Antecedents on human resource management practice change

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ANTECEDENTS ON HUMAN RESOURCE MANAGEMENT

PRACTICE CHANGE

ZHOU XIANG

Nanyang Business School

2021

**ANTECEDENTS ON HUMAN RESOURCE MANAGEMENT
PRACTICE CHANGE**

ZHOU XIANG

Nanyang Business School

**A thesis submitted to the Nanyang Technological University in partial
fulfilment of the requirement for the degree of Doctor of Philosophy**

2021

Statement of Originality

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Abstract

Compared to the work on outcomes of human resource management (HRM) practices, less effort has been made on theorizing and examining the relationship between antecedents and HRM. To move the field forward, it is important to understand how HRM practices are shaped and influenced. In Chapter 1, I review research that has investigated the factors that influence HRM practices and evaluated the empirical evidence, though this is a small fragment of the HRM literature. HRM practices are categorized based on Tsui, Pearce, Porter, and Tripoli's (1997) employee-organization relationships (EOR) framework into II (investment and inducement) and EE (expectation-enhancement) practices. To integrate this literature, I organize these influencing factors into external and internal segments. Chapter 1 paves the way for theoretical development and empirical investigation on the factors that influence HRM practices.

Drawing upon attention-based view of the firm and EOR framework, I develop a theoretical model to examine why firms change HRM practices in Chapter 2. Specifically, I predict that firms with an internally (externally) focused culture will react more strongly to internal (external) issues with HRM change. Flexibility (control) oriented culture will respond by adjusting their II (EE) HRM practices. Change in HRM practice further relates to firm performance. This chapter answers two important questions – why firms implement HRM change and why firms differ in what they change. Through two studies, I found some support for the proposed model. Specifically, in Study 1, clan culture was found to interact with prior firm performance to predict II usage, while market culture interacted with prior performance to predict EE usage. II usage was found to be positively related to firm performance, while EE usage had negative relationship with firm performance. In Study 2, clan culture was found to interact with labor shortage to predict II usage.

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Antecedents on Human Resource Management Practice Change

CHAPTER 1

Influences on Human Resource Management Practices: A Synthesis of External and Internal Factors

The study of human resource management (HRM) has most frequently been undertaken from a normative perspective. Much of the literature has, either explicitly or implicitly, pertained to the way HRM practices facilitate various organizational objectives and/or employee well-being. Indeed, meta-analyses have shown that HRM affects employee motivation, turnover, organizational productivity, and financial performance (Jiang, Lepak, Hu, & Baer, 2012; Saridakis, Lai, & Cooper., 2017; Subramony, 2009). Compared with the vast empirical work on the consequences of HRM practices, the literature on antecedents is paltry. Clearly, organizations often fail to adopt state-of-the-art HRM practice (Johns, 1993; Rynes, Giluk, & Brown, 2007), but the factors that influence certain HRM practices in an organization are unclear. As noted by Jackson, Schuler, and Jiang (2014), there is a gap in the literature regarding when, where, and why HRM systems become established. A systematic review of the influences on HRM practices is therefore needed.

Research regarding influences on HRM practices has been sporadic; most of these studies only (a) considered isolated factors that shape HRM, targeting a single type of influence and a single HRM practice and/or (b) approached the issue from a single disciplinary and theoretical perspective. Several authors have called for more attention to the antecedents of HRM practices (e.g., Jackson et al., 2014; Jiang & Messersmith, 2018). In an effort to promote the systematic thinking of HRM practice, Jackson et al. (2014) identified thirty articles on antecedents of HRM systems (e.g., high performance, high commitment)

and categorized them as internal environment and external environment. This chapter expanded the scope of their review to include articles on discrete HRM practices (e.g., training, compensation) and reviewed 84 quantitative studies. However, the number of studies examining influences on specific HRM practices is small; therefore, there was little merit in organizing this review according to distinct HRM practices. In this chapter, I categorized HRM practices into *inducements and investments* (II) practices and *expectation-enhancing* (EE) practices based on the employee–organization relationship (EOR) framework (Tsui et al., 1997). According to the EOR framework (Tsui et al., 1997), HRM practices reflect (a) the different investments that organizations make in their employees and (b) the different contributions that organizations expect from their employees. In particular, HRM practices can be categorized based on two social-exchange-based dimensions—enhancing employees’ expected outcomes (i.e., II practices) and enhancing employers’ expected contributions from employees (i.e., EE practices; Cropanzano & Mitchell, 2005; Tsui et al., 1997). Although other frameworks can be used to classify HRM practices (e.g., ability-motivation-opportunity framework; Jiang et al., 2012), the EOR view is more suitable for examining the influences on HRM, as it represents two different exchange logics from the perspective of employers (Shaw, Dineen, Fang, & Vellella, 2009), who are subject to external and internal influences and who can impact HRM practices to a larger extent, as compared to employees (Fitzsimmons & Stamper, 2014).

The goal of this article was to summarize the empirical findings on the factors that shape various HRM practices in organizations. I have organized this review in an integrative framework that synthesizes both external and internal factors. By examining the relationships between HRM practice and various characteristics in the external and internal organizational environment, this chapter makes an important contribution to the HRM research and practice. It will explicate firms’ decisions to use different types of HRM practices, as well as their

decisions to forgo some practices despite the substantial potential returns from them.

Moreover, it will assist organizational decision makers in adjusting and improving the HRM design in their organizations.

Prior to the review itself, a discussion of the categorization of HRM practices based on the EOR framework is necessary.

The EOR Framework for HRM Practices

As briefly discussed above, I use the EOR framework to categorize HRM practices because it represents two different exchange logics from the perspective of employers (Tsui et al., 1997; Shaw et al., 2009). Another popular categorization that may represent employer's perspective is bundles of HRM practices that encompass various organizational investment and expectation practices, e.g., high performance work system (HPWS), high commitment HRM practices, and high involvement work system. Bundles of HRM are thought to be superior in achieving firm performance because the synergistic or systematic effect of combinations of HRM practices is more than the effect of individual HRM practices (Ichniowski et al., 1997; MacDuffie, 1995). However, this approach has two limitations. First, there is no agreement on what constitutes HPWS (or high commitment HRM practices, or high involvement work system). For example, Zacharatos, Barling, and Iverson (2005) included ten HRM practices when assessing HPWS: employment security, selective hiring, training, teams, status distinctions, information sharing, contingent compensation, transformational leadership, job quality, and measurement. In Den Hartog and Verburg (2004), they did not have employment security in their measure of HPWS and included five other practices such as the obligation to update skills, mission, HRM strategy, profit sharing, and autonomy. Gittell, Seidner, and Wimbush (2010) took a different approach and included conflict resolution and boundary spanner practices as part of HPWS. These different operationalizations of HPWS lead to the second limitation, not all HRM practices could be

categorized based on bundles of HRM practices. For example, some HRM practices (e.g., pay level, monitoring) were not discussed in HPWS papers; whether they could be considered HPWS or not is a question.

Instead, EOR framework provides a simple and clear rule to categorize HRM practices: whether the practice manifests the investments organizations make in their employees or the contributions organizations expect from them (Shaw et al., 2009). As such, HRM practices could be either invest and inducement practices that enhance employees' expected outcomes or expectation-enhancing practices that focus on employers' expected contribution from employees (Tsui et al., 1997; Shaw et al., 2009). In addition, empirical studies confirmed the existence of two types of HRM practices that generally match with the EOR framework. For example, Huselid (1995) identified two factors from 13 high-performance work practices based on factor analysis. The first factor is "employee skills and organization structures," which focuses on enhancing employee knowledge, skills, and abilities and provides opportunities for employees to apply their skills. This factor is similar to II practices. The second factor is "employee motivation," which includes HRM practices that focus on recognizing and reinforcing desired employee behaviors, corresponding to EE practices that emphasize expected contribution from employees.

Given the strengths of EOR framework, I choose to use it to categorize HRM practices in both Chapter 1 and 2. II practices aim to enhance employee motivation and commitment and increase human capital pool (Shaw et al., 2009). Examples of II practices include tangible rewards (e.g., pay level, benefits level) and indirect investments that promote employee well-being and career development (e.g., training opportunities, job security, and communication; Heavey, Holwerda, & Hausknecht, 2013; Shaw, Delery, Jenkins, & Gupta, 1998). In contrast, EE practices widen organizational control over employee behaviors, reduce their autonomy, and increase employees' accountability for organizationally desired

contributions. Common forms of EE practices include pay-for-performance systems, close supervision and monitoring, and performance appraisal. A meta-analysis by Heavey et al. (2013) showed that EE practices are generally positively related to collective turnover, while II practices generally showed negative relationships with turnover, although there is considerable variance in the observed correlations.

In this article, I organized HRM practices into EE-related or II-related practices based on EOR framework and reviewed the empirical studies on the influences of HRM practices and highlighted theories that have been explored. This review focuses on the literature relevant to HRM, including industrial relations, strategic management, organizational behavior, and economics. The article expands the results of recent reviews (e.g., Jackson et al., 2014) and organizes the influences on HRM practices into external and internal factors. I began with a review of studies that have examined external influences on HRM practices (i.e., labor market, environmental dynamism, and institutional isomorphism). I then reviewed the internal influences, including organizational (i.e., firm characteristics, performance, turnover, strategy, culture, organizational practices, and unions) and decision makers' (i.e., demographics, perceived benefits and costs, and leadership style) characteristics. By integrating and extending these reviews, I outlined a set of suggestions for future research on HRM practices.

External Influences

Based on the literature review, I identified the three external influences most often examined in the literature: the labor market, environmental dynamism, and institutional isomorphism. The labor market pertains to a firm's ability to recruit employees. The difficulty or ease of attracting and recruiting the right people should influence organizations' HRM practices, such as hiring, selection, and compensation. Environmental dynamism describes the degree of change in a firm's competitive environment (Dess & Beard, 1984),

which will prompt firms to alter their HRM practices to adapt to changes in the environment.

Institutional isomorphism refers to institutional pressures that prompt organizations to respond by adopting certain types of HRM practices.

Labor Market

According to resource dependency theory, organizations are likely to take action to manage critical resources that are difficult to acquire (Pfeffer & Salancik, 1978). Labor scarcity hinders organizations from attracting employees, as the labor supply is low. Furthermore, with a tight labor market, current employees may act opportunistically and leave an organization without fear of reprisals. Neoclassical models predict that organizations will raise the wage level to attract and retain employees when the labor supply is scarce. Alternatively, organizations can adopt more II practices, such as benefit programs and promotion opportunities, to attract and retain employees. In contrast, when the labor market supply is abundant and organizations have access to a munificent labor pool, they may reduce their investment in employees (i.e., fewer II practices) and increase the use of control measures and demand more output from employees (i.e., more EE practices). Therefore, the labor market supply should be negatively related to the use of II practices and positively related to EE practices.

Despite the intuitive appeal of the arguments linking the labor market and HRM practices, they are only weakly supported by few studies. Some studies have shown that labor shortage (the reverse of labor supply) is negatively related to some II practices, such as innovative recruitment practices, but positively related to others (e.g., job applicant screening practices; Bennett, Blum, & Roman, 1994; Tannenbaum & Dupuree-Bruno, 1994). Yet, others found no significant correlation between recruitment difficulties and the use of II practices (e.g., internal hiring and promotion, Ganesan, Weitz, & John, 1993; Pfeffer & Cohen, 1984). Most research by labor economists showed that labor supply abundance that is

caused by the influx of immigrants, has a trivial effect on wage levels (e.g., McGovern, 2007). Disentangling the problems of hiring, Richter and Schrader (2017) found that difficulties in hiring the right type (i.e., qualified) of employees, rather than hiring the right number of employees, contributed to the use of financial participation schemes of profit sharing and employee share ownership, which are forms of EE practices. Altogether, there is only limited support for the argument that labor market supply is positively related EE practices and negatively related to II practices. These mixed results suggest that the relationship may be conditioned in complex ways by other factors such as job types.

Environmental Dynamism

Environmental dynamism refers to the rate and unpredictability of changes in an organization's external environment (Dess & Beard, 1984). As environmental dynamism requires frequent strategic and structural change (Karaevli, 2007), firms facing a turbulent environment often rely on less formalized structures that enable greater flexibility (Drazin & Van de Ven, 1985). Contingency theory suggests that organizations with less formalized structure are more adaptive and flexible in changing and volatile environment (Burns & Stalker, 1961; Lawrence & Lorsch, 1967). Therefore, firms should use fewer HRM practices (i.e., less structure) under a dynamic environment to facilitate adaptation to changes (e.g., Kim & Ployhart, 2014; Snow & Snell, 1993). However, environmental dynamism may increase the need for employee autonomy, which in turn, increases the need to provide the workforce with skills and training and to ensure employee commitment to organizational goals (Batt, 2000; Knox & Walsh, 2005). Thus, firms may invest more in II practices under a turbulent environment.

Empirical work showed inconsistent findings regarding the relationship between environmental dynamism and HRM practices. For example, Huselid and Rau (1997) found that dynamism was negatively related to the majority of the High Performance Work Systems

(HPWS) components that encompass both II and EE practices across three time periods (1992, 1994, 1996), which supports the contingency view. In contrast, Zhu, Cooper, Cieri, and Dowling (2005) found that changing business environment was positively related to both EE practices (e.g., performance appraisal) and II practices (e.g., training) in Chinese firms in both the 1994–1995 and 2001–2002 surveys. These contrasting results required a closer look at the distinguished context of these two studies. More than 40% of the firms of Huselid and Rau's (1997) sample were from the manufacturing industry in the United States, which has declined since the 1990s. As a consequence, companies may have removed their human capital investment, potentially resulting in a negative relationship between dynamism and HRM practices. In contrast, China's economic reforms began in 1978, and most firms are relatively young and in a stage of rapid growth. Therefore, Chinese firms have focused more on setting up formal HRM practices and used a hybrid system of both commitment- and control-based HRM practices (i.e., both II and EE practice; Su & Wright, 2012). These results suggest that other important contextual factors (e.g., industry decline or growth) may moderate the effects of environmental dynamism on HRM practices.

Institutional Isomorphism

The institutional perspective proposes that using certain HRM practices is a way for organizations to gain legitimacy, which could ensure the resources from institutional bodies to facilitate their survival (DiMaggio & Powell, 1991; Meyer & Rowan, 1977). Institutional isomorphism occurs via three mechanisms: coercive, normative, and mimetic (Paauwe & Boselie, 2007). Coercive isomorphism refers to the need for homogeneity stemming from political influence. Government and other powerful organizations could diffuse coercive pressures directly on organizations (DiMaggio & Powell, 1983). For example, an employee welfare program may be adopted in response to pressures from government. Normative isomorphism occurs when organizations adopt HRM practices due to norms, standards, and

institutionalized solutions in their areas of business and professional circles. For example, professional associations that the organization enrolled in may set professional standards and promote certain HRM practices (e.g., pay-for-performance). Mimetic isomorphism is a response to uncertainty, whereby organizations benchmark each other and imitate “best” practices that are viewed to be more legitimate and successful than others. As such, all three sources of institutional isomorphism should be positively related to the particular HRM practices that they are being pressured to adopt or that they want to imitate.

Empirical studies have shown some support for the positive relationship between institutional pressure and HRM practices. For example, using HR managers as key informants, Pasamar and Valle (2015) found that the perception of coercive pressure, mimetic pressure, and normative pressure is positively related to employees’ supportive benefits. Decramer, Smolders, Vanderstraeten, and Christiaens (2012) found that coercive institutional factors (law and university regulations) and mimetic factors have a positive impact on the adoption of employee performance management systems in academic units. In addition, industry-level diffusion is found to be positively related to the adoption of certain HRM practices, such as childcare services for employees (Goodstein, 1994) and performance-related pay (Kang & Yanadori, 2011).

