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## **Commitment, flexibility and the choice of employment contracts**

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### **ABSTRACT**

The study of the factors influencing a firm's choice of employment contract occupies a critical role in the strategic human resource management literature. However, existing research does not adequately address an important question in an uncertain environment: Can a firm balance the apparently conflicting considerations of 'commitment' and 'flexibility', underlying employment contracts? By integrating research on transaction cost economics and the resource-based view, we propose that a firm may avoid the trade-off between commitment and flexibility by differentiating between two types of human asset specificity: 'firm specificity' and 'usage specificity'. The interplay between the two types of human asset specificity and their value-creation potential has fundamentally different implications for a firm's choice of employment contract. By distinguishing between behavioral and competitive uncertainties, we propose that different types of uncertainties may influence levels of commitment and flexibility, and ultimately the choice of employment contract. Implications for research and practice are discussed.

### **KEYWORDS**

behavioral uncertainty ■ competitive uncertainty ■ employment contract ■ firm specificity ■ human capital ■ usage specificity ■ value creation

## Introduction

The field of strategic human resource management has grown extensively in the last two decades (see Schuler & Jackson, 1999 for a review of this literature). A major stream of this research involves the study of criteria underlying the choice of an employment contract mode. For example, firms have used 'internal', or permanent, employees, as well as 'external' workers, such as contractors, temporary employees, etc. This is analogous to the 'make-or-buy' choice of human capital (Miles & Snow, 1984; Williamson, 1975). Selection of an 'appropriate' employment contract mode is crucial because it forms a critical element of value-enhancing human resource strategies and has fundamental implications for a firm's performance (Bamberger & Meshoulam, 2000).

Much of the traditional strategic human resource management literature on the selection of employment modes has focused on the 'bipolar' choices, i.e. 'internal' as opposed to 'external' employment (Koch & McGrath, 1996; Pfeffer, 1994; Rousseau, 1995). However, this 'either-or' choice may be simplistic because a single firm may use *multiple* forms of employment contract for different groups of employees (Gerhart & Trevor, 1996; Huselid, 1995). It is possible that the appropriate mode of employment contract may vary depending on different *types* of human capital within a firm.

Lepak and Snell (1999) proposed a typology of employment relationships based on the literature on transaction cost economics (Williamson, 1975, 1985) and the resource-based view (Barney, 1991; Penrose, 1959; Wernerfelt, 1984); and suggested that a firm's choice of different employment contracting modes depends on the *uniqueness* of human capital and the *value* of human capital. What effect, if any, fundamental uncertainty has on the employment contract has not yet been addressed. Internal development is often associated with a *commitment* to firm-specific and valuable human assets; and outsourcing is associated with flexibility for the firm. Whereas internalizing unique and valuable assets provides a firm with a competitive advantage, outsourcing may imply sacrificing the competitive advantage in favor of *flexibility*. The commitment/flexibility decision has major implications for a firm's sustainable competitive advantage, especially in environments with fundamental change (Ghemawat, 1991). Further, Williamson (1975) suggests greater *commitment* in employment contracts under uncertainty, whereas the strategic management literature favors greater *flexibility* (Harrigan, 1985).

In this article, we attempt to address these deficiencies by creating a typology of employment contracts by distinguishing between usage and firm

specificity of human capital (Ghemawat & del Sol, 1998); emphasizing the value creation potential (resource-based approach); and distinguishing between competitive and behavioral uncertainties (Sutcliffe & Zaheer, 1998). We propose eight different types of employment contract modes, and discuss the implications for the human resource strategies in terms of investments made by firms versus individuals in human assets, incentive systems, and career planning. In the next section, we provide the theoretical background to our proposed architecture. We then present our framework of employment contract choices and finally, conclude with a discussion on the implication of our proposed model for research and practice.

## **Theoretical foundations**

### **Transaction cost economics and the resource-based view**

Several researchers have utilized transaction cost economics (Wachter & Wright, 1990; Williamson et al., 1975) and the resource-based view (Conner & Prahalad, 1996; Grant, 1996; Prahalad & Hamel, 1990) to explain a firm's choice of employment contract mode with different implications. According to transaction cost economics, a firm's decision to internalize or outsource a contract depends on the associated transaction costs (Coase, 1937; Klein et al., 1978; Williamson, 1985). These include the costs incurred *ex ante* while writing, negotiating, monitoring and enforcing an employment contract. In addition, they also include the costs that may arise *ex post* if the transaction shifts out of 'alignment'. The transaction costs of an employment contract are influenced by the specificity of human assets, among other variables. Williamson (1985) defined human asset specificity as the lack of ease (or efficiency) with which employee skills can be redeployed. Given the potential for opportunism – or 'self-interest seeking with guile' (Williamson, 1985) – on the part of the organization and employees, a firm is likely to *internalize* firm-specific human assets in order to economize on the transaction costs. Conversely, a firm may *outsource* generic human assets because alternative employment arrangements in such cases can be easily made should there be contractual problems.

