, while cluster analysis is an excellent exploratory tool for discovering structures in the data without specifying a priori what those structures might be, it is a much less useful tool for understanding what aspects of clusters are causally related to the outcome. Deviation score analyses are a suitable tool for assessing the effect of overall fit with a type on core competence, but likewise face challenges in examining just what aspects of the fit between a hypothesized ideal type and empirically observed configuration in fact relate to strategies. In this respect, Doty et al. (1993) used canonical analysis to examine what measures of their configurational model had the strongest relationship with model fit, but while such an approach is preferable to cluster analysis, it is still quite limited in its ability to determine contextually dependent causal relations within a configuration, particularly when these relationships are affected by the presence or absence of other characteristics.

Moreover, this study plans to build on the set-theoretic methods first introduced by Ragin (1987) and extended by Ragin (2008) and Ragin & Fiss (2008). We would like to argue that set-theoretic methods such as fuzzy set QCA are uniquely suitable for our model because such methods explicitly conceptualize cases as combinations of attributes and emphasize that it is these very combinations that give cases their unique nature. Set-theoretic methods thereby differ from conventional, variable-based approaches in that they do not disaggregate cases into independent, analytically separate aspects but instead treat configurations as different types of cases. These features make set-theoretic methods particularly attractive for organizational and strategy researchers, as indicated by several recent studies that have argued for applying QCA and fuzzy sets in organizational settings (e.g. Fiss, 2007, 2008; Grandori & Furnari, 2008). The methodological approach used here thus sheds new light on the causal relationship between the characteristics of a configuration and the outcome of interest. While cluster analysis addresses the power of the theory as a classification scheme, and while deviation analysis is appropriate for testing the grand theoretical assertions incorporated in a configurational theory, fuzzy set analysis allows the researcher to examine the causal processes within a configuration and thus offers a tool for understanding the individual mid-range theories associated with each configuration. Apart from contributing to configurational theory building, the current study thus also aims to make an additional methodological contribution in showing how the use of fuzzy set analysis offers superior insights into configurational mechanisms and how instrumentation can affect what we may learn about a configuration.

Measurement

Organizational Strategy

Mile and Sonw(1984) proposed a typology of strategic types based for the most part on the organization's orientation toward strategic human resources systems. They suggested four strategic types: Defenders, Prospectors, Analyzers and Reactors. Porter(1980) suggested that three potentially competitive strategies: overall cost leadership, differentiation, focus and stuck in the middle. These two highly detailed business-level strategic typologies, both based on comprehensive studies with their rich data and case studies, are a major addition to the organizational level strategic literature(Segev, 1989). This study adopted strategic variables proposed by (Segev, 1989):environment, strategy content, strategy-making process, organizational structure, performance, and organizational characteristics. And then we would like to compared the data showed on Segev(1989) study to identify four different kinds of strategies(change-creator, commitment-maximize, stable-operator and cost-minimizer)

.

Core Competence Workforce

Salary, benefit and training are the factors to retain the employees. These regard money-wages and salaries as the price of human capital. That price may contingently be higher or lower than the value of human capital, depending on market forces of supply and demand, on skill monopolies, legal rules, etc. There is typically a constant conflict over the level of wages between employers and employees, since employers seek to limit or reduce wage-costs, while workers seek to increase their wages, or at least maintain them. How the level of wages develops depends on the demand for labor, the level of unemployment, and the ability of workers and employers to organize and take action with regard to pay claims. Chen &Lin (2003) mentioned three kinds of costs about human capital. First, the acquisition cost: the recruitment, selection, hiring and orientation costs are direct costs of human capital acquisition costs. These costs are direct related to recruit prospective employees from the open market, spent for locating and identifying human capital. Selecting costs are costs spent for the procedure of interviewing the prospective employees. Hiring and orientation costs indicate the costs to settle down the employees. Second, the learning costs in developing period includes orientation costs, general training costs and on-the-job training costs (direct costs) and opportunity costs of trainers' time(indirect cost). Third, the replacement costs include the discharge cost, the opportunity cost of losing efficiency before discharge and the cost of arranging vacant positions. Hence, we identify core competence human capital from the following expenses in each employment mode. 1) The salary expense of staff that recruiting activities. 2) The advertising expense during the recruitment period. 3) The necessary travel and moving expenses for the prospective employees. 4) The managerial expense related to the recruitment activities. 5) The salary expense of the new employee before officially becomes a member of the company. 6) The training costs. 7). The opportunity costs caused by vacant position and new employment. 8) The opportunity costs caused by the low efficiency before discharging the employees.