Summary and Synthesis of External Influences

Research on the external influences of HRM practices largely focused on three factors: the labor market, environmental dynamism, and institutional isomorphism. Overall, the evidence is clearest, although limited, for the role of institutional isomorphism. The labor market and environmental dynamism factors received only weak support. Of the theories used, institutional theory received relatively strong empirical support, which shows that institutional pressures can have considerable influence on HRM practices used in the organizations. However, most of this research was conducted using cross-sectional data,

which precludes the possibility of drawing meaningful causal links. In addition, there lacks insights into the mechanisms through which external higher level influences actually affect organization's HRM practices.

Internal Influences

The two main categories of internal influences are organizational influences and decision makers' influences. Organizational influences are composed of firm characteristics, performance, turnover, strategy, culture, organizational practices, and unions. Decision makers' influences pertain to demographics, perceived benefits and costs, and leadership style.

Organizational Influences

Firm Characteristics

Past literature has explored several firm characteristics that may be correlated with HRM practices. This section elaborates upon four firm characteristics that are most often examined in the literature: size, family firm, ownership type, and idiosyncratic skills.

Size. From the perspective of economies of scale, it is reasonable to predict that high-cost HRM practices are more likely to be found in larger organizations. Indeed, an organization may need to reach a certain workforce size before it can justify the use of some HRM practices. For example, a firm needs to have enough workers and hierarchies to use the internal labor market (i.e., the system by which senior posts in the company are filled by internal workers through promotion or transfer, Baron et al., 1986; Pfeffer & Cohen, 1984). Institutional theory suggests that organizations with larger size tend to adopt more sophisticated and socially responsive HRM practices, as they are more visible and under greater pressure to comply with external influences to gain legitimacy. However, large companies wield more political power and resources and have more bargaining power over employees (Kim & Chung, 2016), which insulates them from the pressure to adopt socially

responsive HRM practices; thus, they may use fewer II practices that emphasize investment in employees.

Most empirical work used economies of scale and the visibility argument and found that organizational size is positively related to the use of formal and sophisticated HRM practices that encompass both EE and II, such as performance appraisal (Dimick & Murray, 1978; Kim & Gao, 2010), performance-based pay (Kang & Yanadori, 2011; Wood, Dibben, Stride, & Webster, 2011), and the internal labor market (Kaplan & Ferris, 2001; Pfeffer & Cohen, 1984). Although some studies showed that firm size has a negative association with II practices (e.g., Kim & Chung, 2016) and EE practices (e.g., Huang & Verma, 2018), the empirical studies generally supported the view of economies of scale and institutional perspective, suggesting that size is associated with more formal and sophisticated HRM practices that include both II and EE.

Family Firm. Family firms control approximately 80% of businesses over a broad range of industries in the United States and employ about 60% of the global workforce (Gomez-Mejia, Larraza-Kintana, & Makri, 2003; Neckebrouck, Schulze, & Zellweger, 2018). Studies examining the HRM practices in family firms usually derive hypotheses from stewardship theory and/or agency theory. Stewardship theory suggests that family firms adopt more II practices and fewer EE practices, as family managers are believed to act in pro-organizational and collectivistic ways and are intrinsically motivated to care about the prosperity of the organization (Davis, Schoorman, & Donaldson, 1997). As such, family firms develop a stewardship culture that cares about and trusts their employees, which should give rise to more II practices and fewer EE practices. Agency theory, however, suggests that, while an owner-management status reduces the costs of monitoring and incentivizing family members, it provides additional incentive for family members to opportunistically exploit nonfamily employees, for example, nepotism or preferential treatment of family members

(Schulze, Lubatkin, Dino, & Buchholtz, 2001; Young, Peng, Ahlstrom, Bruton, & Jiang, 2008). As such, agency theory predicts that family firms should have more EE practices and fewer II practices.

Empirical evidence showed partial support for both theories. Family ownership was found to be negatively correlated to both II and EE practices. For example, family firms are negatively related to employee compensation (Carrasco-Hernandez & Sánchez-Marín, 2007; Neckebrouck et al., 2018), training (Neckebrouck et al., 2018), and downsizing (Neckebrouck et al., 2018; Stavrou, Kassinis, & Filotheou, 2007). Moreover, based on a sample of 3,406 firms across 14 countries, Cristiani and Peiro (2018) showed that family-owned firms are negatively related to both performance- and person-centered HRM practices. These results suggest that family firms may be reluctant to adopt either II or EE practices. This may be due to the fact that family firms are usually small in size and less complex than nonfamily firms (Carrasco-Hernandez & Sánchez-Marín, 2007); thus, it is not cost efficient to adopt more HRM practices.

Ownership Type. The extant literature focused on three major ownership types: privately owned enterprises, foreign-owned enterprises, and state-owned enterprises. Among the three types of ownership, state-owned firms are more likely to face the greatest pressure to comply with the demands of the state and employees, as they are more embedded within traditional institutions (e.g., political ideology; DiMaggio & Powell, 1983). Agency theory also suggests that state-owned firms have incentives to assist governments to achieve social and political goals, such as improving employee benefits and maintaining a stable society. As such, state-owned enterprises are more likely to adopt II practices and less likely to use EE practices. In contrast, privately owned firms and foreign-owned firms are not part of the traditional institutional environment. Organizations of these two ownership types are more under the direct influence of competitive market. Therefore, privately owned firms and

foreign-owned firms are unlikely to fulfill the state's demand for social stability and employee demands through the provision of II practices and are more likely to use EE practices to improve employee efficiency in the face of market competition.

Consistent with these arguments, empirical studies have shown that state-owned firms are generally negatively related to EE practices such as short-term contracts (Huang & Verma, 2018), performance appraisals (Zhu et al., 2005), and dismissals (Goodall & Warner, 1999). However, the results for II practices are mixed. For example, Huang (2016) found that state-owned firms are positively related to contract duration, but are negatively related to training and employee involvement programs. Baron, Davis-Blake, and Bielby (1986) found that U.S. organizations in the state or social-overhead-capital sector were more likely to use internal labor markets, while Gong and Chang (2008) found that Chinese state-owned firms are less likely to provide career advance opportunities. The different national context may explain these differences. The state-owned sector in China is shrinking, as China has been undergoing economic transformations since 1978, which may constrain the career advancement opportunities provided for existing employees in state-owned firms. In contrast, the context of U.S. state-owned firms is more stable, so they are more in line with the prediction of institutional theory. Ouyang, Liu, and Zhang (2016) argued that Chinese state-owned firms can be further differentiated regarding whether they are local- vs. central-controlled, as well as regional differences. Based on that categorization, they found that local state-owned firms in coastal provinces in China are more similar to private business, which is negatively related to high-involvement human resource systems that are basically comprised of II practices.

Few studies examined the relationship between privately owned firms and foreign-owned firms and HRM practices. The findings showed that privately owned firms and

foreign-owned firms are more likely to use a combination of both EE and II practices (e.g., short-term labor contracts and training; Huang, 2016).

Idiosyncratic Skills. Transactional costs economics suggests that organizations choose the appropriate organizational arrangement to minimize costs that arise from exchanges (Williamson, 1985). One exchange characteristic that describes and differentiates the nature of economic transactions is human asset specificity, which refers to the firm-specific skills and knowledge employees obtain in their work (Williamson, 1981). Although firm-specific human assets could be a source of a firm's superior performance, this may not be effectively translated into reality because both parties may conduct opportunistic behaviors that harm the employer–employee exchange (Williamson, 1985). On the one hand, employees are vulnerable because firm-specific skills are not valuable to other employers, so employees are reluctant to develop these skills. On the other hand, employers are vulnerable because their employees may develop more tacit knowledge than they, the employers, possess. As such, firms may invest more in II practices to enhance employees' organizational commitment and avoid unwanted employee turnover, such as internal labor markets and employee-involvement practices. However, the relationship between firm idiosyncratic skill and EE practice is less clear. Firms may increase the use of EE practice to monitor and ensure that employees invest in learning and improving firm-specific skills. However, firms may decrease the use of EE practices to retain employees, as EE practices are generally found to be positively related to turnover (Heavey et al., 2013).

Indeed, empirical results have largely shown that firms are more likely to use II practices, such as an internal labor market, for employee idiosyncratic skills. Lepak (1998) also found that firms are more likely to invest in human capital (i.e., use strategic partnerships and knowledge-based employment rather than contract or traditional work

arrangement) when the uniqueness of human capital increases. To my best knowledge, research on how firm idiosyncratic skill relates to EE practice is lacking.

Performance

Though the research on HRM has focused on the impact of HRM on firm performance, scholars have noted that prior firm performance can also influence the use of HRM practices. The behavioral theory of the firm argued that both problems and slack can motivate organizations to search for alternative processes and practices (Cyert & March, 1963). Accordingly, there are two main views on how past performance could influence a firm's use of HRM practices. First, high-performing firms have slack resources, enabling for more flexibility to expand or explore new HRM practices including both II and EE (Jackson & Schuler, 1995; Waddock & Graves, 1997). Second, poor performance (a problem) can motivate organizations to depart from their current practice and seek alternatives. As such, firms facing financial difficulty may adopt HRM practices that focus on improving employee efficiency and decrease their investment in employees to save costs. That is, firms will use more EE practices and fewer II practices when their performance is low. These two different views have similar predictions regarding the relationship between firm performance and II practices (i.e., a positive link), while departing regarding the prediction of the relationship between performance and EE practices.

Empirical studies are more supportive of the slack perspective. It has been shown that firm performance is generally positively related to II practices, such as selection practices (Kim & Polyhart, 2018), human capital investment (Bentley & Kehoe, 2020; Blanchflower, 2007), and childcare programs (Piszcek, 2020), as well as EE practices, such as variable pay, including stock option plans and performance-related pay (Torp, 2016; Wang & Verma, 2012). Based on the longitudinal data of over 2000 firms, Shin and Konrad (2017) showed that firm productivity is positively related to the use of HPWS, which is a mixture of both II

and EE practices. Together, these results suggest that the slack perspective may be more relevant when hypothesizing the relationship between past performance and the use of HRM practices.

Turnover

Employee turnover has undesirable effects on unit performance (Park & Shaw, 2013). Organizations with undesirably high collective turnover rate may seek to mitigate future turnover via the use of HRM practices. The Exit, Voice, Loyalty, Neglect (EVLN) model identifies four ways that employees respond to job dissatisfaction (Rusbult, 1987). Employees may react passively by ignoring the problem (neglect) or waiting for the problem to be fixed (loyalty), or they may actively respond to dissatisfaction by changing the situation (voice) or leaving the organization (exit). As such, HRM practices that cater to employees' needs and improve their satisfaction may be useful in deterring employee turnover. For example, II practices such as work–life balance programs may aid in reducing the turnover rate of married employees. Employee involvement programs may be helpful with easing employee dissatisfaction by incorporating employees' contribution into organization's decision-making process. High wages may deter employees from opportunities elsewhere. On the contrary, a high turnover rate indicates that employees tend to have short tenure in organizations. Therefore, companies may be reluctant to invest in employees, as it is not cost efficient. As such, turnover should be negatively related to II practices. For EE practice, I expect turnover would predict a decrease in EE practice. Turnover indicates that employees are unsatisfied with their job and work environments (Tett & Mayer, 1993). To retain employees, organizations are motivated to remove some EE practices that emphasize on employee contribution, for example, lessen the extent of performance appraisal, decreasing monitoring level.

Both views on how turnover affects II practices have received some empirical support. For example, turnover was found to be negatively related to II practices, such as employee assistance programs, preemployment drug screening (Bennett et al., 1994), and composite selection practices (Kim & Ployhart, 2018), while other studies showed that turnover is positively related to II practices (e.g., average wages, Goodall & Warner, 1999; childcare, Piszczek, 2020). A drawback of these empirical studies is that they mainly used cross-sectional data (e.g., Bennett et al., 1994; Goodall & Warner, 1999), which may raise doubts about the causality of the findings. One notable exception is Piszczek's (2020) study, which used longitudinal data on 24,888 firms to show that turnover is positively related to the presence of childcare practices. Few studies explored the relationship between turnover and EE practices, which serves as a future direction to pursue.

Strategy

The external fit view of strategic HRM theory suggests that firms should adopt HRM policies and practices that are consistent with a firm's strategy (Delery & Doty, 1996). Schuler and Jackson (1987) argued that HRM practices should be designed to reinforce the behavioral implications of strategies. In terms of firm strategy, Schuler and Jackson's (1987) framework is often used to examine its relationship with HRM practices; moreover, their framework shares several similarities with Porter's (1980) and Miles and Snow's (1984) typologies of strategies. According to Schuler and Jackson, there are three types of firm strategy: cost reduction, innovation, and quality enhancement.

Cost reduction strategies strive to produce goods and services that are less costly than those of the firm's competitors (Schuler & Jackson, 1987). Compliant HRM practices should emphasize lowering cost and maximizing efficiency through, for instance, lower wage levels, closer monitoring, and fewer employee-involvement practices; in other words, they should have more EE practices and fewer II practices to offer less investment in employees while

expecting more contributions from them. Innovation strategy focuses on offering new and different products or services (Schuler & Jackson, 1987). Organizations adopting innovation strategy may use more II practices by, for example, offering training to current employees to develop their skills, selecting highly skilled and creative individuals, and granting more discretion to employees while exercising minimal control. EE practices such as incentive pay, which focuses on the quantitative measure of performance, may inhibit risk-taking and foster a short-term focus (Gerhart, Rynes, & Fulmer, 2009), which is contrary to the goal of innovation strategy and, thus, are less likely to be used. A quality enhancement strategy attempts to produce and deliver the highest quality goods and services to customers. The concern for quality may be reflected in an organization's use of II practices (Chow, Huang, & Liu, 2008), for example, by involving employee in the continuous improvement process, attracting strong job candidates, and providing more in-house training programs. EE practices, such as performance appraisal and pay-for-performance, are also aligned with the organizational goal of continuous assessment and improvement of product and/or service quality. As such, both II and EE practices may be prevalent in organizations pursuing a quality enhancement strategy.

The empirical evidence generally shows some support for the external fit argument. Though only a small number of articles have studied the quality enhancement strategy, the evidence for its relationship with HRM practices is clear, as the strategy was generally found to be linked with both EE practices (e.g., short-term-oriented HRM; Takeuchi, 2009) and II practices (commitment-based HRM; Chow, et al., 2008).

In line with the external fit argument, the cost reduction strategy was found to be positively related to EE practices such as performance pay (Sun, 2016; Wang & Verma, 2012), performance appraisal (Bowen, Galang, & Pillai, 2002; Zhu et al., 2005), and short-term labor contracts (Huang, 2016). However, some studies found the II practices negatively

related to cost reduction strategies such as investment in employee skills (Huselid & Rau, 1997), and training and employee involvement programs (Huang, 2016), while other studies suggested a positive relationship between the two, such as training (Zhu et al., 2005) and commitment-configured HRM (Chow et al., 2008). In addition, Ding and Akhtar (2001) found that firms scored high in cost reduction strategy used limited HRM practices.

Innovation strategy was found to be related to both EE practices, such as incentive pay and performance management (Flores, 2006), and II practices, such as training (Jackson, Schuler, & Rivero, 1989), sophisticated selection, participation and communication (Sun, 2016), and work–life balance programs (Wang & Verma, 2012). Lepak, Taylor, Tekleab, Marrone, and Cohen (2007) found that innovation strategy was positive related to high investment human resource systems, which is made up of both II and EE practices, for both core and support staff. Therefore, the empirical findings on innovation strategy only partially supported the theoretical arguments of external fit.