The resource-based view, however, underscores the importance of a firm's assets (e.g. human assets) in value creation (Barney, 1991). Human assets are considered valuable if they help a company exploit opportunities or neutralize threats in its environment. Some researchers have argued that firms should choose an employment contract mode, depending on the degree to which employee skills contribute to the core capabilities of the firm (Quinn, 1992; Venkatesan, 1992).

Viewed separately, transaction cost economics and the resource-based view offer only *part* of the explanation for a firm's choice of employment contract mode. Whereas the former emphasizes economizing on transaction costs, the latter mainly focuses on the value added (and its sustainability) by a firm's resources. A profit-maximizing firm needs to simultaneously consider both the transaction costs and the value created. Some researchers have suggested that an *integration* of transaction cost economics and the resource-based view may provide an answer to a very important question in strategic human resource management: which forms of employment contract capture the employee's potential to be a source of sustainable competitive advantage (Leiblein & Miller, 2003; Silverman, 1999)?

Lepak and Snell (1999) proposed that a firm's choice of employment contract may depend on two dimensions: (i) human capital uniqueness, and (ii) human capital value. The uniqueness dimension is mainly grounded in transaction cost economics, whereas the value dimension is principally derived from the resource-based view. They proposed that four different types of employment contractual modes may exist: internal development (high uniqueness, high value); acquisition (low uniqueness, high value); contracting (low uniqueness, low value); and alliance (high uniqueness, low value). Their study signifies the importance of explicit examination of the existence of multiple contractual types within a single firm and the types that are likely to create a competitive advantage for the firm, a key issue in the strategic human resource management literature.

A firm often faces the all-pervasive dilemma under uncertainty: 'whether it should *commit* to a particular employment contract mode or stay *flexible*' (Ghemawat, 1991). Such commitment versus flexibility dichotomy assumes that a high commitment mode such as 'internalization' may provide the firm with a sustainable competitive advantage when human assets are specific and highly valuable. The highly flexible employment mode such as 'outsourcing' is characterized by generic, less valuable human assets and hence, fails to provide a competitive advantage. Uncertainty often erodes the uniqueness of human assets because of imitating competitors (D'Aveni, 1994; Ghemawat, 1991), and may reduce the value of human assets because of the changes in customer tastes and technology (Barney, 1995). Therefore, a move from 'internalization' to 'outsourcing' in an uncertain environment can also mean a loss of competitive advantage.

Of course, managers may attempt to enhance the uniqueness of human capital by increasing their *commitment* to on-the-job training (Becker, 1964), and by customizing their skills. They may also enhance the value of human capital by creating new talents, a source of future capabilities. It is possible that a firm can use highly specific and valuable employees, and – *at the same*

*time* – retain some flexibility by exploiting the multiple skills of an employee. We suggest that it is possible for a firm to sometimes *avoid* a trade-off between commitment and flexibility.

### Resource commitment and flexibility

One of the useful tests of a strategic framework's rigor concerns the way it explains the role of environmental uncertainty, especially that of fundamental change (Ghemawat & Pisano, 1999). According to Hayek (1945), interesting economic organization problems usually arise only in uncertain environments. Thompson (1967) describes uncertainty as the most fundamental problem for complex organizations. Indeed, the concept of uncertainty has long been a key component in a number of theories, including organization theory (Burns & Stalker, 1961; Lawrence & Lorsch, 1967); resource-dependency view (Pfeffer & Salancik, 1978) and strategy (Porter, 1980). Uncertainty has also been recognized as a key variable in the resource-based view (Teece et al., 1997) and transaction cost economics (Walker & Weber, 1987) research.

A firm is often at a crossroads of decision-making in an uncertain environment. The first choice, 'resource commitment,' refers to a few lumpy decisions involving large changes in a firm's resource endowments that are somewhat irreversible (Ghemawat, 1991). The second choice, 'resource flexibility' refers to the decisions that are individually small and frequent and somewhat reversible. Resource flexibility usually means that: (i) the resource (e.g. human capital) can be applied to a large range of alternative uses; (ii) the costs and difficulty of switching from one use of resource to an alternative use are low; and (iii) the amount of time required to switch to an alternative use is minimal (Sanchez, 1995).