Plan of Analysis

To examine the effect of instrumentation on understanding the nature of configurations, I will analysis proceeds in three steps that move from standard statistical approaches for configurational analysis to set-theoretic analyses using fuzzy sets and QCA, thus following Ketchen and Shook(1996)who recommend using multiple methodologies to validate groupings. In a first step, I generate an empirically derived taxonomy of configurations based on cluster analysis. In a second step, I will use a theoretically derived typology based on prior scholars(Mile and Snow, Snell and Lepak, Reich) and theoretic perspective(agency theory, social exchange theory, transaction cost theory and human capital theory) to generate profiles. I combine both the empirically and theoretically derived solutions with regression analysis to examine their ability to explain core competence differences across types and environments. After thus establishing a baseline of findings using the standard methodology, the third step employs a set-theoretic approach based on fuzzy set QCA. Using Boolean algebra, I will analyze the dataset for the presence of set-theoretic relationships between the different aspects of organizational configurations and again examine the ability of this analysis to explain core competency and to examine what causes are central in a configurational analysis of the observed types.

Reference:

Becker, G. S. 1964. ***Human capital***. New York: Columbia University Press.

Chen, H. M., & Lin, K. J. 2003. The Measurement of Human Capital and its Effects on the Analysis of Financial Statements. ***International Journal of Management***, 20(4): 470-478.

Das, T. K., & Bing-Sheng, T. 2002. Alliance constellations: a social exchange perspective, ***Academy of Management Review***, Vol. 27: 445-456: Academy of Management.

Doty, D. H., Glick, W. H., & Huber, G. P. 1993. Fit, equifinality, and organizational effectiveness: A test of two configurational theories. ***Academy of Management Journal***, 36.

Eisenhardt, K. M. 1989. Agency Theory: An Assessment and Review, ***Academy of Management Review***, Vol. 14: 57-74: Academy of Management.

Ettorre, B. 1994. The contingency workforce moves mainstream. ***Management Review***, 83(2).

Fiss, P. C. 2008. ***Case studies and the configurational analysis of organizational phenomena. Forthcoming in C. Ragin & D. Byrne (Eds.) Handbook of case study methods,Thousand Oaks***. CA: Sage.

Gerhart, B., & Milkovich, G. T. 1990. Organizational differences in managerial compensation and financial performance. ***Academy of Management Journal***, 33.

Gouldner, A. W. 1960. The norm of reciprocity: A preliminary statement. ***American Sociological Review***(25).

Grandori, A., & Furnari, S. 2008. A chemistry of organizations: Combinatory analysis and design. ***Organization Studies***, 19.

Hutchison, S. 1997. A path model of perceived organizational support. ***Journal of Social Behavior and Personality***(12).

Katz, D., & Kahn, R. L. 1978. ***The social psychology of organizations (2nd ed.)***. New York: Wiley.

Ketchen, D. J., & Shook, C. L. 1996. The application of cluster analysis in strategic management research: An analysis and critique. ***Strategic Management Journal***, 17.

Ketchen, D. J., Thomas, J. B., & Snow, C. C. 1993. Organizational configurations and performance: A comparison of theoretical approaches. ***Academy of Management Journal*** 36.

Leonard-Barton, D. 1995. ***Wellsprings of Knowledge***. Massachusetts: Harvard Business School Press.

Lepak, D. P., & Snell, S. A. 1999. The human resource architecture: toward a theory of human capital allocation and development, ***Academy of Management Review***, Vol. 24: 31-48: Academy of Management.

Maertz, C. P., & Campion, M. A. 1988. ***25 years of voluntary turnover research: overview and critique*** (81 ed.).

Mahoney, T. A. 1989. Multiple Pay Contingencies:Strategic Design Of Compensation. ***Human Resource Management***, 28.

Miles, R. a. S., C.C. 1992. Causes of failure in network organizations. ***California management Review***(28).

Pfeffer , J. 1994. ***Competitive advantage through people: Unleashing the power of the work force***. Boston: Harvard Business School Press.

Pfeffer, J. B., J. 1988. Taking the workers back out: Recent trends in the structuring of employment. ***Research in organizational behavior***, 10.

Powell, W. 1990. Neither market nor hierarchy: Network forms of organizations. ***Research in organizational behavior***, 12.

Prendergast, C. 1999. The Provision of Incentives in Firms. ***Journal of Economic Literature***, 37(1): 7.

Quinn, J. B. 1992. ***Intelligent enterprise***. New York: Free Press.

Ragin, C. C., & Fiss, P. C. 2008. ***Net effects analysis versus configurational analysis: An empirical demonstration. In C. C. Ragin (Ed.), Redesigning social inquiry: Set relations in social research: 190-212. In press.*** Chicago: University of Chicago Press.

Ragin, C. C. C. 2008. ***Redesigning social inquiry: Fuzzy sets and beyond.*** Chicago: University of Chicago Press. .

Reiche, B. S. 2008. The configuration of employee retention practices in multinational corporations??foreign subsidiaries, ***International Business Review***, Vol. 17: 676-687.

Rousseau, D. M. 1995. ***Psychological contracts in organizations: Understanding written and unwritten agreements.*** CA:Sage: Thousand Oaks,.

Sanchez, R. J., Truxillo, D. M., & Bauer, T. N. 2000. Development and examination of an expectancy-based measure of test-taking motivation. ***Journal of Applied Psychology***, 85.

Segev, E. 1989. A systematic comparative analysis and synthesis of two business-level strategic typologies, ***Strategic Management Journal***, Vol. 10: 487-505: John Wiley & Sons, Inc. / Business.