Culture

Organizational culture reflects deeply embedded values and beliefs that define appropriate behaviors for organizational members (O'Reilly & Chatman, 1996), which are conceptually related to a firm's HRM philosophies and subsequent HRM policies and practices. Organizations that value people and recognize human capital as the determinant of organizational effectiveness are more likely to invest in their HRM systems. As such, people-oriented organizations are more likely to use more HRM practices, especially II practices that focus on developing human capital.

Consistent with this logic, the empirical findings showed that a people-oriented culture is generally positively related to both EE and II practices. For example, Lepak et al. (2007) found that employee-centered HR philosophy is positively related to staffing, training, compensation, and performance management for both core and support employees.

Managerial belief in the value of workers was associated with more II practices such as training (Bartlett, Lawler, Bae, Chen, & Wan, 2002). In addition, Wang, Bruning, and Peng (2007) showed that humanistic goal priority is positively related to a bunch of II and EE practices such as internal promotion, internal recruitment, employee selection, employee training, and performance-contingent compensation.

Organizational Practices

The internal fit perspective suggests that one HRM practice may need to comply with other HRM practices to form “powerful connections” that exert synergistic effects (Delery, 1998). Kepes and Delery (2007) reviewed the literature on internal fit and summarized its four types: within-HRM system vertical fit, inter-HRM activity area fit, intra-HRM activity area fit, and internal between-HRM system fit. Out of the four types of internal fit, inter- and intra-HRM activity area fit received more empirical testing (Kepes & Delery, 2007). Inter-HRM activity area fit refers to the fit across different HRM activity areas (e.g., the fit between work design and compensation), while intra-HRM activity area fit is the fit among HRM activities within an area (e.g., the fit between pay level and pay dispersion within compensation area). Different combinations of HRM practices can have additive, substitutive, and synergistic effects on firm performance (Delery, 1998). As an attempt to further examine the internal fit problem, Jiang et al., (2012) discussed the internal fit argument at three levels of HRM systems (systems, policies, and practices) using the Ability, Motivation, and Opportunity (AMO) framework. Specifically, different levels of HRM can assist the accomplishment of goals of improving employees’ KSAs (knowledge, skills, and ability), motivating employees, and providing opportunities for employees to contribute. In an HRM system, the policy domains of AMO within an HRM system can have synergistic effects. Within a policy domain, different HRM policies can have synergistic effects if the policies are contributing to a same goal interdependently, or they can have additive effects if

the goals are independent. Within a policy, when HRM practices are contributing to different sub-goals, their effects are additive; otherwise, the relationship among these HRM practices are substitutive. Using the EOR framework, II and EE practices refer to different goals thus can have synergistic effects when used together. Within II/EE practices, different operations can have additive or substitutive effects when they are contributing to different or the same goal respectively. Therefore, there are many possibilities of how the use of one HRM practice relates with the use of other HRM practices.

Research generally suggests that firms tend to have internally coherent HRM systems (Kepes & Delery, 2007) and adopt supporting HRM practices to secure and further boost the benefits of using certain HRM practices. For example, Bartlett et al., (2002) showed that employee empowerment, as a strong commitment and belief in employee ability, was positively associated with human resource development activities that mainly involve training. Pil and MacDuffie (1996) found that implementing complementary HRM practices in previous years that support changes and new work practices, such as training, hiring and contingent rewards, was positively related to adopting high-involvement work practices later.

In addition, scholars also discussed the relationship between HRM practices and other organizational operations. For example, adopting new technologies should be associated with more II and EE practices; both II practices, such as training and increased wage, and EE practices, such as performance-based pay, may motivate employees to learn and use new technologies. Indeed, technological change is positively correlated with II practices such as the internal labor market (Pfeffer & Cohen, 1984) and training (Neirotti & Paolucci, 2013). Snell and Dean (1992) found that the use of integrated manufacturing technologies is related to the use of II and EE practices, such as selection and appraisal.

Unions

Unions seek to improve employees' working conditions, exert control over work procedures, and to survive and grow (McIlroy, 1995); in essence, giving employees a voice in the workplace is a primary goal of unions. As such, II practices, which aim to improve employees' human capital through investment and increase employees' involvement in the organization, should be appealing to unions. EE practices, in contrast, seek to increase employers' flexibility and discretion on issues such as staffing and compensation, which should be at odds with union's goals. Therefore, the presence of union should have a positive impact on II practices and have a negative impact on EE practices.

The empirical findings generally showed that unions had a negative influence on EE practices, such as pay-for-performance (Gooderham, Fenton-O'Creevy, Croucher, & Brookes, 2018) and short-term labor contracts (Huang & Verma, 2018), while having positive influences on II practices, such as employee benefits (Cobb, 2015), training (Neirotti & Paolucci, 2013), and direct communication (Croucher, Gooderham, & Parry, 2006). Based on a sample of more than 3000 firms, Cristiani and Peiró (2018) found that union presence is positively related to person-centered HRM practices, which contains mostly II practices, and negatively related to performance-centered HRM practices, which include mainly EE practices. Verma's (2005) review on the effect of unions on HRM showed that unions have a positive influence on II practices (e.g., training, employee voice, formalized recruitment, and selection), while curbing managerial flexibility in some EE practices, such as incentive pay and performance appraisal. Although there are some inconsistent findings (e.g., Doellgast, 2008; Pfeffer & Cohen, 1984), generally, the empirical studies showed support for the argument that unions are positively related to the use of II practices and negatively related to EE practices.

Summary and Synthesis of Organizational Influences

Most of the research has examined influences on HRM practices at the organizational level. Compared to the evidence for environmental influences, the empirical evidence for the effects of organizational factors appears relatively strong, particularly for the effects of size, idiosyncratic skills, performance, and culture. Large, high-performing, and people-oriented companies tend to have more HRM practices that encompass both II and EE. Firms that require idiosyncratic skills or knowledge will specifically use more II practices to retain their employees. Institutional theory and SHRM theory have been used more often in this field of research, and they both received some support. For example, the external fit and internal fit argument established by SHRM theory received some support (e.g., technological change and HRM practices).

However, although the evidence is relatively strong, most of the research on organizational factors lacks a systematic examination of how organizational factors translate into a different use of HRM practices and how the external environment may influence or interact with organizational factors to influence HRM. There is also little evidence for the relative effects of different organizational factors, such as whether firm performance has a stronger effect on HRM practices than organizational culture.

Decision Makers' Influences

Demographics

Upper echelon theory has been widely used to explain the effects of decision makers' influence on organizational practices. There are three central principles of upper echelon theory: (1) firms' strategic choices are reflections of top managers' values and cognitive bases; (2) top managers' values and cognitive bases are expressions of their observable characteristics, like gender or education; and (3) organizational outcomes are associated with the observable characteristics of these top managers (Carpenter, Geletkanycz, & Sanders, 2004; Hambrick & Mason, 1984). Suggested by the upper echelon theory, the education

background and work experience in HRM-related field of the top management team (TMT) members may be associated with the level of investment in HRM. Education and experience are important indicators of the cognitive orientation and knowledge base that TMT members offer. Such orientations and knowledge in HRM may influence their perceptions of critical factors for achieving a competitive advantage. As such, TMTs with a higher education and HRM-related work experience are more likely to invest in more HRM practice encompassing both II and EE. Second, the diversity of the TMT composition may be associated with more II practices, such as inclusive and equality practices. TMT members who are minorities (e.g., women, disabled, ethnic minorities) will be more aware of and sensitive to any organizational factors that pose bias towards minorities, in part because of their personal experiences. Therefore, diversity in TMT will be positively associated with the use of II practices that are aimed at prohibiting discrimination and promoting the success of minority workers. However, there lacks theoretical argument on how demographic diversity of TMT would relate to EE practices.

Though not many studies investigated the influences of TMT demographics on HRM practices, the empirical findings generally showed that TMT's education level is positively related to the use of HRM practices (e.g., Liang & Gong, 2017). The findings on the TMT's work experience are more equivocal, with some studies suggesting no significant relationship between work experience and HRM practices (e.g., Decramer et al., 2012) and some showing a positive relationship between management experience and HRM investment (e.g., Khavul, Benson, & Datta, 2010). The results regarding diversity of TMT members are mixed. For example, Milliken, Martins, and Morgan (1998) did not find significant effects of women in TMT on a firm's work-life balance programs. They suggested that the nonsignificant results might be due to the lack of power of female TMT members. As more recent studies show a significant positive relationship between TMT gender diversity and equality and diversity

practices (e.g., Ali & Konrad, 2017; Nishii, Lepak, & Schneider, 2008), the results may suggest that firms have been becoming more responsive to diversity issues in recent years.

Perceived Benefits and Costs

The efficiency perspective suggests that firms will evaluate the benefits and costs of HRM practices and adopt HRM practices that are advantageous (Abrahamson, 1991). As such, perceived value and positive impact of HRM practices should be positively related to the use of such practices, while perceived costs and negative impact would have negative effects on the adoption of such practices, regardless of its EE or II orientation.

Consistent with the efficiency perspective, the perceived benefits of HRM practices are positively related to the adoption of such practices. For example, the perceived impact of HRM practices on productivity has been positively related to the use of HRM practices such as training, flexible work options, and incentive pay (Chen, Lawler, & Bae, 2005; Milliken et al., 1998; Morgan & Milliken, 1992; Thang & Quang, 2005). Although few studies have explored the effects of perceived costs, Goodstein (1994) did find that the perceived cost of childcare was negatively related to firms' willingness to use childcare services. A drawback of the literature is that most studies used cross-sectional data, which preclude the possibility of a causal conclusion.

Leadership Style

Leadership style describes a particular type of leader behavior that motivates subordinates to achieve an organization's goals and is considered to be important in achieving organizational goals. It can influence HRM practices through direct communication to HRM managers or indirectly through creating team or organizational culture that is influenced by the specific leadership style. Transformational leadership refers to a style of leadership that inspires followers and promotes collective interest to facilitate the achievement of collective goals (García-Morales, Jiménez-Barrionuevo, & Gutiérrez-

Gutiérrez, 2012), which is demonstrated by empirical studies as being superior to traditional forms of leadership (e.g., transactional leadership) in motivating subordinates, improving leader effectiveness, and enhancing team performance quality (Burke, Stagl, Klein, Goodwin, Salas, & Halpin, 2006; Judge & Piccolo, 2004). II practices, such as employee involvement and participation and training programs, may be preferred by transformational leaders who tend to encourage and motivate their subordinates to create positive changes. In contrast, transactional leadership has the characteristic of avoiding risks, operating within the existing system, and emphasizing efficiency and standards (Bass, 1985). In addition, transactional leaders tend to monitor individual to anticipate mistakes and implement corrective actions when necessary (Howell & Avolio, 1993). As such, transactional leaders should promote a greater use of EE practices that emphasize control and efficiency.

Of the few studies that examined the relationship between leadership styles and HRM practices, the empirical findings are not clear-cut. For example, Para-González, Jiménez-Jiménez, and Martínez-Lorente (2018) found that transformational leaders help to carry out a joint system of HRM practices that include both II and EE such as training, performance appraisal, and personnel selection. Lopez-Cabrales, Bornay-Barrachina, and Diaz-Fernandez (2017) failed to differentiate the impact of transformational leadership and transactional leadership on HRM, finding that both leadership styles are positively related to HRM systems that encompass both II and EE practices. Torp (2016) found that participative leadership style, which covers subdimensions of transformational leadership (Arnold & Loughlin, 2013), did not relate to employee stock option plans, a form of EE practice. As studies on the relationship between leadership styles and HRM practices are limited and did not offer an overall conclusion, more studies are in need.

Summary and Synthesis of Decision Makers' Influences

In terms of the robustness of the research findings, the evidence appears to be strongest for a positive effect of perceived benefits on HRM practices, providing some support for the efficiency perspective. The education level of decision makers also exerts some influence on HRM practices. Overall, despite the long-standing idea that decision makers can impact HRM practices, empirical work is quite limited. In addition, few studies looked at the actual process through which decision makers can exercise their influence (e.g., managerial decision-making process). For example, Garavan, Watson, Carbery, and O'Brien (2015) found that owner-manager attitudes towards leadership development mediated the relationship between HRM-strategy fit and the presence and intensity of leadership development practices.

 Insert Table 1 and Figure 1 Here

Implications and Directions for Future Research

In Chapter 1, I have identified and reviewed theory and research on HRM practices from multiple areas, including human resource management, strategic management, industrial relations, organizational behavior, and economics. This comprehensive approach unpacks the external and internal forces that shape HRM practices in organizations. In this last section of Chapter 1, I discussed theoretical and practical implications stemming from the review and pinpointed some directions for future research.

Theoretical Implications

Though the research is sporadic and isolated, progress has been made in terms of understanding the factors that influence an organization's HRM practices. Early strategic HRM model stressed the importance of context, contending that the internal and external environment of an organization shapes the design of HRM (Jackson & Schuler, 1995). In line

with this argument, the factors identified in this chapter include both external forces, such as the labor market, environmental uncertainty, and institutional isomorphism, and internal forces, such as organizational and decision makers' influences. Figure 1 shows the external and internal influencing factors on HRM practices, and Table 1 is a more detailed summary of the internal and external influences that are discussed in this chapter. The evidence is perhaps most clear for some organizational influences (size, idiosyncratic skills, performance, organizational culture) and one of the decision makers' factors (perceived benefits), reflecting the proximity of these factors to HRM practices. With respect to the external environmental factors, there is a moderate degree of evidence on institutional isomorphism, but rather weak support for the roles of the labor market and environmental dynamism.

Theories from various disciplines have been used to argue for the effects of internal and external influences. For example, decision maker's influences are frequently examined in disciplines such as organizational behavior and strategy, while disciplines of human resource management and industrial relations provide more insights into whether and how organizational biography and attributes shape HRM practices. The effects of higher-level external factors are covered in disciplines such as economics and industrial relations.

A review of the influences on HRM practices shows that HRM practices are more subject to a top-down influence, except for turnover and unions, which represent employee-led processes. However, as the impact of unions is declining, there are other informal and emergent processes through which employees can have influence on HRM practices. For instance, the negotiation of i-deals can be perceived as an employee-led bottom-up process that influences job and work design. Future research may consider exploring how employees can serve as a force to influence firm's HRM practices.

Practical Implications

Synthesizing the influencing factors on HRM practices can help researchers and business practitioners to understand the effects of environmental, organizational, and decision makers' influence on HRM practice.

While HRM has been targeted for enhancing in the claims of its importance in organizations and economy in recent decades, the process of implementing changes in a firm's HRM practices can be challenging. Thus, an awareness of various influences on HRM practices can help to foster the design of a better matched HRM system. As institutional isomorphism has moderate influence on HRM practices, the challenges of upgrading firm's HRM operations will be bigger in some situations, such as in developing countries where strong institutional forces (e.g., labor legislation, professional association) for using a better designed HRM system are often lacking. Besides, recognizing the influencing factors in the environment and organizations would help practitioners to foresee constraints and facilitators in the process of adopting certain HRM practices and may manage the process more effectively. In addition, employers are not the only actors responsible for designing a better HRM system; rather, a broader social environment is needed to support the use of well-designed HRM practices and thereby enhance the successful implementation of HRM practices.