There are two sources of irreversibility underlying commitment: the 'lock-in' costs or sunk costs, and the 'lock-out' costs that result from lost opportunities (opportunity costs). As a result of this irreversibility, the decision to commit to a particular strategy can result in *persistent* superior or inferior performance. In terms of the resource-based view, a firm's strategy can create a sustained competitive advantage, so long as the underlying resources are valuable, rare, imperfectly imitable, and non-substitutable (Barney, 1991). Commitments have the potential to create an unusually large amount of *value*. Commitments are also *rare* because very few firms can afford the investment in enormous sunk costs. *Imitation* does not pose much of a threat because most of the barriers to imitation are based on some underlying source of irreversibility. The threat of *substitution* from generic human resources could actually compel a firm to invest substantially in firm-specific

human resources and favor the commitment decision. From the transaction cost economics perspective, a commitment to firm-specific resources can substantially and irreversibly lower the transaction costs. This includes the savings in the costs of setting up and maintaining arbitration and other conflict resolving mechanisms. Therefore, excess waste, bureaucracy and slack are eliminated. Williamson (1991) terms such gains as 'first order efficiency gains', which may, in fact be bigger than 'second order efficiency gains' induced by a reduction in product price.

Examination of the role of organizational history (Selznick, 1957) may also help explain why commitments can result in *persistent* superior or inferior returns under fundamental change. In the history of an organization, there are periods characterized by stability. However, the stability is sometimes (albeit rather infrequently) disrupted by fundamental change, and the equilibrium is punctuated. The choice of commitment coincides with such punctuated equilibria. During the course of history following the punctuated equilibrium period, organizations often organize human resources, develop internal and external relationships, form political coalitions, and subscribe to a set of norms and beliefs. In the short run following the resource commitment, these factors create path dependencies (Nelson & Winter, 1982), as they give little freedom for organizations to depart from the ways set by organizational history. Therefore, organizational history often leads to irreversibility in strategy and, subsequently, persistent superior or inferior performance.

The most challenging question about commitment is how to deal with change – particularly fundamental change, in view of environmental uncertainty. Uncertainty can increase the attractiveness of flexible alternatives, such as investing in less specialized resources or delaying action. According to the resource-based view, a firm's differing flexibilities can help it discover and exploit new market opportunities and out-manuever competitive threats in product markets (Sanchez, 1995). Notwithstanding the advantages of flexibility under uncertainty, it may not pay to stay *totally* flexible. Flexibility can have substantial 'lock-out' costs because of the opportunities lost. A fundamental change in the environment involves a substantial unlocking of *both* opportunities *and* threats. Therefore, a firm's decision, such as choosing an employment contract mode, hinges on the relative costs and benefits underlying commitment and flexibility.

It is clear from the preceding discussion that 'alignment' between the 'antecedents' of commitment/flexibility and a firm's decision to commit resources can result in persistent superior performance. Conversely, there may be persistent inferior performance if the alignment is upset. This is analogous to Williamson's (1985) assertion that 'misalignment' between the

transaction criteria (e.g. asset specificity and uncertainty), and the choice of a contract mode results in inefficiency.

In the next two sections, we examine two antecedents of a firm's commitment/flexibility decision as far as the choice of an employment contract: (i) human asset specificity, and (ii) uncertainty. First, we propose that the traditional definition of asset specificity often masks the relationship between commitment and flexibility, and it overemphasizes the trade-off between the two (Ghemawat & del Sol, 1998). Next, we propose that different types of uncertainties may have very different implications for the commitment/flexibility decision.

### Types of asset specificity and resource commitment

According to the traditional transaction cost economics literature, assets are considered specific if they cannot be transferred to other *users* or *uses* without a loss in productive value (Englander, 1988; Williamson, 1985). However, such a definition implies that there should *always* be a trade-off between commitment and flexibility. The resource-based view suggests that if a firm wants to have a competitive advantage, it must make a 'commitment' in *specific* assets. Conversely, it implies that a firm that wants to stay 'flexible' in the face of uncertainty must have *general-purpose* assets, and therefore it must sacrifice the competitive advantage.