Siggelkow, N. 2002. Misperceiving interactions among complements and substitutes: Organizational consequences. ***Management Science***, 48.

Teece, D. J. 1984. Economic analysis and strategic management. ***Strategy for decision making in complex organizations***.

Venkatesan, R. 1992. Strategic sourcing: To make or not to make. ***Harvard Business Review***.
Williamson, O. E. 1975. ***Markets and hierarchies: Analysis and antitrust implications***. New York: Free Press.
Williamson, O. E. 1981. The economics of organization: The transaction cost approach. ***American Journal of Sociology***(87).

Appendix I: Measurement

Organizational Strategy (Segev,1989)

Environmental variables

Uncertainty. The amount of information available to decision-makers for predicting the occurrence and nature of environmental factors and external changes. No information is maximum uncertainty.

Dynamism. The rapidity and amount of change in the environment (e.g. changes in customer tastes, in production, in service technologies or in the rate of inflation).

Hostility. The prevalence in the environment of factors that are negative to the organization and its interests (e.g. price, product, technological and distribution competition, regulatory restrictions, shortages of labor or raw materials and unfavorable demographic trends).

Complexity. The number and heterogeneity of external elements with which the organization has to contend. In a complex environment a large number of diverse external elements interact with and influence the organization; in a simple environment few external elements have an impact on the organization.

Strategy

Technological progress. Innovativeness in terms of the number and novelty of new techniques which are employed in the production of existing services and products.

Product/market breadth. The number and heterogeneity of the firm's products and customers.

Product innovation. Innovativeness in terms of the number and novelty of new products and services introduced.

Quality. The superiority of the firms" products or services compared to those of competitors, as perceived by customers.

Price level. The amount of money paid in exchange for the product, as perceived by customers with respect to similar products in the market.

Active marketing. The amount of organizational resources allocated to marketing and the awareness of management of the marketing concept.

Control system level. The use of rules, regulations, policies, hierarchy or authority, documentation and other bureaucratic mechanisms to standardize behavior and to assess performance (e.g. performance appraisals. quality control, cost and profit centers, budgeting and cost accounting).

Equity vs. debt. The choice between equity or debt in order to finance the firm in the long term (a high score is given to a firm financed by equity).

Long-term financial strength. The ability of the firm to raise large amounts of financial resources for long-term investments, either through debt or owners' equity, at a minimum price.

Resource level. The state and availability of the firm's human and material resources.

Investment in production. The amount and frequency of investments in production equipment and facilities. A high score is given to a firm with high added value.

Number of technologies. The number of different core technologies employed in production processes.

Professionalization. The level of formal education and training of employees. Professionalism is generally measured as the average number of years of education of employees, or professionally qualified people as a percentage of the number of employees.

Strategy-making

Internal analysis level. The ability of the firm to assess its performance, focusing on internal trends and developments.

External analysis and forecasting level. The ability of the firm to systematically track opportunities and threats in the environment in order to design long-range strategies.

Level of risk. The extent to which strategy makers are willing to make commitments which involve many resources and risky projects.

Proactiveness of decisions. The extent to which the firm tries to shape its environment, as opposed to merely reacting to trends in the environment (e.g. introducing new products, finding new markets and lobbying).

Structure

Size of the strategy-making team. The number of main strategic actors in the organization.

Centralization. The hierarchical level that has the authority to make a strategic decision. When the decision-making authority is kept at the top level, the organization is centralized; when decisions are delegated to lower organizational levels, the organization is decentralized.

Mechanism. The extent to which the internal organization of the formalized management structure is characterized by rules, procedures and clear hierarchy of authority. In a mechanistic organization the structure is highly formalized. In a non-mechanistic-organic (low-score) organization, the internal organization is much looser,free-flowing and adaptive; rules and regulations are flexible and usually no written criteria exist, and people are expected to find their own way through the system.

Performance

Profibility. Return on equity with respect to other firms in the industry.

Market share. The percentage of the relevant market held by the firm.

Rate of growth. Of total sales with respect to industry norms and past performance.

Liquidity. The ability of the organization to raise a large amount of cash on short notice, measured by the quick and acid ratio.

Operational efficiency. The degree of utilization of resources to produce output, measured as the ratio of inputs to outputs. I f one organization can achieve a given production level with fewer resources than another organization, it is described as more efficient.

Organizational characteristics

Size. Total sales, total assets, and the number of people in the organization.

Age. As compared to competitors in the industry.

Core Competency of Human Capital (Chen &Lin,2003)

Accounting accounts of human capital

1) The salary expense of staff that recruiting activities.

2) The advertising expense during the recruitment period.

3) The necessary travel and moving expenses for the prospective employees.

4) The managerial expense related to the recruitment activities.

5) The salary expense of the new employee before officially become a member of the company.

6) The training costs.

Opportunity Costs of human capital

7). The opportunity costs caused by vacant position and new employment.

8) The opportunity costs caused by the low efficiency before discharging the employees.