Directions for Future Research

There are a lot of studies on the outcomes of HRM practices. While changes in the broad environment warrant examining the outcomes of HRM practices, attention to influences on HRM practices is also needed. Thus, I have identified six directions for future research highlighted by this review.

Exploring Other External Factors on HRM Practices

HRM practices are found to vary widely across countries and by industries (Ahmad & Schroeder, 2003). National- and industry-level factors may explain the variations we

observed regarding HR practices adopted in different countries and industries. However, compared to the research on organizational factors and decision makers' characteristics, research on external forces on HRM practices is less common and more sporadic. Future research may explore the effects of other external forces, such as national culture, economy types, and industry competition on HRM practices. For example, the recent outbreak of the coronavirus disease (COVID-19) provides a context to study how a global emergency influences various HRM practices (e.g., hiring, telecommuting, job design, etc.) across industries and countries.

Conducting Multilevel Research That Combines Different Influences

Multilevel research can be conducted to integrate influences across different levels. As noted in this article, there is an insufficiency of such studies. Future research may take this review as a point of departure to conduct multilevel research that combines both external and internal factors. For example, the Model of Culture Fit (Aycan, Kanungo, & Sinha, 1999) provides a framework for multilevel research. The authors postulated that the physical and socio-political context (e.g., political, historical, ecological forces) would influence internal workplace value through the enterprise environment and sociocultural environment (e.g., cultures), which would, in turn, impact HRM practices, such as rewards allocation and job design.

Another fruitful path would involve systematic research on the interaction of the multilevel influences on HRM practices. Though some examples are provided in this article, the study on how multiple influences operate collectively to shape a firm's HRM practices is limited. For example, higher level external influences may act as an enabling force on lower level organizational factors when they fit with each other. For instance, people-oriented firms may find it easier to implement HR practices when operating in a welfare society.

Investigating factors at different levels can also help to determine the relative effects of various influences on HRM practices. The literature review showed that organizational and decision makers' characteristics had stronger effects on HRM practices than the environmental factors did. Therefore, it might be expected that more variance in firm's HRM practices is explained by lower level factors, as compared to the industry or national-level influences. However, it is also possible that, in national contexts with strong institutional regimes, organizational factors will have less effect on HRM practices. Conducting cross-level studies would reveal which factors contribute more in shaping HRM practices in organizations.

Establishing a Valid Causal Link

Most of the studies reviewed in this chapter used cross-sectional data. Although cross-sectional data provides some meaningful correlational information about influences on HRM practices, it is insufficient to draw causal inferences. To improve the research design, a longitudinal design can be used to collect data on influencing factors and HRM practices to assess origins and causality. For example, Kang and Yanadori (2011) used a six-year observation of 364 Korean companies to study the impact of economic, social, and political factors on pay-for-performance adoption and coverage. They found that social and economic factors predicted pay-for-performance adoption, while all three factors were related to coverage of pay-for-performance. In addition, field experiment can be conducted to explore how internal factors (e.g., organizational strategies, TMT characteristics) affect HRM practices. Such research design may require tremendous resources, but it could offer substantial value to inform theory and practice. Though it may be impossible to control the external influencing factors (e.g., labor market condition) in field experiment, future studies may utilize natural experiment such as implementation of a new policy to study how changes in environment lead to HRM change.

Increasing the Role of Employee Influence

Though managers have more power in deciding the HRM practices, employees also have a say in a firm's HRM practices through voicing. Previous literature has looked at the role of unions, which provide voicing channels and decision-making power for employees. Turnover, as a destructive action by employees, also has been investigated as influencing factor on HRM. However, with the declining role of unions in firms all over the world (Blanchflower, 2007) and the negative consequences of turnover on organizations, organizations have adopted some employee-involvement programs to encourage employees' participation in decision-making. Also, employees may impact their workplace practices through proactively voicing or negotiating idiosyncratic deals (i-deals). Future research may examine other bottom-up process through which employees can influence HRM practices in organizations.

Considering the Moderating Role of Organizational Culture

Chapter 1 shows that most of the effects of influencing factors on HRM are weak, which suggests that it may be fruitful to explore moderators on these relationships. Though limited, past literature has examined moderators such as ownership (Chen et al., 2005), organizational size (Kroon, Van De Voorde, & Timmers, 2013), job characteristics (Yin, Wang, & Lu, 2019). One possible moderator that could account for the relationship between influencing factors and HRM change and is neglected in the literature is organizational culture. Though organizational culture is an important part of internal environment (Jackson & Schuler, 1995), it is lacking when evaluating how it interacts with other organizational aspects to influence the implementation of HRM practices (Harrison & Bazy, 2017). Representing firm's value system (Schein, 1990), organizational culture could vary the antecedents-HRM practice links by affecting firm's attention allocation to different influencing factors and subsequent actions in HRM practices.

Alternative Categorization of HRM Practices

This review used an EOR framework to categorize HRM practices into II and EE practices; however, there are other criteria for classifying HRM practices. First, future research may apply the EOR framework to further categorize HRM into four types of exchange relationships by combining different levels of II and EE (i.e., mutual investment, quasi-spot contracts, over-investment, and under-investment). For example, Zhao, Xi, and Jiang (2016) found that HRM competency and importance were positively associated with mutual investment or organization focused EOR and negatively related to quasi-spot contracts or job focused EOR. Second, some HRM practices are more constrained by legislations and institutions through, for instance, wage bargaining and compensation practices, while others suffer fewer institutional pressures, as with training and information provision practices (Farndale, Brewster, Ligthart, & Poutsma, 2017). Environmental and organizational factors may differ in their impact on these two forms of HRM practices. Third, HRM systems may differ for managers and employees (Jackson, et al., 1989). While employees may have some impact on HRM practices that cater to their needs, they may be less aware of HRM practices for TMT members and have less power in influencing them. The effects of the influencing factors may differ based on how HRM practices are categorized.

CHAPTER 2

Why Firms Change Their Human Resource Management Practices:

The Moderating Role of Organizational Culture and Its Performance Outcome

Based on the literature review of influences on HRM practices in Chapter 1, various internal and external influencing factors are identified. Three major external influences that have been investigated by empirical studies are labor market, environmental dynamism, and institutional isomorphism. For internal influences, it includes organizational factors and decision makers' characteristics such as organizational size, performance, strategy, and decision makers' leadership style. Though efforts have been made, there are three limitations in the literature. First, the empirical studies investigating influences on HRM practices have been sporadic and not integrated. Most research focused on one or two influencing factors and failed to consider both internal and external influences at the same time. Therefore, we cannot determine the relative importance of each factor in predicting HRM practices. Second, most research focused on influences emanating from higher-level factors, for example, the external environment, organizational circumstances, and management characteristics. Few studies have considered the influences derived from the internal environment at the employee level, such as employees' attitudes. Employees are increasingly expected and required to launch organizational change and innovation (Griffin, Rafferty, & Mason, 2004). For example, employees dissatisfied with their job may initiate changes in job design, modifying job content and boundaries (Wrzesniewski & Dutton, 2001). In addition, managers will evaluate and consider employees' input because negative employee attitudes are associated with organizational costs (e.g., high turnover costs, lower productivity; Harter, Schmidt, & Hayes, 2002). Third, most studies used cross-sectional data, which failed to provide a causal explanation for what influences HRM practices.

In this chapter, I focus on HRM change, while most previous studies used a static view by studying how different influences relate to levels of HRM practices. As the environment changes (e.g., consumer demands, unemployment rate, new technology), firms strategically change their HRM system to facilitate adaptation (Kim & Ployhart, 2014; Schuler & Jackson, 1987). Studying change is essential as it explains a dynamic process of when and why HRM practices are implemented/abolished and the resultant performance of these changes in HRM (Jackson et al., 2014; Jiang & Messersmith, 2018). Studying change also offers additional knowledge beyond the average level of HRM. For example, Huang et al. (2020) showed that strategic change in employee involvement programs positively affects innovation on top of the main effects of mean level employee involvement programs. As such, I focus on HRM change in this chapter.

I include both internal and external issues as antecedents of HRM change in organizations. For external factors, I include labor shortage and environmental dynamism. Institutional isomorphism is excluded because institutional force is strong (Scott, 1995) and is likely to elicit similar organizational responses (i.e., companies have the exact extent of HRM changes). Internal issues investigated in this chapter are (poor) firm performance and (low) job satisfaction. Firm performance has been studied as an outcome of HRM practices; however, it can influence future investment in HRM practices (Shin and Konrad, 2017). In addition, by including employees' job satisfaction as an antecedent, this chapter considers employee force as a catalyst that prompts organizations to change their HRM practice.

As organizations are subject to various influencing factors from both outside and inside of organizations, these factors often compete with each other for organizational attention (Ocasio, 1997). This chapter focuses on four antecedents, including two common issues that all organizations care about: (poor) firm performance and labor shortage, and two issues that catch the attention of internal- vs. external-oriented types of organizations: (low)

job satisfaction and environmental dynamism. Though these issues capture organizations' attention, firms may place different importance on these issues as the attention structure of each organization differs (Ocasio, 1997), which refers to the “the top-down cognitive (and motivational) structures that generate heightened awareness and focus over time to relevant stimuli and responses” (p. 1288, Ocasio, 2011). Organizational culture, which represents organizations' attention structure, is what an organization learns over a period of time as it solves problems of internal integration and survives in the external environment (Schein, 1990). As such, flexibility-oriented culture may focus on investment and inducement practices to search for solutions to firm problems, while control-oriented culture may direct their attention to expectation-enhancing measures. Therefore, in this chapter, I draw on the attention-based view of the firm (ABV) and employee-organization relationship (EOR) framework to propose an interactive relationship between antecedents and organizational culture on HRM changes in organizations, which in turn relates to firm performance.

This chapter contributes to the HRM literature in at least three ways. First, both internal and external antecedents are included, which provides insights into the relative strength of these factors. Besides, based on ABV, organizational culture is proposed to be a moderator that strengthens or weakens the effects of internal and external antecedents on outcomes because organizational culture provides guidance on what issues to pay attention to and what responses firms should take. Second, employees' job satisfaction is included in the model as an employee force that influences HRM practices, which complements and extends the current literature that mainly focuses on high level, external influences. Third, this chapter used a three-wave study and a longitudinal dataset to test the model, aiming to provide a causal explanation on the relationship among antecedents, organizational culture, HRM change, and firm performance.

Theories and Hypotheses

Attention-Based View of the Firm and Organizational Culture

Independently, the internal and external influences have multiple effects on HRM change. For example, the firm may increase the use of II practices (e.g., more training) and EE practices (e.g., more frequent performance appraisal and monitoring) when firm performance is low, while, using less II and EE practices could be a strategy to cut costs and losses, which may also be firm's response to poor performance. Thus, on their own, the internal and external influences may not hold direct implications for firm decision makers. Indeed, in line with the past research, the four influences are found to have weak to moderate relationships with II and EE in Chapter 1. Therefore, I did not hypothesize the main effects of these influences on II/EE usage. However, in conjunction with organizational culture, internal and external influences and II/EE usage become more relevant for certain cultural types. Based on ABV, I propose that organizational culture, an organizational characteristic that defines the attentional structure of decision-makers, would interact with internal and external issues to predict changes in HRM practices.

Organizations are surrounded by various issues that require decision makers' attention. As attention is a limited resource, attending to every issue would result in information overload. Instead, ABV contends that decision-makers only allocate their time, effort, and attention to selective issues based on their attention structure (Ocasio, 1997). Ocasio defines attention structures as "the social, economic, and cultural structures that govern the allocation of time, effort, and attentional focus of organizational decision-makers" (1997: 195). As firms' attention structures vary, decision-makers will attend to different aspects of the environment. For example, in a firm with an innovative culture, managers will prioritize new product creation and establish communication channels and procedures that are

conducive to attending to such matters, compared to organizations without such culture (Lumpkin & Dess, 1996).

According to Ocasio (1997), decision-makers in an organization rely on their cultural repertoire to interpret issues and set appropriate answers. This repertoire is encoded in the practices of the organization and its members. The core layer of culture shapes attentional processing and represents the agenda of actions; in other words, it defines "what to pay attention to...and what actions to take in various kinds of situations" (Schein, 2010: 32). Therefore, organizational culture provides guidance for organizational members to deal with issues and answers related to HRM.

Organizational culture refers to the underlying assumption, values, ideologies, philosophies, and norms held by organizational members (Schein, 1990). One of the frequently used organizational culture taxonomies is the Competing Values Framework (Hartnell, Ou, & Kinicki, 2011). By analyzing indicators that assessed organizational effectiveness, Quinn and Rohrbaugh (1981) developed the Competing Values Framework, which is composed of two dimensions - *internal versus external orientation* and *flexibility versus control*. Organizations with an external orientation underscore rivalry and differentiation, whereas firms with an internal orientation emphasize integration and unity. Organizations that emphasize flexibility value adaptability and dynamism, while organizations that focus on control stress the importance of stability, predictability, and order. Combining these two dimensions produces four types of organizational culture - *clan* culture, which describes organizational culture that focuses on internal orientation and flexibility; *hierarchy* culture, which emphasizes internal orientation and stability; *market* culture, which is characterized as externally oriented and control-focused; and *adhocracy* culture, which emphasizes external orientation and flexibility (Cameron & Quinn, 2005).

Although four cultural types have been used to characterize a cultural profile for organizations (Cameron & Quinn, 2005), organizations tend to develop one dominant culture over time (Schein, 1996). Moreover, organizational culture will become more salient in the face of threat, ambiguity, and pressure (Cameron, 2003). In this chapter, I propose that organizational culture will interact with internal and external issues to predict HRM changes, which further relates to firm performance outcomes.

Internal and External Influences, Organizational Cultures, and HRM Change

Internal Influence: (Poor) Firm Performance

Problematic search view suggests that organizations will search for solutions and alternatives when organizational performance falls below their aspirational levels (Cyert & March, 1963). As HRM practices can impact firm performance through improving employee behavior and attitudes (Boselie, Dietz, & Boon, 2005; Jiang et al., 2012), organizations with poor performance may turn to their HRM practices for solutions. For example, Lee (2016) found that organizational performance below aspirations led to exploitative HRM, which refers to the refinement and extension of existing HRM practices.

Based on ABV, firms with different organizational cultures may direct their attention to different areas for improvements and implement changes in different types of HRM practices. Different organizational cultures have different theories of effectiveness (Cameron & Quinn, 2005). Clan culture views organizational effectiveness can be achieved through high employee morale and cohesion. II practices, such as employee benefits, empowerment and involvement program, training, and development opportunities, can be useful in improving employees' positive attitudes, which clan-type organizations may prefer as a response to poor performance. For example, increasing open communication and involvement programs can help address employee concerns and increase their discretion over behaviors, thereby fostering participativeness and enhancing employees' motivation and

commitment (Meyer, Becker, & Vandenberghe, 2004). Providing more training and learning opportunities may enhance shared values and goals in employees. Besides, employees may view the adoption of more II practices as employers' willingness to invest in them, which can boost their commitment to organizations. Indeed, research has found that benefits programs positively predicted commitment (Jaworski, Ravichandran, Karpinski, & Singh, 2018), and providing training and development was positively related to employee morale (Chow, Haddad, & Singh, 2007). As such, for clan-type organizations, using more II practices would be seen as an appropriate response to poor performance.

As another flexibility and discretion-oriented culture, Adhocracy culture views organizational effectiveness comes from innovative and creative solutions to customers and clients (Cameron & Quinn, 2005). II practices are more relevant in facilitating the search for innovative views and perspectives and the generation of new ideas. For example, providing more training would develop employee capabilities, fostering innovation (Lado & Wilson, 1994). Improving open communication can facilitate knowledge sharing and integration of information, which is important for innovation (Zhou & Li, 2012). Thus, adhocracy-type organizations may see II practices as an area for improvement when firm performance is low.