Asset specificity can, however, arise in one of *two* different ways: assets can be specific either to the *firm* employing them *or* to a particular *use* or application – a productive activity, a product, or a physical location. Following Ghemawat and del Sol (1998), we term these two types of asset specificity 'firm specificity' and 'usage specificity', respectively. An asset is specific to a *firm* if its value to the firm exceeds its price in the factor market, i.e. if its value to one firm exceeds its value to any other firm. An asset is specific to a *usage* if its value decreases when a firm applies it differently or redeploys it in another activity. Sometimes individuals, *by themselves* may be non-specific to a firm yet they may be firm specific as part of a bundle of resources (e.g. teams). This is termed as 'co-specialization', i.e. the resources are *collectively* specific to a firm (Teece, 1982, 1986). This situation does not pose a serious challenge conceptually, because we consider co-specialized employees as 'firm specific' even though they may be non-specific to the firm *individually*.

Firm-specific assets tend to be 'sticky' in the sense that there are significant costs involved in separating them from the firm that possesses them. The decision to invest, or disinvest, in them implies an irreversible commitment by the firm. The costs associated with abandoning such

firm-specific assets may create a tendency for firms to persist with the strategy. However, the firm retains the option of realizing (most of) the value of generic resources by selling them in factor markets.

Dynamic environments often require a firm to engage in rapid product proliferation, rapid performance improvement, and intensive market segmentation (Sanchez, 1995). Usage-specific assets tend to restrict a firm's ability to change the way that it is positioned in dynamic product markets. By contrast, usage-flexible human assets can enhance a firm's ability to increase or decrease production volume in response to fluctuations in demand, to change from one product to another, to alter the attributes of or inputs to existing products, or to introduce new products.

However, usage-specific resources *may* or *may not* imply commitment to a particular strategy on the part of the firm that possesses them because commitment depends partially on whether they are also firm specific and valuable. More generally, specificity/flexibility along the *usage* dimension need *not* be tightly related to specificity/flexibility along the *firm* dimension. As an example, human assets with usage-flexible skills may or may not be firm specific. A firm would invest in developing a multiskilled workforce only to the extent the underlying human assets are firm specific and valuable.

#### Types of uncertainty and resource commitment

Besides asset specificity and the value creation potential, uncertainty may influence a firm's resource commitment decision (and the employment contracts) substantially. However, there is considerable debate regarding the *direction* in which uncertainty influences the choice of employment contracts. Williamson (1985) argues that uncertainty influences the opportunistic behavior of the transacting parties, thereby increasing the transaction costs and hence, uncertainty increases the likelihood of internalization of a contract and *commitment*. However, others suggest that uncertainty in the product demand or technology increases the desirability of staying *flexible* (Harrigan, 1985). To resolve this conflict, Sutcliffe and Zaheer (1998) have distinguished between competitive and behavioral uncertainties, and proposed that the choice of a contract mode may be sensitive to the *type* of uncertainty.

According to Sutcliffe and Zaheer (1998), *competitive uncertainty* refers to unpredictability in the actions of potential or existing competitors, whereas *behavioral uncertainty* is attributable to the opportunism or strategic behavior of the transacting parties. Behavioral uncertainty increases the difficulty of anticipating all possible contingencies in employment contracts, thereby increasing overall transaction costs. However, high levels



of competitive uncertainty require a firm to be flexible in responding to their competitors' actions. Sutcliffe and Zaheer (1998) found that increased levels of behavioral uncertainty were *positively* related to internalization, whereas increased levels of competitive uncertainty were *negatively* related to the internalization of a transaction. Furthermore, Sutcliffe and Zaheer found that the two types of uncertainty influence a transaction independently of each other.

Adapting Sutcliffe and Zaheer's (1998) arguments, we posit that the type (as well as the level) of uncertainty may influence the firm's decision of commitment and flexibility, and ultimately the choice of employment contract. High levels of behavioral uncertainty are often associated with a substantial amount of haggling and negotiation if the transactions are organized outside the firm's boundaries. The costs of internalizing (or 'lock-in') are substantially lower than the costs of 'lock-out' (flexibility). Therefore, the decision tips in favor of commitment.

High levels of competitive uncertainty, however, can considerably raise 'lock-in' costs, compared with 'lock-out' costs. In competitively uncertain environments, such as hypercompetitive markets, a firm needs to respond quickly to changes in technology and demand (D'Aveni, 1994). Many times the firm will need to introduce new products and services (or upgrade existing products and services), and offer well-differentiated products to a finely segmented market at a rapid pace (Sanchez, 1995). Therefore, it may be more efficient for a firm to stay flexible. In that event, a firm is likely to organize the transaction outside its boundaries.

To be sure, there may be an interaction between asset specificity and uncertainty (Williamson, 1985). Behavioral uncertainty may interact with asset specificity and the value created. Behavioral uncertainty may have *little* impact on a transaction when the assets are non-specific to a firm, non-specific to a particular use, and are not valuable. In such a situation, a firm can easily make alternative employment arrangements if employees act opportunistically. However, it becomes very costly to arrange the employment mode outside the firm when the level of behavioral uncertainty is high, and the assets are highly specific to a firm or use, as well as valuable. That is, the costs of 'locking out' (or flexibility) of a transaction exceed the costs of 'locking in' (commitment). Therefore, commitment is the more efficient alternative in such a situation.

Competitive uncertainty may also interact with asset specificity and the value created, although its influence on a transaction may be *opposite* to that of behavioral uncertainty. For example, when the assets are firm specific and valuable, competitive uncertainty may have a moderate impact on a transaction, given the 'lock-out' costs. However, it is 'considerably' easier for a

firm to choose flexible employment modes when the human assets are non-specific to a firm, non-specific to use, and non-valuable.

As the level of uncertainty (behavioral or competitive) *changes*, one would like to know how efficiently a firm is able to adapt to these changes by repositioning the alignment of the employment contract mode. In fact, adaptation to the environmental changes has been considered to be a fundamental problem by many economists (Hayek, 1945). In general, high-commitment employment contract modes may be less adaptable to increased competitive uncertainty levels. The limitations on the ease of movement from a 'high-commitment' contract mode to a 'high-flexibility' mode under increased competitive uncertainty may result in 'misalignment or maladaptation', and persistent inferior returns. Similarly, the difficulties in making a switch from a 'high-flexibility' contract mode to a 'high-commitment' mode under increased behavioral uncertainty can produce persistent inferior returns because the firm may be 'locked out' of opportunities.

### The proposed framework

Our proposed framework is presented in Table 1. This framework captures the distinction between firm specificity and usage specificity, which is crucial to the understanding of commitment and flexibility. It also highlights the influence of the type of uncertainty on commitment and flexibility in an employment contract. We suggest that the interplay among firm specificity of human assets, usage specificity of human assets, potential for value creation, and the types of uncertainty determines different modes of employment contract. Furthermore, each dimension is a continuum, and the difference between two levels of a dimension may be a matter of degree rather than a clear dichotomy (Ghemawat & del Sol, 1998). However, the dimensions may be considered to have two levels for the purpose of convenience. The framework brings out the differences in the levels of commitment and flexibility among various modes of employment contract. We have also included some illustrations of each contract type to substantiate our arguments.

#### I. Internal development (A)

In this mode, employees have highly firm-specific and usage-specific skills, as well as high potential for value creation. Employees may specialize in a narrowly defined area. The firm specificity of such employees is probably deepened by tacit learning – or 'learning by doing'. Therefore, the transaction

**Table I** Typologies of commitment and flexibility in employment contracts

Type	Firm specificity	Usage specificity	HR value	Behavioral uncertainty	Competitive uncertainty	Employment contract	Commitment and flexibility	Examples
I	High	High	High	High	Low	Internal development (A)	High commitment Low flexibility	Aerospace project manager, waterworks engineer
II	High	Low	High	High	High	Internal development (B)	High commitment High flexibility	Academic dean, newspaper editor
III	Low	High	High	Moderately low	Moderately low	Acquisition (A)	Moderately low commitment Low flexibility	Computer systems engineer
IV	Low	Low	High	Moderately low	High	Acquisition (B)	Moderately low commitment High flexibility	Accountant, software engineer
V	Low	High	Low	Low	Low	Contracting (A)	Low commitment Low flexibility	Machine operator
VI	Low	Low	Low	Low	Moderately high	Contracting (B)	Low commitment High flexibility	Janitor
VII	High	High	Low	Moderately high	Low	Alliance (A)	Moderately high commitment Low flexibility	Genetics researcher
VIII	High	Low	Low	Moderately high	Moderately high	Alliance (B)	Moderately high commitment High flexibility	Managers – educational think tank or technology incubators in academic institutions

costs increase if the employment contract is organized outside the boundaries of the firm. Most likely the firm and the employees are bilaterally dependent on each other. Because the human assets are firm specific and valuable, the resource-based view suggests a potential for sustainable competitive advantage. Furthermore, there is a high level of usage specificity because of the employee specialization in relatively few areas. High levels of firm- and usage specificity, coupled with the potential for value creation, indicate a high level of commitment and a low level of flexibility on the part of the firm. Several project engineers in aerospace and waterworks firms may fall in this category.