Organizational culture is developed through previous successful experiences of solving internal and external problems (Schein, 1990). EE practices, which focus on monitoring and control, contradict the theory of effectiveness of flexibility-oriented organizations (i.e., clan or adhocracy culture). Therefore, EE practices are less likely to be seen as a solution to improve performance for these organizations. Taking the arguments together, I predict that the relationship between firm performance and II usage will be negative for organizations with flexibility-oriented culture (i.e., clan and adhocracy culture).

Hypothesis 1a: *Firm performance will interact with organizational culture to influence HRM changes, such that firm performance will have a negative relationship with II*

usage when flexibility-oriented culture is high (i.e., clan or adhocracy culture) and this relationship will be less negative when flexibility-oriented culture is low.

Organizations with control-oriented culture (i.e., hierarchy or market culture) view firm effectiveness comes from stability and predictability (Cameron & Quinn, 2005). EE practices, which emphasize employees' accountability and contributions through control and monitoring, may be preferred for firms with hierarchy or market culture when their performance is low. For example, organizations may invest more in their performance appraisal procedures and pay-for-performance practices to ensure their goods or services are delivered to company standards. More close monitoring may be implemented to minimize employee mistakes and secure the standardized and efficient provision of their products. For example, Bhave (2014) found that the use of electronic performance monitoring was positively related to employee task performance. As such, I predict that firm performance will have a negative relationship with EE usage for organizations with control-oriented culture (i.e., hierarchy or market culture).

Hypothesis 1b: *Firm performance will have a negative relationship with EE usage when control-oriented culture is high (i.e., hierarchy or market culture) and this relationship will be less negative when control-oriented culture is low.*

Internal Influence: (Low) Job Satisfaction

Job satisfaction is defined as the evaluative judgment one has about one's job (Weiss, 2002). Low job satisfaction is undesirable for organizations as it can result in absenteeism and turnover, incur high costs for organizations (Mobley, 1977; Scott & Taylor, 1985). As such, low job satisfaction may prompt organizations to change HRM practices to deal with this problem. For example, Brown, Forde, Spencer, and Charlwood (2008) argued that HRM practices, such as participatory work practices, teamwork, and upward communication systems, would improve employee satisfaction.

Firms with internal orientation (i.e., clan and hierarchy culture) may be more responsive to job satisfaction issue as it is a characteristic of an organization's internal environment. In contrast, firms with an external orientation (i.e., market and adhocracy culture) focus more on external positioning and competition in the market. Thus, low job satisfaction may be seen as a less important issue to them. As such, I only predict the moderating effects of clan and hierarchy culture on the relationship between job satisfaction and HRM change.

Different culture orientations may direct organizations to respond differently. As clan culture values cohesion, participativeness, and a sense of “we-ness” in organizations (Cameron & Quinn, 2005), clan-type organizations may invest more in II practices to improve employees’ job satisfaction. For example, enhanced communication with supervisors provides employees with a voice channel about their concerns and dissatisfied issues, potentially improving their job satisfaction. The provision of more benefit programs such as company housing, health insurance, and family assistance could satisfy employee needs and desires, which can boost their positive experience at work (Igalens & Roussel, 1999) and thus increase their job satisfaction. Empirical studies confirmed that II practices such as benefits packages, training, and communication had positive effects on employee job satisfaction (Barber, Dunham, & Formisano, 1992; Miles, Patrick, & King Jr, 1996; Schmidt, 2007). As such, I predict that when clan culture is high, employees' low job satisfaction problem is more likely to be solved using more II practices.

Hypothesis 2a: *Job satisfaction will interact with organizational culture to influence HRM changes, such that job satisfaction will have a negative relationship with II usage when clan culture is high, and the relationship will be less negative when clan culture is low.*

In contrast, hierarchy culture values predictability and consistency. As hierarchy-typed organizations have more experience with EE practices, they tend to adjust EE practices

as firms' responses to low job satisfaction. EE practices communicate employers' expected contribution from employees and indicate their aversion towards long-term investment (Shaw et al., 2009). By reducing EE practices (e.g., monitoring, performance appraisal), employees may feel they have more autonomy and less being controlled by organizations, which should improve their job satisfaction. Indeed, research has found that organizations with a balanced level of EE and II practice or a lower level of EE to II are associated with improved employee attitudes (e.g., commitment, loyalty, Hom et al., 2009). As such, when hierarchy culture is high, organizations may address the problem of low job satisfaction by reducing the use of EE practices.

Hypothesis 2b: *Job satisfaction will have a positive relationship with EE usage when hierarchy culture is high, and the relationship will be less positive when hierarchy culture is low.*

External Influences: Labor Shortage

Labor shortage means that labor supply is low. Under this circumstance, it is more challenging for employers to find and retain good workers as there are fewer available job candidates but abundant job opportunities in the labor market. When firms are competing with each other for talents in the labor market, employees have greater power in negotiating with employers about work contracts. They thus are more likely to receive favorable benefits terms (Dulebohn, Molloy, Pichler, & Murray, 2009). Workers with relatively greater market power (e.g., professional and managerial workers) are more likely to have access to employee benefits such as leave policies (Glass & Fujimoto, 1995). Therefore, when labor shortage is high, organizations tend to respond by offering more inducements or lowering their expected contributions from employees (i.e., more II practices and less EE practice) to attract and retain employees.

Although labor shortage is an external influence, it may catch the attention of internal-oriented organizations as labor market conditions affect their ability to retain their current employees. However, an organization's response to labor shortage may differ if its culture is flexibility or control oriented.

ABV suggests that organizational culture provides guidance not only on issues and problems that firms should consider but also appropriate responses and actions to address those issues and problems (Ocasio, 1997). Both clan and adhocracy cultures emphasize flexibility and discretion (Cameron & Quinn, 2005). When facing the labor shortage problem, II practices may be seen as a relevant solution for clan- and adhocracy-type organizations as investing in human capital can increase employees' flexibility and discretion at work. Besides, the adoption of more II practices is useful in attracting and retaining employees. For example, training and development opportunities are preferred attributes of organizations (Terjesen, Vinnicombe, & Freeman, 2007) and will be helpful in attracting and retaining employees. High pay and flexible benefits significantly increased job attractiveness (Cable & Judge, 1994). Holland, Sheehan, and De Cieri (2007) found that Australian organizations increased investment in recruitment and selection in the face of a heightened skilled labor shortage. Based on the arguments above, I predict that for organizations high on clan or adhocracy culture, increasing the use of II practices would be more seen as a solution for labor shortage.

Hypothesis 3a: *Labor shortage will interact with organizational culture to predict HRM change. Labor shortage will have a positive relationship with II usage when flexibility-oriented culture (i.e., clan and adhocracy culture) is high, and the relationship will be less positive when flexibility-oriented culture is low.*

In contrast, hierarchy and market cultures value control and order (Cameron & Quinn, 2005), and they allocate more resources and attention to practices on controlling and

monitoring. To tackle the problem of labor shortage, hierarchy- or market-type organizations may turn to EE practices as a potential solution. When labor shortage is severe, employees have the bargaining power to ask for favorable employment contracts, such as lowering expected contributions from them (Dulebohn et al., 2009). As such, organizations with a hierarchy or market culture may decrease the use of EE practices to increase their attractiveness to employees. For example, contingent pay policy puts employees' salaries at risk, which is less preferred by employees than fixed payment (Cable & Judge, 1994). Performance appraisals may communicate criticism and negatively impact their career, which employees may dislike. As such, organizations are more likely to decrease the usage of EE practices as a response to the labor shortage problem when control-oriented culture is high.

Hypothesis 3b: *Labor shortage will have a negative relationship with EE usage when control-oriented culture (i.e., hierarchy and market culture) is high, and the relationship will be less negative when control-oriented culture is low.*

External Influence: Environmental Dynamism

A dynamic environment is characterized as having fast and unpredictable changes (Dess & Beard, 1984). The unpredictable nature of environmental change poses substantial risks for organizations and may result in performance decline (Boyne & Meier, 2009; Keats & Hitt, 1988). This threatening situation would draw organizations' attention and promote organizational changes and innovations that facilitate adaption to environmental change.

External-oriented culture (i.e., adhocracy and market culture) emphasizes rivalry and differentiation and focuses on competing with others in the environment (Cameron & Quinn, 2005). Changes in the environment would catch the attention of organizations with an external orientation and be responded to with changes in some organizational practices. In contrast, internal-oriented culture (i.e., clan and hierarchy culture) emphasizes harmonious internal characteristics such as unity and integration (Cameron & Quinn, 2005). As an issue

not related to internal affairs, environment dynamism would be viewed as less relevant and less important for internal-oriented organizations. Thus, I only hypothesize that environmental dynamism would interact with adhocracy and market culture to predict HRM change.

Adhocracy culture values the roles of flexibility and creativity in the process of adapting to changes (Cameron & Quinn, 2005). To manage environmental dynamism, II practices may be preferred by adhocracy-type organizations to provide employees with autonomy and discretion to identify opportunities in times of rapid change and develop innovative ideas and solutions. For example, enhancing employee empowerment can help employees quickly recover from work mistakes, learn from them, and generate innovative proposals for redesigning processes and products, facilitating adaptation in the dynamic environment (Fernandez & Moldogaziev, 2013). Providing more training can increase employees' human capital, broadening their skill sets and improving their skill flexibility (Beltrán-Martín & Roca-Puig, 2013), which is useful for managing environmental dynamism. Implementing competitive pay and benefits would attract versatile employees with varied knowledge and abilities and motivate employees to reciprocate by acting in the way desired by organizations, which is engaging in flexible and creative behaviors for adhocracy culture. Therefore, I predict that for organizations high on adhocracy culture, environmental dynamism is more likely to be associated with increased use of II practices.

Hypothesis 4a: *Environmental dynamism will interact with organizational culture to predict HRM change. Environmental dynamism will have a positive relationship with II usage when adhocracy culture is high, and this relationship will be less positive when adhocracy culture is low.*

To deal with the rapidly changing environment, organizations with a market culture may strive to secure their external positioning by stressing productivity and results (Cameron

& Quinn, 2005). EE practices focus on increasing employees' accountability and contributions and expanding organizational control over work behaviors, such as performance appraisal, pay-for-performance, and close monitoring. These practices may be preferred and adopted more by market-type organizations as measures to cope with environmental dynamism. For example, Huang and Verma (2018) found that dynamic organizational change, represented by international competitive pressure, is positively related to the use of short-term labor contracts, which is a demonstration of EE practices.

***Hypothesis 4b:** Environmental dynamism will have a positive relationship with EE usage when market culture is high, and this relationship will be less positive when market culture is low.*

HRM Change and Firm Performance

According to the EOR framework (Tsui et al., 1997), II practices take employee well-being, career advancement, and stability into consideration, thus extending the economic exchange relationship between employee and employer to social exchange. Adopting more II practices increases the desirability of current employment for employees, showing organizations' commitment to building long-term, rewarding employee relationships. As such, employees are more obliged to reciprocate with higher job performance and may even engage in prosocial behaviors that fall beyond their areas of responsibilities, all of which should contribute to firm performance. Indeed, increased use of II practices is generally found to be positively related to firm performance (e.g., Wang & Zatzick, 2019). As such, I predict:

***Hypothesis 5a:** II usage is positively related to firm performance.*

Adopting more EE practices is also likely to boost firm performance. As noted by Batt and Colvin (2011), EE practices are designed to be short-term incentives to improve performance immediately. For example, increased use of monitoring and performance

appraisal can provide more accurate performance feedback, detect and avoid more performance errors, and thus improve work performance. Strengthening the linkage between performance and rewards will increase employees' motivation towards pursuing higher performance goals (Gerhart & Fang, 2015). As an example, the adoption of pay-for-performance is generally found to be positively related to organizational performance in health care settings (Petersen, Woodard, Urech, Daw, & Sookanan, 2006). As such, I expect that EE practice will also be positively related to firm performance. Figure 2 depicts the proposed model.

Though I hypothesize a positive relationship between II/EE usage and firm performance, the strength of the relationship may differ depending on the types of performance indicator. Mainstream HRM models emphasize the positive effects of HRM practices on firm performance through improving employee work motivation, commitment, and satisfaction (Sels, De Winne, Maes, Delmotte, Faems, & Forrier, 2006). However, some researchers noted that increasing the use of HRM may incur labor and administrative costs such as training and recruitment expenditures and increased communication and coordination activities (Cappelli & Neumark, 2001). As a result, it may offset the benefits of improved employee productivity and may not achieve an overall improved financial performance. For example, Sels et al. (2006) found that the cost-increasing effect of HRM intensity cancels out the productivity gains, resulting in null effects on financial performance, including profitability, liquidity, and solvency. Therefore, I expect II and EE usage to have stronger effects on proximal productivity-related measures of firm performance (e.g., sales) but weaker effects on distal firm performance (e.g., profitability). To explore the effects of II and EE usage, I used different firm performance measures in Study 1 and 2.

Hypothesis 5b: EE usage is positively related to firm performance.

 Insert Figure 2 Here

Study 1 Trucking Companies

The data was collected to study HRM systems and organizational performance and has been used in several publications (e.g., Shaw, Dineen, Fang, & Vellella, 2009; Shaw & Gupta, 2007; Shaw, Gupta, & Delery, 2005). Shaw et al. (2009) studied HRM practices measured at Time 1 and quit rates reported at Time 2. Shaw and Gupta (2007) examined the relationship between pay dispersion and quit rates. Shaw et al. (2005) studied how turnover rate interacts with HRM practices to influence organizational performance. Although Shaw et al. (2005) used organizational performance measures, none of the independent variables or mediators in the current study overlap with any prior studies that used the same dataset. Hypothesis 1a, 1b, 5a, and 5b were tested in this study.

Method

The original sample was 1076 trucking organizations that were listed as Class I (annual gross revenue of \$10 million or more) or Class II (annual gross revenue of \$3 to \$10 million) companies in the 1999 version of the *Transportation Technical Services Blue Book of Trucking Companies* (Blue Book). Excluding organizations that used owner-operators exclusively (i.e., they did not have company drivers), 1041 organizations were included.

The top HRM official of each organization was identified as the key informant and was sent a 16-page questionnaire. 380 completed responses were returned after sending a second reminder mail. One year later, a 2-page follow-up survey was sent to 380 organizations that responded to Time 1 survey in 2000. 263 completed questionnaires were returned. The response rate for the Time 1 survey is 37% (380/1041) and is 69% (263/380).

for Time 2 survey. Missing data reduced the analysis sample to 191 – 231, depending on the dependent variables used in the analysis.

Independent variables and moderators used in this study were obtained from the Time 1 survey, and the mediators were from the Time 2 survey with a one-year lag. Dependent variables were obtained from the 2002 version of *Blue Book* (one-year lag from Time 2), which provided organizational and financial information that trucking organizations file with the federal government.

Measures: Independent variables, Time 1

Prior firm performance. Informants were asked to rate their organization's overall performance in the past year from 0 to 100 (0 = very poor performance, 100 = perfect performance).