High commitment and low flexibility levels are consistent with the 'internalization' of employment contracts. That is, the firm commits substantial resources to hiring and retaining employees. Furthermore, the employees work in a highly specialized area. Their jobs are characterized by a high degree of depth and a relatively low degree of breadth. Turning our attention to behavioral and competitive uncertainties, the relative level of behavioral uncertainty vis-à-vis competitive uncertainty may influence the commitment-flexibility decision. The *relatively* high levels of behavioral uncertainty are associated with high commitment levels. At the same time, relatively low levels of competitive uncertainty may allow a firm to overlook the benefits of flexibility.

Given the high commitment and low flexibility associated with this cell, it is likely that this type of employment contract can produce *persistent* returns under fundamental change. If the change turns out to be favorable for the firm (e.g. an increase in behavioral uncertainty), it will produce persistently *superior* returns. Conversely, if the change upsets the 'alignment' between firm specificity, usage specificity and value, on the one hand, and 'commitment-flexibility', on the other hand (e.g. an increase in competitive uncertainty), it will produce persistently *inferior* returns.

## II. Internal development (B)

These employees have highly firm-specific skills. However, their skills are also highly flexible. In other words, these employees can perform a variety of firm-specific tasks. Over time, these employees have acquired *multiple* skills that are both tacit and path dependent. There is considerable bilateral dependence for the firm and the employees. The costs of organizing employment outside the firm are considerable. Furthermore, the employees' skills are *not* limited to a specific area. They also create high value for the firm. Because their skills are unique and imperfectly imitable, they are likely to create a sustainable competitive advantage for their firm. Therefore, this cell is marked by high

commitment and high flexibility. Examples include many academic deans and newspaper editors.

Once again, 'internalization' of the employment contract is an appropriate employment contract mode. However, the key difference between cell I and cell II is the level of flexibility of the employees' skills. High levels of behavioral uncertainty may suggest internalization. However, as the level of competitive uncertainty increases, a firm and its employees look for ways to create flexibility. For example, rapid changes in demand and technology may force a firm to encourage the firm-specific employees to develop flexible skills. The firm and its employees in cell II may be better able to cope with increased competitive uncertainty than those in cell I. Therefore, the trade-off between 'commitment' and 'flexibility' may *not* be applicable in such situations. Here, the firm enjoys the benefits of both – commitment *and* flexibility. In other words, the firm can create persistent superior performance under increased uncertainty (behavioral or competitive) *without* incurring substantial 'lock-out' or 'lock-in' costs.

### III. Acquisition (A)

Employees in this cell have skills that are not specific to a firm. Furthermore, the expertise of some of them may be limited to a fairly narrow area. They have potential for creating great value and the costs of organizing these employment contracts through the market are low because of the low firm specificity of these employees. These employees also create high value for a firm, at least temporarily, although their skills may not be unique or imperfectly imitable. The levels of both behavioral and competitive uncertainty are moderately low. This cell is associated with moderately low commitment and low flexibility. A firm here is likely to 'acquire' employees from outside. The firm may invest only moderately in employee development, and quickly capture the value created by the employees. Examples of jobs falling into this category include many computer hardware engineers.

### IV. Acquisition (B)

There are many employees whose skills are not specific to a firm. Nor are they unique or imperfectly imitable. In addition, their skills are spread across a number of different areas. These employees create high value for their firm temporarily. Given the low level of firm- and usage specificity, and a high potential for value creation, this cell is associated with moderately low commitment and high flexibility. A firm is likely to 'acquire' such employees. Because of the moderately low level of commitment, the emphasis is not

much on retaining the employees in the long run. Alternative arrangements can be made relatively easily if employment contracts are severed. The firm is likely to quickly capture the high value created by these employees. There is a high level of competitive uncertainty in comparison with behavioral uncertainty. The corresponding high levels of flexibility differentiate Acquisition (B) from Acquisition (A). Many accountants and software engineers may fall in this category.