Moderators, Time 1

Organizational culture. Organizational culture was measured by twelve items, with three items measuring one type of culture (Deshpandé, Farley, & Webster, 1993; Quinn & Spreitzer, 1991). For example, clan culture was measured by "This organization is a personal place – like an extended family. People share a lot of themselves" (Cronbach's $\alpha = .68$). Market culture was measured by "This organization is a production-oriented place – people are concerned with getting the job done" (Cronbach's $\alpha = .65$). Adhocracy culture was measured by "This organization is a dynamic and entrepreneurial place – people stick their necks out and take risks" (Cronbach's $\alpha = .71$). For hierarchy culture, one item ("This organization is a stable place – people are concerned with permanence and stability.") was removed to improve the Cronbach's α from .55 to .68. A five-point Likert scale was used (1 = strongly disagree, 5 = strongly agree).

Mediators, Time 2

II usage. Informants in the trucking companies were asked to describe any changes in their HRM systems (e.g., recruiting and selection, training, compensation/benefits, performance appraisal, on-board technology, other systems) in the past one year. For every change in one area mentioned by the informant, 1 score was given if it was an improvement in the organization's II practice, and -1 score was given if it was a decrease in the use of II practices. For example, "slight benefits improvements" was scored 1, and "more employee contribution to health benefits" was scored -1. All scores for changes in II practices were then summed up to form an overall score.

EE usage. For any changes in the organization's EE practices in one area, if it was an increase in EE practices, 1 score was given; if it was a decrease, -1 was given. For example, "went to performance-based pay from hourly" was given 1, and "changed from essay to 1 to 5 rating form to speed up the process" was given -1. The scores for EE practices across all HRM systems then summed up to form an overall score on changes in EE practices.

Dependent Variables, Time 3

Firm performance. Following previous studies (e.g., Cantor, Celebi, Corsi, & Grimm, 2013), vehicle and driver out-of-service rates were used to indicate firm performance. Vehicle (driver) out-of-service rate was calculated by dividing the number of inspections with vehicle (driver) being placed out-of-service by the number of total inspections. Vehicle or driver could be placed out-of-service if unsafe conditions were discovered during inspections, such as defective or inoperable brakes or driving hours exceeding what is allowed. Being put out-of-service is a serious violation of transportation rules. The driver may not continue to operate the vehicle until the violation is addressed, which could incur large costs for trucking companies. A high vehicle (driver) out-of-service rate means low firm performance. This information is obtained from *Blue Book* for the 2002 calendar year.

Control variables

Several variables that might account for the relationship between independent and dependent variables were included as control variables. First, I controlled for organizational size. Large firms may have more resources to invest in HRM practices. Organizational size was operationalized as the natural log of total assets, which is provided in the *Blue Book*. Second, I controlled for organizational age. Organizations with long history may develop unique paths to achieve performance (David, 1994). Third, I controlled for unionization because it may affect HRM practices. This variable is operationalized as the percentage of drivers that were covered by the collective bargaining agreement. Fourth, three industry-specific controls, carrier type, tractor age, and owner-operator use, were included in the analysis because HRM practices may vary by these firm characteristics (Shaw & Gupta, 2007). Carrier type was obtained from *Blue Book*. This variable was coded as 1 when the company is a truckload and specialized commodity carrier and coded 0 when it is a less-than-truckload carrier. Average tractor age reflects working conditions and the use of more sophisticated HRM and was provided by the respondent. Owner-operator use was reported by respondents as the percentage of hauls accomplished by owner-operator drivers.

Results

Table 2 shows the descriptive statistics and correlations among Study 1 variables. Prior firm performance was not significantly related to changes in II or EE practices. Changes in II or EE were not significantly related to firm performance. However, the correlations among the four cultures were significant.

 Insert Table 2 and 3 Here

Table 3 shows the hierarchical regression results of predicting changes in II and EE practices. All control variables were entered in Step 1, and IV (prior firm performance) was entered at Step 2. Step 3-6 entered the interaction between prior firm performance and each culture in predicting II or EE usage. Step 7 entered the interactions of all four cultures.

Hypothesis 1a predicted that firm performance would interact with flexibility-oriented culture (i.e., clan and adhocracy culture) to predict II usages such that this relationship would be more negative when the flexibility-oriented culture was high. In the regression models of predicting II usages, Step 3 showed that the interaction of prior firm performance and clan culture was significant ($b = -.02$, $SE = .007$, $p < .01$). However, the interaction of prior firm performance and adhocracy culture in Step 4 was not significant ($b = .000$, $SE = .008$, ns). Therefore, Hypothesis 1a was partially supported. Figure 3 depicts this significant interaction. When clan culture is high (1 SD above mean level), prior firm performance had a negative relationship with II usage (simple slope $\beta = -.02$, $SE = .008$, $p < .05$). The relationship became insignificant when clan culture is low (1 SD below mean level) (simple slope $\beta = .000$, $SE = .006$, ns). The clan culture' prior firm performance interaction maintained significant when other cultures and interactions between culture and firm performance were added to the model in Step 7 ($b = -.02$, $SE = .008$, $p < .01$).

 Insert Figure 3 and 4 Here

Hypothesis 1b predicted that prior firm performance would interact with control-oriented culture (i.e., hierarchy and market culture) to predict EE usage such that this relationship would be more negative when the control-oriented culture was high. In the regressions in predicting EE usage, Step 6 showed that market culture marginally significantly interacted with firm performance to predict EE usage ($b = -.006$, $SE = .004$, p

< .10). Figure 4 depicts this interaction effect. When market culture is high (1 SD above mean level), prior firm performance had a negative relationship with EE usage (simple slope $\beta = -.008$, $SE = .003$, $p < .05$). The relationship became insignificant when market culture is low (1 SD below mean level) (simple slope $\beta = -.001$, $SE = .003$, ns). However, Step 5 showed that the interaction between hierarchy culture and firm performance was not significantly related to EE usage ($b = -.002$, $SE = .003$, ns). Therefore, Hypothesis 1b was only marginally supported.

Table 4 presents the hierarchical regression results of predicting firm performance. When DV is vehicle out-of-service rate, II usage was negatively related to it in Step 3-6 (e.g., in Step 4, $b = -1.04$, $SE = .51$, $p < .05$). However, EE usage was not significantly related to vehicle out-of-service rate (e.g., in Step 3, $b = .46$, $SE = 1.15$, ns). When DV is driver out-of-service rate, II usage was marginally negatively related to it in Step 5 and 6 (e.g., in Step 5, $b = -.57$, $SE = .33$, $p < .10$). In contrast, EE usage was positively related to driver out-of-service rate through Step 3 to 7 (e.g., in Step 7, $b = 1.74$, $SE = .75$, $p < .05$). Taken together, the results showed that II usage was positively related to firm performance by reducing both vehicle and driver out-of-service rate. However, EE usage was negatively related to firm performance by increasing driver out-of-service rate. Therefore, Hypothesis 5a was supported, but 5b was not supported.

Supplementary Analysis¹. In the analyses above, I used vehicle and driver out-of-service rate as firm performance. To test if II and EE usage related to another performance measure, I rerun the analyses using return on equity (ROE) at Time 3 as the dependent variable. Table 5 shows that neither II nor EE usage was related to ROE, indicating that the positive effects of HRM change on proximal results may not be reflected in distal financial performance.

¹ I thank Examiner 3 for this suggestion.

 Insert Table 4 & 5 Here

Discussion

The results in Study 1 provided support for the moderating effects of clan and market culture on the relationship between prior firm performance and II and EE usage, respectively. This is consistent with ABV that organizations will respond to issues in ways that are in line with their attention structure. In addition, consistent with my prediction, II usage was positively related to firm performance by reducing both vehicle and driver out-of-service rate. However, EE usage was found to be negatively related to firm performance by increasing driver out-of-service rate. By stressing employees' contribution to organizationally desired outcomes, using more EE practices may prompt employees to take risky behavior such as driving extra hours than allowed or conceal previous violations, which is positively related to the rate of drivers being put out-of-service. For example, Beer and Cannon (2004) found that employees under gain-sharing plans perceived the program to be promoting short-term behaviors.

Despite the findings on the moderating role of clan and market culture, Study 1 is limited in two ways. First, Study 1 used trucking companies as the sample and tested the hypotheses in a single industry. Whether the hypotheses would hold in other industries is a question. Second, due to the data limitations, only one predictor (prior firm performance) was tested in Study 1. Thus, in Study 2, a multi-industry sample of organizations in Korea was used to test the full model.

Study 2 Human Capital Corporate Panel Data

Human Capital Corporate Panel (HCCP) surveys from the Korean Research Institute for Vocational Education and Training (KRIVET) and firm performance data from the

Korean Information Service (KIS) were used to test the model. Some scholars have used parts of these datasets because they covered a wide range of companies in South Korea and used a longitudinal design. For example, Shaw, Park, and Kim (2013) used 2005 HCCP surveys to test how HRM investment practices interacted with turnover rates to predict firm performance. However, the research focus of this chapter is substantially different from previous studies that have used HCCP data. Thus, I believe it is appropriate to use these data to test the theoretical model. All hypotheses were tested in this study.

Method

HCCP survey was conducted by KRIVET every two years since 2005. It was intended to learn how HRM and human resource development (HRD) practices influence firm performance and provide policy suggestions (KRIVET, 2006). The survey contains two parts: company survey and employee survey. The company survey covers questions such as general business, HRM, HRD, and R&D practices. The person in charge of each part (e.g., strategic planning directors, HRM managers, HRD managers) was asked to answer questions in the corresponding part. For example, HRM managers responded to questions on HRM practices, such as performance appraisal, compensation, labor unions, etc. HRD managers were responsible for questions such as training, investment in employee education, HRD qualifications, etc. The employee survey asked about their demographics, tasks, competence, participation, and evaluation of organizational practices, and job attitudes. Respondents of HCCP surveys were representative of Korean firms with at least 100 employees from manufacturing, financial, and service industries.

Measures: Independent Variables

Prior firm performance. Firm performance was calculated as the mean of profit (earnings before tax) from 2007 to 2009, provided by the KIS database. The unit of firm performance is 10 billion Korean won (approximately 8.9 million USD).

Job satisfaction. Job satisfaction was measured by four items in the employee survey. One sample item is “I am satisfied with my job”. Employees indicated their response on a five-point Likert scale (1 = not at all, 5 = to a great extent). Individual answers (Cronbach’s $\alpha = .83$) were aggregated to the organizational level for analysis (ICC[1] = .17, ICC[2] = .82).

Industry dynamism. Industry sales during 2007-2009 were collected using KIS database based on Korean SIC codes. To calculate industry dynamism, industry sales were regressed on a TIME variable. Then, industry dynamism was computed as the regression coefficients divided by the mean values of industry sales during 2007-2009. This operationalization has been used in other research (e.g., Kim & Ployhart, 2018).

Labor shortage. Labor shortage was operationalized as the number of planned recruits divided by the number of applicants in 2010. A high score means there are fewer applicants for one job vacancy, indicating a severe labor shortage.

Moderators

Organizational culture. Employees were asked to rate their organizational culture using a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). 12-item measurement based on Cameron and Quinn (2011) was used, and each of the four types of culture was measured by three items. Sample items are “Our company creates a family-like atmosphere in the organization” for clan culture, “Our company encourages changes and new initiatives” for adhocracy culture, “Our company considers official procedures, rules, and policies more important” for hierarchy culture, and “Our company emphasizes a competitive atmosphere and achievements” for market culture. Employee scale scores were aggregated to the organizational level for analysis (Cronbach’s $\alpha = .89$, ICC[1] = .14, ICC[2] = .79 for clan culture; Cronbach’s $\alpha = .85$, ICC[1] = .19, ICC[2] = .84 for adhocracy culture; Cronbach’s $\alpha = .69$, ICC[1] = .11, ICC[2] = .74 for hierarchy culture; Cronbach’s $\alpha = .81$, ICC[1] = .17, ICC[2] = .82 for market culture).

Mediators

II usage. II practices were operationalized as an additive index of pay, benefits, training, open communication, and selection ratio (Shaw et al., 2013). *Pay level* was the average level of total annual compensation to full employees in the organization. *Benefits level* is the average level of benefits costs to full employees in the organization. *Training* was the total education and training costs. *Open communication* was measured by three items in the employee survey using five response options from 1 (not at all) to 5 (to a great extent). A sample item is "Our company communicates the company's circumstances to employees in detail." Individual scale scores ($\alpha = 0.83$ for 2010; $\alpha = 0.82$ for 2012) were aggregated to the organizational level for analysis (ICC[1] = .14, ICC[2] = .78 for 2010; ICC[1] = .15, ICC[2] = .80 for 2012). *Selection ratio* was operationalized as the ratio of the total number of new hires to the total number of applicants (Shaw et al., 2013). Each II practice measure was standardized, and then the z-scores were added up to form the indexes of II practices in 2010 and 2012. II usage was calculated as the difference between 2010 and 2012.

EE usage. EE practices were measured by an additive score of pay-for-performance, performance appraisal, and monitoring (Park, 2016). *Pay-for-performance* was measured as the number of pay-for-performance schemes in use (i.e., individual incentive, team incentive, division incentive, corporate incentive, profit sharing, and gain sharing). The maximum score is 6, and the minimum is 0. *Performance appraisal* was measured as the number of appraisal practices implemented (i.e., balanced scorecard, management by objective, competence evaluation, leadership evaluation, multisource evaluation, and other performance evaluation). The maximum score is 6, and the minimum is 0. *Monitoring* was measured by implementation of evaluation feedback (1 = yes, 0 = no) and the number of applications of evaluation results to seven areas (i.e., promotion, reassignment/deployment, management of poor performance, discharging, training, career development, core talent management). The

maximum score for this dimension is 8, and the minimum score is 0. Each EE practice measure was standardized before the z-scores were added to form the EE practices index in 2010 and 2012. The difference between the 2010 and 2012 index was used as EE usage.

Dependent Variable

Firm performance. Profit (earnings before tax) in 2013 was used as the indicator of firm performance.

Control variables.

Following previous practice (Shaw et al. 2013), I controlled for age, size, unionization, and existing HRM practices because they are related to HRM practices and firm performance. Age was measured as the number of years since the establishment of the firm. Size was calculated as the natural logarithm of the number of total employees. Unionization was coded 1 if a union was present and 0 if not. Existing HRM (II and EE) was the index calculated using 2010 data.

Results

Table 6 contains the descriptive statistics and correlations among Study 2 variables.

As one independent variable (industry dynamism) is at the industry level and companies are nested within industries, multilevel models were used to test the hypotheses. Tables 7 and 8 present the regression results of predicting changes in II and EE practices. All control variables were entered in Step 1, and four IVs were entered at Step 2. Step 3-6 entered the interactions between four IVs and each culture in predicting II or EE usage. Step 7 entered the interactions of all four IVs with all four cultures.

Insert Table 6, 7, and 8 Here

Hypothesis 1a predicts that flexibility-oriented culture (clan and adhocracy) interacts with prior firm performance to predict II usage, while Hypothesis 1b is that control-oriented culture (hierarchy and market) interacts with prior firm performance to predict EE usage. Step 3 and 4 in Table 7 show that neither clan nor adhocracy culture interacted with prior firm performance to predict II usage ($b = -.02, SE = .07, ns$; $b = .03, SE = .06, ns$ respectively), therefore, Hypothesis 1a was not supported. Step 5 and 6 in Table 8 show that neither hierarchy nor market culture was interacted with prior firm performance to predict EE usage ($b = .04, SE = .04, ns$; $b = -.04, SE = .03, ns$ respectively). Therefore, Hypothesis 1b was not supported.

Hypothesis 2a predicts that clan culture interacts with job satisfaction to predict II usage, while Hypothesis 2b is that hierarchy culture interacts with job satisfaction to predict EE usage. Step 3 in Table 7 shows that clan culture did not interact with job satisfaction to predict II usage ($b = -.68, SE = .45, ns$); therefore Hypothesis 2a was not supported. Step 5 in Table 8 shows that hierarchy culture did not interact with low job satisfaction to predict EE usage ($b = .82, SE = .60, ns$). Therefore, neither Hypothesis 2a nor 2b was supported.

Hypothesis 3a predicts that flexibility-oriented culture (clan and adhocracy) interacts with labor shortage to predict II usage, while Hypothesis 3b is that control-oriented culture (hierarchy and market) interacts with labor shortage to predict EE usage. Step 3 in Table 7 shows that clan culture positively interacted with labor shortage to predict II usage ($b = 2.66, SE = 1.03, p < .05$). Figure 5 depicts the moderation effect. Consistent with the hypothesis, the relationship between labor shortage and II usage was more positive when clan culture is high (+1 SD, simple slope $\beta = -.36, SE = .60, ns$; +2 SD, simple slope $\beta = .63, SE = .32, p < .05$), and the relationship became more negative when clan culture is low (-1 SD, simple slope $\beta = -2.36, SE = .43, p < .001$; -2 SD, simple slope $\beta = -3.35, SE = .82, p < .001$).

However, the interaction between adhocracy culture and labor shortage was not significant (b

= .57, $SE = .94$, ns). Therefore, Hypothesis 3a was only partially supported. As shown in Step 5 and 6 in Table 8, neither hierarchy nor market culture interacted with labor shortage to predict EE usage ($b = -1.28$, $SE = 1.27$, ns ; $b = -1.22$, $SE = 1.07$, ns , respectively). Thus, Hypothesis 3b did not receive any support.

 Insert Figure 5 and 6 Here

For environmental dynamism, Step 4 in Table 7 shows that the moderating role of adhocracy culture on II usage was not significant ($b = 5.00$, $SE = 4.47$, ns). Step 6 in Table 8 shows that market culture did not interact with environmental dynamism to predict EE usage ($b = .03$, $SE = 4.46$, ns). Therefore, Hypothesis 4a and 4b were not supported.

Table 9 presents the regression results of predicting firm performance. Hypothesis 5a predicts that II usage positively relates to firm performance, and Hypothesis 5b predicts EE usage has a positive relationship with firm performance. However, through Step 3 to 7 in Table 9, I did not find II or EE usage was related to firm performance (e.g., in Step 3, $b = -.05$, $SE = .11$, ns for II usage; $b = .06$, $SE = .11$, ns for EE usage). Hypothesis 5a and 5b were not supported.

 Insert Table 9 and 10 Here

Supplementary analysis. Instead of using II and EE usage as DV, I also used base-free approach (Jenkins & Lawler, 1981) by predicting 2012 II and EE practices while controlling for 2010 II and EE. The results remained largely the same. Only clan culture significantly and positively interacted with labor shortage to predict II usage ($b = 2.66$, $SE = 1.03$, $p < .05$).

In addition, I have computed II and EE score for each company for all available years. However, KRIVET changed questionnaire content every year, so the items for computing II and EE were not the same across different waves (e.g., 7 items for computing Monitoring for EE practices were unavailable for Time 1 (2004), Time 6 (2014), and Time 7 (2016)). Figure 6 and 7 plotted the observed mean level of II and EE score at each wave.

Based on II and EE scores for all seven waves of the study, I examined the trajectory of II and EE using unconditional hierarchical linear modeling. The coefficient of the linear term for predicting II became insignificant when random effects entered into the model; therefore, the fixed effect model result was reported for II. Table 10 showed that II and EE practices followed an increase pattern ($\gamma = .05$, $SE = .02$, $p < .05$ for both II and EE). Furthermore, the variances for the linear term were significant, indicating there is significant variability in EE trajectory. However, as the fixed effects model was used for II, there is no variance in II trajectory, suggesting it is not meaningful to look for firm-level predictors in this variable. Due to data limitation, only three variables (firm performance, job satisfaction, and industry dynamism) were interacted with organizational culture to predict EE slope. The results were not significant.

 Insert Figure 6 and 7 Here

Discussion

Study 2 supported the moderating role of clan culture on the relationship between labor shortage and II usage. Consistent with ABV, clan-type organizations will change their II practice when facing the problem of labor shortage. An emphasis on clan culture would lead organizations to make more (at least not decrease) investments in employees to attract and retain them. In contrast, firms that place little importance on employee cohesion and

morale (i.e., low clan culture) may lower their investment in employees, probably due to the reason that employee tenure tends to be short when labor is scarce (Harris, 2010), making it less cost-efficient to invest in them. However, other hypotheses on II and EE usage were not supported. The results also indicate that labor supply may be an important antecedent that prompts organizations to change their HRM practices in Korean context.

Study 2 did not find any effect of II or EE usage on firm performance, which is measured by firm profit. A possible reason is that implementing HRM practice also incurs costs. For example, offering higher pay levels and investment in training directly deplete organizations' financial resources. As such, the benefits of more II or EE practices may be offset by the costs of using these practices, making the relationship insignificant. For example, Cappelli and Neumark (2001) found that high performance work practices, a combination of both II and EE practices, raised labor costs while boosting labor productivity, resulting in no effects on efficiency. The operationalization of firm performance in Study 2 was profit, which considers operating costs. Thus, the non-significant effect of II and EE usage on firm performance may be due to increased costs.

General Discussion

Previous studies on the influences of HRM practices have investigated a variety of antecedents inside and outside organizations. Despite great efforts have been made, we know little about why and how different organizations use HRM practices to different extents. Hence, drawing on ABV and EOR, I study how organizations respond to four issues based on their organizational culture by changing their II or EE practices and how II and EE usage may facilitate organizational performance on different dimensions.

First, I found some support for the predictions based on ABV. In Study 1, I found that clan culture interacted with prior firm performance to predict II usage, and market culture interacted with prior performance to predict EE usage. In Study 2, results showed that clan

culture interacted with labor shortage to II usage. Second, I found II usage was positively related to firm performance (i.e., reducing both vehicle and driver out-of-service rates). In contrast, EE usage was negatively related to firm performance (i.e., increasing driver out-of-service rate) in Study 1. However, neither II nor EE usage was found to be related to firm performance on profit in Study 2.

In the following sections, I highlight the theoretical and practical implications of the findings. In addition, the limitations of this chapter are discussed.

Theoretical Implications

First, I explore potential antecedents of HRM change using multi-wave datasets. The results showed the relative strength of antecedents in predicting HRM change. For example, labor shortage remained the only significant predictor of II usage (Step 2 in Table 6), which suggests that theories on antecedents of HRM may consider the influence of labor market. Previous studies have shown that labor shortage influenced firms' HRM practices (e.g., Bennett et al., 1994). However, most of these studies only considered limited antecedents and used cross-sectional data. By including antecedents from both internal organization and external environment and using longitudinal data, I also answered the call for empirically investigating how the internal and external environments shape HRM systems (e.g., Jackson et al., 2014; Jiang & Messersmith, 2018).

Second, this chapter shows that organizational culture may direct organizational responses in II or EE usage by moderating the effects of antecedents. Chapter 1 showed that most of the antecedents have mixed relationships with II or EE. Previous studies have examined some moderators (e.g., ownership, Chen et al., 2005; organizational size, Kroon et al., 2013). However, organizational culture was seldomly considered as a moderator. Supporting ABV, in Study 1, I found that clan-type organizations are more likely to use more II practices when firm performance is low. In comparison, market-type organizations are

more likely to adopt more EE practices when facing the same problem. In Study 2, I found that firms high in clan culture are more likely to increase the use of II practices when facing the problem of labor shortage, while firms low in clan culture are less likely to do so. These results suggest that it is meaningful to consider organizational culture when investigating the effects of various antecedents.

Third, this chapter shows that II and EE usage may have different implications for firm performance. In Study 1, II usage was found to be negatively related to vehicle and driver out-of-service rate, which promotes firm performance. In contrast, EE usage was positively related to driver out-of-service rate, thereby depleting firm performance. However, in Study 2, neither II nor EE usage was found to be related to firm performance, which is indicated by firm profit. These results show that the effects of HRM change on employee behavioral outcomes may not translate into distal firm outcomes such as profit. The benefits and values gained from implementing II practices may be offset by its costs (Sels et al., 2006). This finding also suggests that when evaluating the effects of HRM practices on firm performance, it may be useful to include other outcomes besides financial indices such as customer satisfaction, product or service quality, etc.

Last, though different measures on HRM change and firm performance were used, the unmatched results in Study 1 and Study 2 suggest industrial and national context should be considered when investigating antecedents and outcomes of HRM practices. II and EE usage in Study 2 was captured using HCCP 2010 and 2012 survey when the Korean economy was recovering from the Great Recession. During this period, firms may invest more in staffing to enable rapid adaptability and flexibility (Latham & Braun, 2011), which may explain why Korean companies paid more attention to labor market conditions. As the economy was generally down during the recession, prior performance and industry dynamism may be less important to them. Lee (2017) showed that the unemployment rate in Korea saw a steady

decrease pattern from 2010, indicating that most Korean companies are hiring more people after the Great Recession.

Practical Implications

The investment in HRM practice incurs large costs for organizations. The results from this study suggest that investing in more II practices instead of in EE may lead to more favorable outcomes such as employee safe behavior and rule compliance. However, the improvement in employee behavior may not translate into an increase in organizational profit. Raising the costs associated with HRM practice may explain why there is a null effect on profit. However, implementing more II practices should not hurt organizational competitiveness. It is possible that more II practices have other beneficial effects such as high morale, high flexibility etc. In sum, organizations are suggested to invest more in their II practices. In addition, they are suggested to implement it more strategically and efficiently such that the benefits associated with investments in II would not exceed its costs.

In addition, this chapter shows how firms' attention and responses to organizational issues may differ by their cultural types. While clan-type organizations choose to implement more II practices in the face of low firm performance, market-type organizations are determined to use more EE practices. Though these firm actions are consistent with their values and culture, different responses may lead to opposite results. As such, organization leaders are suggested to switch their attentional focus and take different views to scan their internal and external environment. In this way, their view should not be bounded by their prerequisite assumptions, logic, and values and be more prepared for hidden threats and seize more potential opportunities.

Limitations and Future Research

This chapter has several limitations. First, there are some problems in the measurement of II and EE usage. In Study 1, II and EE usage was measured by coding key

informants' descriptions of HRM change in their company. As any description of the change in any HRM subarea (e.g., training, performance appraisal) was coded as +1 or -1, it did not capture the extent of the change. For example, “increased pay 15 percent” and “increased start pay by 2 percent” were coded as 1 as II usage. However, the former certainly shows greater investment in II than the latter. Study 2 has better operationalization of II and EE usage by using multiple survey items. However, the items used to calculate EE usage only covered three dimensions (monitoring, pay-for-performance, performance appraisal). Though this approach aligns with previous studies (e.g., Shaw et al., 2009), future research may include other dimensions such as routinization and managerial oversight to measure EE practices.

Second, the measurement of organizational culture is not perfect. In both Study 1 and 2, four types of organizational culture had relatively high correlations with each other, which could cause the problem of multicollinearity. Though CVF argues that the four types of culture should be negatively related to each other, a meta-analysis found that these four are generally positively related (Hartnell et al., 2011). In addition, other studies using HCCP also found a positive correlation among the four cultural types (e.g., Kim & Chang, 2019). To explore if there are better ways to combine the measurements on organizational culture, I have conducted Exploratory Factor Analysis². However, the results did not support a clear-cut two-factor or four-factor structure. I used two factors with the highest loadings as flexibility- and internal-oriented cultural dimensions (combining to form four types of organizational culture). However, the two cultural dimensions did not moderate the effects of any antecedents (please see Table 11 – 14 for these additional analyses). Future research may consider alternative ways to operationalize organizational culture.

² I thank Examiner 1 for this suggestion.

Third, alternative analysis on HRM change could be performed. In Study 2, HRM change was operationalized as the 2012 score minus the 2010 score. Though I used alternative ways to examine HRM change in the supplementary analysis, I found similar results using base-free approach and did not find significant results using change slope as the dependent variable. Future research could conduct additional analyses (e.g., latent change score model) to examine the proposed model using longitudinal data.

Summary

The aim of this thesis is to examine the antecedents of HRM practices. For this reason, I first reviewed the literature on influences on HRM practices; then, I tested four organizational issues (prior firm performance, job satisfaction, labor shortage, and environmental dynamism) as antecedents using two time-lagged datasets. Results showed that prior performance and labor shortage interacted with organizational culture to predict HRM change. In addition, while II usage would improve firm performance, EE usage may have negative effects on firm performance.

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Table 1. External and Internal Influences on Human Resource Management Practices, Theoretical Perspectives, Key Mechanisms, and Evidence

Level of influence	Key influences	Examples of theoretical perspectives	Key mechanisms and quality of evidence
External environment	Labor market	Neoclassical economics Resource dependence theory	Firms use more II practices to attract (e.g., high pay level, benefit programs, and promotion opportunities) and retain employees (e.g., internal labor markets, firm skill-specific training) when facing labor scarcity (L) Firms decrease wages when labor market supply is ample (L)
	Environmental dynamism	Contingency theory	Firms use fewer HRM practices to enable flexibility when facing a dynamic environment (L) Firms adopt more II practices to respond to the increasing need for employee autonomy in a dynamic environment (L)
	Institution isomorphism	Institutional theory	Coercive, normative, and mimetic isomorphism requires firms to adopt HRM practices promoted by institutions (M)
Organization	Firm characteristics (size, family firm, ownership type, idiosyncratic skills)	Size	Size
		<ul style="list-style-type: none"> Economies of scale Institutional theory 	<ul style="list-style-type: none"> Large companies adopt more sophisticated HRM practices (both EE and II), as the average costs will be lower, and they need to remain legitimate (H)
		Family firm	Family firm
		<ul style="list-style-type: none"> Agency theory Stewardship theory 	<ul style="list-style-type: none"> Firms adopt fewer II practices, as they have more political power and bargaining power over employees (L)
		Ownership type	Ownership type
		<ul style="list-style-type: none"> Institutional theory Agency theory 	<ul style="list-style-type: none"> State-owned enterprises need to comply with the social and political goals of the state, so more II and fewer EE practices will be used (M)
		Idiosyncratic skills	Idiosyncratic skills
		<ul style="list-style-type: none"> Transaction cost economics Resource-based theory 	<ul style="list-style-type: none"> Family firms care about the welfare of employees, so they will use fewer EE practices and more II practices (L) Family firms may opportunistically exploit nonfamily members, so more EE practices and fewer II practices will be used. (L)
			<ul style="list-style-type: none"> In contrast, privately owned and foreign-owned enterprises are under more market pressure, so they will

			<p>use more EE practices and fewer II practices. (L)</p> <p>Idiosyncratic skills</p> <ul style="list-style-type: none"> Firms tend to invest more in II practices to prevent turnover when employees acquire idiosyncratic skills (H)
	Performance	Slack Performance feedback	<p>High-performing firms own more slack resources, which allows them to explore more HRM practices and invest in employees (H)</p> <p>Poor-performing firms will decrease their use of II practices and increase EE practices to improve efficiency (L)</p>
	Turnover	EVLN model Cost efficiency	<p>II practices such as employee benefits and involvement programs will be provided to avoid employee turnover. (L)</p> <p>Firms are unlikely to invest in II practices, as employees have shorter tenure when turnover is high (L)</p>
	Strategy	SHRM theory (external fit)	<p>Quality enhancement strategy is positively related to both II and EE practices (M).</p> <p>Cost reduction strategy is negatively related to II practices and positively related to EE practices so as to lower costs and maximize efficiency (L)</p> <p>Innovation strategy is positively related to II practices and negatively related to EE practices (L)</p>
	Culture	Internal consistency	<p>People-oriented HRM is positively related to the use of both II and EE practices (H).</p>
	Organizational practices	SHRM (internal fit) Internal consistency	<p>Organizations use different combination of EE and II practices to achieve positive synergistic effects (L).</p> <p>Technological change is related to the use of EE and II practices (M).</p>
	Unions	EVLN model	<p>Unions bring changes (more II practices and fewer EE practices) to HRM practices by giving their members a voice in workplace decisions (M)</p>
Decision maker	Demographics	Upper echelon theory	<p>Education level of the decision makers is positively related to more HRM practices encompassing both II and EE (M).</p>

Perceived benefits and costs	Efficiency perspective	<p>Work experience is positively related to more HRM practices of both II and EE (L).</p> <p>Demographic diversity of decision makers is positively related to inclusive HRM (II) practices (L).</p> <p>Perceived benefit of HRM practices, regardless of II or EE, is positively related to the adoption of such practices (H).</p> <p>Perceived cost of HRM practices, regardless of II or EE, is negatively related to the use of such practices (L).</p>
Leadership style	Transformational leadership	<p>Transformational leaders promote collective interests and are more likely to use II practices (L).</p>

Note. L, low level of evidence; M, moderate level of evidence; H, high level of evidence. Level of evidence is determined by the number of correlations, strength of correlations, and the percentage of correlations in the predicted direction.