#### V. Contracting (A)

Employees described by Adam Smith in his classic 'pin-making' example perhaps fall in this category (also see Williamson, 1985). In the words of Adam Smith, 'one man draws out the wire, another straightens it, a third cuts it, a fourth points it, a fifth grinds it . . . The business of making a pin is, in this manner, divided into about eighteen distinct operations.' This cell is characterized by extreme job simplification. According to transaction cost economics, the costs of contracting these employees through the market are low because of the generic nature of the skills. Furthermore, the skills are not valuable. They are neither unique nor imperfectly imitable. Therefore, this cell is characterized by low commitment and low flexibility. A firm is likely to outsource the employees from the market. The firm is likely to generate normal returns under uncertainty. This cell is characterized by low levels of behavioral and competitive uncertainty. Because of the relatively stable competitive environment, the firms may not encourage employees to develop flexible skills. The firm's objective here may be to tap the economies of scale.

#### VI. Contracting (B)

Employees in this cell have skills that are not specific to a firm. However, these skills can be applied to a number of different areas. Employees can also switch from one skill area to another with relative ease. The employee skills are somewhat more flexible than those in cell V. The transaction costs of arranging the contracts through the market are low. The employee skills are not very valuable to the firm. Neither are the skills rare and imperfectly imitable. Therefore, this cell involves a low level of commitment and high level of flexibility. The firm is likely to outsource these employees. The firm is likely to generate normal returns in an uncertain environment. While low levels of behavioral uncertainty may encourage the contracting mode, there is also a need on the part of the firm to stay flexible because of high levels of competitive uncertainty. Many janitors may fall in this category.

## VII. Alliance (A)

Here the employees possess moderately high levels of firm-specific skills. The skills are highly usage specific. However, they may not have high value-creation potential. There are many employees that work in areas that are not *directly related* to the core (or principal revenue-generating) businesses of firms. For example, consider some scientists working as research associates in telecommunication firms. These scientists may sometimes work in areas, such as 'basic' (as opposed to 'applied') physics. Furthermore, the areas of their research may be very highly specialized. This research may not be of direct and immediate relevance to the firm's activities, and it may often be only of theoretical interest. Therefore, it may not create much value for the firm. Furthermore, the employees' tenure at the company may sometimes be time-bound, depending on the value of the project that they are working on. The firm may be better off 'internalizing' the employment transaction in view of the attendant costs. However, the resource-based view suggests that the employee skills are not very valuable although they are unique, and perhaps imperfectly imitable. Therefore, they may not contribute significantly to the firm's sustainable competitive advantage. This cell is marked by moderately high commitment and low flexibility. A combination of the transaction cost economics and the resource-based view rationales suggests an 'alliance' as a possible employment mode. It also implies that the firm is likely to generate persistent but moderately superior or inferior returns over the length of the employee contract. The level of behavioral uncertainty in this cell is moderately high. However, the level of competitive uncertainty may be low. Many geneticists may fall in this category. Their skills may be firm specific. However, they may not have immediate relevance for the firm's core business in terms of generating profit. These skills may be fairly specialized in a narrow area, such as molecular genetics or population genetics.

## VIII. Alliance (B)

The employees here possess moderately high levels of firm-specific skills. But the skills are usage flexible. These employees may perform a variety of different tasks that are specific to a firm. The skills are not very valuable. Consider managers working in 'think tanks' and technology 'incubators' in educational institutions. For example, the job description of an educational think tank manager from a recent newspaper advertisement reads: 'the person will be responsible for directing and planning the communication activities of the think tank, a consortium of elementary, secondary, community college, university and city partners . . . (The person) will provide

broad planning and direction to other think tank style consortia in the district'. Many times, the employees' tenure may be limited by the survivability of their unit. Transaction cost economics arguments favor internalization of these employees, given their firm specificity. However, the resource-based view arguments suggest otherwise because the employee skills are not very valuable. This cell is characterized by moderately high commitment and high flexibility. The alliance may be an appropriate mode of contracting. The firm is likely to generate 'somewhat superior' but persistent returns over the length of the employee contract. The flexibility of employee skills may prove a hedge in uncertain times. The relatively high level of competitive uncertainty in comparison with behavioral uncertainty is also consistent with high levels of flexibility.

### Discussion

Organizations tend to use different types of employment contracts with different individuals or groups of employees performing similar jobs. Such contractual types may also impact other human resource activities, such as the design of compensation, training and career planning. Despite the existence of firms using different strategies with respect to human capital, a theoretical model does not exist to address questions, such as why do firms choose different employment contract modes with different employee groups or individuals under fundamental uncertainty, and what impact, if any, such contract modes have on the firms' human resource strategies. In this study, we proposed a model incorporating firm specificity of human assets (usage- and firm-specific skills), value created by human assets, and the role of uncertainty (behavioral and competitive) in the design of such contracts.

Our model has several implications for researchers to examine the role of human resource strategies. Sonnenfeld and Peiperl (1988) suggested that both individuals and firms make investments in human capital. Our model suggests that the investments firms make in individuals may be a function of the extent to which the skills are firm specific. We propose that investments by firms on employee developments may provide the firm with a competitive advantage and sustainable value, particularly when the firm emphasizes internal development modes. Even here, we suspect that firms operating in an uncertain environment may emphasize horizontal skills, compared with firms operating in a stable environment, which may emphasize training on vertical skills. By contrast, in contract types emphasizing acquisitions, the level of investments made by the firm in human asset development may be comparatively lower than internal development; yet individuals themselves



may invest more in enhancing their skills. Similarly, in the two contractual modes, firms may not make much investment in human assets as these are 'arms-length contracts'. In the alliance modes, firm investments on employees may be quite restrictive and be project based.

The types of investments firms versus individuals make in human capital may also have implications for the differences in career systems for different groups of employees. For instance, firms emphasizing internal development mode A may rely on vertical career paths for these employees, while emphasizing horizontal career paths for employees with contractual types under internal development mode B. While career paths are non-issues under contracting, they may be more restrictive under alliance than under internal developments. Similarly, under acquisition modes, careers may be quite restrictive and time bound until the use of the human asset for the organization diminishes.

In organizational economics (Barney, 1995) and compensation literature (Milkovich & Newman, 2005), alignment of individual behaviors with the objectives of the organization has been a crucial research area. Our model may also be useful in analyzing the issues relating to compensation design. For instance, why do firms adapt different compensation policies with different employee groups? We suspect that under internal development modes, the firms may emphasize lower cash compensation, yet emphasize the long-term relationship with the employees through pension plans tied to longevity in the firm. At the other extreme, under contractual types, firms may only rely on cash incentives based on market rates and bidding. In the alliance mode, due to high usage or firm specificity, firms may rely more on intrinsic than extrinsic rewards. In the acquisition modes, firms may rely on short-term performance-based cash compensation than on long-term rewards. Future research should address these issues.

Why and how do firms make the decisions to move employees from one contract type to another? For instance, employees from acquisition mode may move to internal development mode at a later date. Owing to the dynamic nature of the environment, if the value created by such assets is sufficiently high to provide the firm with a competitive advantage, firms may choose such an option.

The value dimension often implicitly incorporates the ways in which a firm deals with opportunities and threats in the industry (Barney, 1991). It is possible that firms in different industries may deploy the jobs differently, and may adapt different contractual types, depending on the value created. As an example, refuse collection may not be a high value-added activity for a financial services organization but it may well be a high value-added activity for a refuse collection firm. Therefore, the former may outsource the

activity, and the latter may internalize the activity. Thus, future research may address the influence of the industry on the contractual types more explicitly.

From a managerial perspective, this article has several useful implications. In particular, cells I and II are especially important for the generation of a sustainable competitive advantage. Both are characterized by high firm specificity on the part of employees, and a high potential for value creation. However, the key difference between the two is the *flexibility* of skills. Under increased competitive uncertainty, employees in cell II can cope with fundamental change much better than those in cell I. Employment contracts in cell I can produce persistently superior or inferior returns, depending on whether the change unlocks significant opportunities or threats. Employment contracts in cell II can produce persistently superior returns under favorable change conditions. However, they can lessen the persistence and the magnitude of inferior returns in an unfavorable environment. This is because the 'lock-in' costs are less formidable in cell II than in cell I under competitive uncertainty.

## Conclusion

We have proposed that commitment versus flexibility may not be a bipolar choice, as often assumed, and firms may have different levels of commitment and flexibility under certain conditions. We have accomplished this by integrating the literatures on asset specificity (firm and usage specificity), the value-creation potential of human resources, and uncertainty (strategic and behavioral); and by suggesting that commitment versus flexibility may vary as a function of these three variables. We have suggested that when the *relative* levels of behavioral and competitive uncertainties change, the limitations on the movement from one cell to another can be a source of persistent superior (if the change unlocks opportunities) and inferior (if the change unlocks threats) returns. Furthermore, the proposed model may also be useful for explaining variations in human resource strategies such as employee development, incentives and compensation, and career management. Future research may also test the model empirically.

## Note

- 1 Authors are listed alphabetically but both authors contributed equally.

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