Table 2. Study 1: Mean, Standard Deviations, and Correlations among Variables

Variables	Mean	s.d.	N	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Size (log)	4.77	0.99	371														
2. Age (log)	3.64	1.23	373	.02													
3. Unionization	8.91	27.33	369	.007	.07												
4. Tractor age	3.70	2.76	364	.05	.03	.13*											
5. Carrier type	0.90	0.31	376	-.13*	-.003	-.08	-.12*										
6. Owner-operator percentage	25.15	31.25	373	-.17***	.01	-.13*	.05	.09									
7. Prior firm performance	76.45	16.25	355	-.06	-.03	.05	-.17**	.08	-.11*								
8. II usage	0.89	1.22	255	.01	-.02	-.006	-.02	-.01	-.02	-.06							
9. EE usage	0.22	.51	255	.10	-.008	.01	-.04	.004	-.01	-.10	.29***						
10. Clan culture	3.99	0.86	369	-.08	-.06	-.02	-.15**	-.03	.008	.37***	-.03	-.05					
11. Adhocracy culture	2.87	0.91	369	.02	-.09	-.03	-.12*	-.02	-.05	.26***	-.04	.04	.51***				
12. Hierarchy culture	3.40	0.77	369	.03	-.02	.05	-.07	-.03	-.04	.24***	.01	.01	.21***	.24***			
13. Market culture	4.04	0.62	369	.06	-.01	-.02	-.04	.05	-.03	.16**	.08	.08	.41***	.48***	.41***		
14. Vehicle out-of-service rate	17.28	9.59	356	-.02	.009	.12*	.15**	-.05	.11*	-.10	-.09	.002	-.05	-.04	-.04	-.09	
15. Driver out-of-service rate	6.26	5.21	356	-.005	-.14**	-.12*	-.08	.17**	.15**	.06	-.001	.13*	.04	.12*	.03	.06	.06

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 3. Study 1: Regression on II and EE usage (Coefficients and Standard Errors)^a

	II usage							EE usage						
	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7
Intercept	.90 (.56)	.89 (.58)	.95 (.58)	.88 (.59)	.86 (.58)	.88 (.59)	1.05† (.59)	-.03 (.25)	-.08 (.26)	-.06 (.26)	-.08 (.26)	-.08 (.26)	-.09 (.26)	-.05 (.26)
Size (log)	.009 (.08)	.03 (.09)	.04 (.09)	.04 (.09)	.03 (.09)	.04 (.09)	.03 (.09)	.06 (.04)	.08† (.04)	.08* (.04)	.08† (.04)	.07† (.04)	.08* (.04)	.08* (.04)
Age (log)	-.002 (.06)	-.01 (.06)	-.01 (.06)	-.01 (.06)	-.03 (.06)	-.02 (.06)	-.03 (.06)	-.001 (.03)	-.003 (.03)	-.005 (.03)	-.003 (.03)	-.006 (.03)	-.007 (.03)	-.005 (.03)
Unionization	.000 (.003)	.001 (.003)	.001 (.003)	.001 (.003)	.001 (.003)	.001 (.003)	.000 (.003)	.000 (.001)	.000 (.001)	.000 (.001)	.000 (.001)	.000 (.001)	.000 (.001)	.000 (.001)
Tractor age	-.02 (.03)	-.03 (.03)	-.03 (.03)	-.03 (.03)	-.03 (.03)	-.03 (.03)	-.03 (.03)	-.01 (.01)	-.02 (.01)	-.02 (.01)	-.02 (.01)	-.01 (.01)	-.02 (.01)	-.02 (.01)
Carrier type	.01 (.26)	.005 (.27)	-.01 (.27)	.004 (.27)	.11 (.27)	-.006 (.27)	-.04 (.28)	.01 (.11)	.02 (.12)	.02 (.11)	.03 (.12)	.05 (.12)	.02 (.12)	-.01 (.12)
Owner-operator percentage	-.001 (.003)	-.001 (.003)	-.001 (.003)	-.001 (.003)	-.002 (.003)	-.001 (.003)	-.001 (.003)	.000 (.001)	.000 (.001)	.000 (.001)	.000 (.001)	-.000 (.001)	.000 (.001)	.000 (.001)
Prior firm performance		-.006 (.005)	-.01† (.006)	-.006 (.005)	-.009† (.006)	-.008 (.01)	-.01† (.006)		-.004† (.002)	-.005* (.002)	-.004† (.002)	-.005† (.002)	-.005* (.002)	-.005† (.003)
Clan culture			-.009 (.13)				-.03 (.15)			-.002 (.06)				-.05 (.07)
Adhocracy culture				-.05 (.11)			-.14 (.13)				.05 (.05)			.04 (.06)
Hierarchy culture					.03 (.13)		-.02 (.15)					.04 (.06)		.01 (.07)
Market culture						.18 (.14)	.28 (.17)						.10 (.06)	.09 (.08)
Prior firm performance × Clan culture			-.02* (.007)				-.02* (.008)			-.005 (.003)				-.005 (.003)
Prior firm performance × Adhocracy culture				.000 (.008)			.01 (.01)				-.002 (.003)			.003 (.004)
Prior firm performance × Hierarchy culture					-.01† (.008)		-.01 (.009)					-.002 (.003)		.001 (.004)
Prior firm performance × Market culture						-.01 (.009)	-.006 (.01)						-.006† (.004)	-.007 (.005)
R ²	.003	.01	.04	.01	.03	.02	.07	.02	.03	.05	.04	.04	.06	.07

^a $N = 227-237$. † $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

Table 4. Study 1: Regression on Firm Performance (Coefficients and Standard Errors)a

	Vehicle Out-of-Service Rate							Driver Out-of-Service Rate						
	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7
Intercept	16.64*** (3.73)	16.63*** (3.82)	15.35*** (4.21)	15.80*** (4.23)	16.06*** (4.22)	15.50*** (4.26)	14.65** (4.28)	3.80† (2.00)	4.02† (2.10)	5.24† (2.70)	5.31† (2.70)	5.40* (2.70)	5.36† (2.73)	4.84† (2.77)
Size (log)	-.16 (.57)	-.14 (.59)	.11 (.64)	.19 (.65)	.13 (.64)	.12 (.66)	.22 (.65)	.38 (.31)	.37 (.32)	.20 (.41)	.20 (.41)	.21 (.41)	.25 (.42)	.27 (.42)
Age (log)	-.07 (.42)	-.05 (.41)	-.15 (.44)	-.21 (.45)	-.10 (.44)	-.14 (.44)	-.16 (.45)	-.52 (.22)	-.57* (.23)	-.53 (.28)	-.52 (.28)	-.54† (.28)	-.55† (.28)	-.52† (.29)
Unionization	.04* (.02)	.05* (.02)	.03 (.02)	.03 (.02)	.03 (.02)	.03 (.02)	.03 (.02)	-.01 (.01)	-.02 (.01)	-.02 (.01)	-.02 (.01)	-.02 (.01)	-.02 (.01)	-.02 (.01)
Tractor age	.49* (.19)	.45* (.19)	.30 (.22)	.28 (.22)	.26 (.22)	.30 (.22)	.30 (.22)	-.14 (.10)	-.13 (.11)	-.16 (.14)	-.17 (.14)	-.17 (.14)	-.17 (.14)	-.17 (.14)
Carrier type	-1.67 (1.75)	-1.64 (1.77)	-.41 (1.89)	-.44 (1.92)	-1.12 (1.94)	-.35 (1.90)	-.41 (1.96)	2.85** (.94)	2.71** (.97)	2.39† (1.21)	2.42† (1.22)	2.40† (1.24)	2.35† (1.22)	2.42† (1.27)
Owner-operator percentage	.04† (.02)	.03† (.02)	.05* (.02)	.05* (.02)	.05* (.02)	.05* (.02)	.05* (.02)	.02* (.01)	.03** (.01)	.03* (.01)	.03* (.01)	.03* (.01)	.03* (.01)	.03* (.01)
Prior firm performance		-.05 (.03)	-.03 (.04)	-.05 (.04)	-.03 (.04)	-.04 (.04)	-.004 (.04)		.02 (.02)	.05† (.03)	.03 (.02)	.04 (.03)	.04 (.02)	.04 (.03)
Clan culture			-.21 (.93)				.57 (1.04)			.06 (.59)				-.30 (.68)
Adhocracy culture				-.90 (.80)			-.62 (.97)				.66 (.51)			.73 (.63)
Hierarchy culture					-.43 (.80)		-.15 (.85)					.34 (.51)		.28 (.55)
Market culture						-1.52 (1.02)	-1.29 (1.23)						.39 (.66)	-.11 (.80)
Prior firm performance × Clan culture			.09† (.05)				.12* (.05)			.03 (.03)				.03 (.04)
Prior firm performance × Adhocracy culture				-.008 (.05)			-.10 (.07)				-.009 (.03)			-.005 (.04)
Prior firm performance × Hierarchy culture					.06 (.04)		.07 (.04)					-.001 (.03)		.009 (.03)
Prior firm performance × Market culture						.04 (.06)	.02 (.08)						-.03 (.04)	-.04 (.05)
II usage			-.87† (.51)	-1.04* (.51)	-.96† (.51)	-.94† (.51)	-.76 (.52)			-.52 (.33)	-.53 (.33)	-.57† (.33)	-.58† (.33)	-.48 (.34)
EE usage			.46 (1.15)	.40 (1.15)	.41 (1.15)	.54 (1.16)	.73 (1.16)			1.86* (.74)	1.75* (.74)	1.80* (.74)	1.73* (.74)	1.74* (.75)
R ²	.05	.07	.10	.09	.09	.09	.13	.09	.10	.13	.13	.13	.13	.14

^a $N = 219$. † $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

Table 5. Study 1: Supplementary Analysis Using ROE as Dependent Variable

	ROE				
	Step 1	Step 2	Step 3	Step 4	Step 5
Intercept	-34.37 (267.55)	-81.50 (273.04)	-77.26 (269.82)	-163.98 (273.51)	-69.78 (273.66)
Size (log)	39.08 (42.75)	32.49 (43.84)	34.61 (43.09)	48.91 (44.16)	45.99 (43.86)
Age (log)	-7.27 (27.43)	-2.00 (28.24)	-8.85 (28.00)	-4.13 (27.75)	-5.08 (28.04)
Unionization	-.67 (1.41)	-.73 (1.43)	-.44 (1.42)	-.59 (1.42)	-.48 (1.42)
Tractor age	-1.11 (13.85)	.88 (14.12)	2.29 (13.99)	.93 (13.98)	-.54 (13.93)
Carrier type	-38.07 (119.85)	-15.19 (123.72)	6.04 (125.09)	6.14 (121.55)	-50.18 (127.33)
Owner-operator percentage	.25 (1.26)	-.03 (1.28)	.006 (1.26)	-.05 (1.26)	.48 (1.27)
Prior firm performance	3.87 (2.57)	4.05 (2.44)	3.33 (2.55)	3.48 (2.39)	3.36 (2.67)
Clan culture	-123.79* (57.71)				-134.66 (68.43)
Adhocracy culture		-23.93 (51.59)			48.88 (62.07)
Hierarchy culture			-90.68 (60.12)		-31.67 (69.19)
Market culture				-62.84 (63.25)	-28.70 (75.89)
Prior firm performance × Clan culture	-6.30* (3.00)				-6.58 (3.38)
Prior firm performance × Adhocracy culture		-.15 (3.34)			7.40 (4.22)
Prior firm performance × Hierarchy culture			-5.54 (3.39)		-3.06 (3.95)
Prior firm performance × Market culture				-6.33 (3.86)	-6.86 (4.88)
II usage	-22.49 (31.62)	-13.02 (31.89)	-16.34 (31.73)	-12.44 (31.59)	-25.82 (32.26)
EE usage	-8.61 (74.32)	3.14 (75.93)	-1.71 (74.88)	-9.18 (75.72)	-25.65 (75.47)
R ²	.06	.02	.04	.04	.09

Note. $N = 200$. * $p < .05$ ** $p < .01$ *** $p < .001$

Table 6. Study 2: Mean, Standard Deviations, and Correlations among Variables

Variables	Mean	s.d.	N	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Size	5.94	1.14	420															
2. Age	39.98	16.88	420	.14**														
3. Unionization	.88	.32	420	.17***	.14**													
4. Existing II	-.02	2.63	388	.43***	-.06	.02												
5. Existing EE	-.05	2.27	420	.43***	.04	.04	.28***											
6. Prior firm performance (07-09)	28.62	103.29	392	.28*	.06	.04	.19*	.10										
7. Job satisfaction (10)	2.44	.35	420	.44***	.11*	.02	.49***	.36***	.24*									
8. Labor shortage (10)	.22	.23	395	-.25***	-.14**	-.10*	.14**	-.18***	-.09	-.14**								
9. Industry dynamism (07-09)	.03	.05	419	.07	.10*	-.09	.06	.05	.06	.01	.05							
10. II usage (10-12)	-.08	1.74	352	.02	.04	.05	-.36***	.007	.01	-.03	-.31***	-.04						
11. EE usage (10-12)	.05	1.67	419	.08	.02	-.01	.04	-.32***	.03	-.004	-.06	.02	.14*					
12. Clan culture	3.60	.38	420	.36***	.11*	-.01	.39***	.28***	.16**	.66***	-.17***	-.03	.05	.01				
13. Adhocracy culture	3.37	.44	420	.31***	.02	.003	.46***	.32***	.15**	.56***	-.11*	.09	.007	.06	.64***			
14. Hierarchy culture	3.50	.28	420	.21***	.21***	.06	.12*	.09	.09	.30***	-.08	.004	-.05	.00	.35***	.25***		
15. Market Culture	3.54	.36	420	.35***	.03	.06	.36***	.35***	.15**	.52***	-.16**	.10*	-.006	.01	.61***	.64***	.49***	
16. Firm performance (13)	3.28	21.63	387	.36**	-.03	.04	.12	.10	.35***	.22**	-.09	.02	-.01	.03	.18***	.17**	.07	.15**

Note: The monetary unit of all firm performance measures is 10 billion Korean won (approximately 8.9 million USD).

* $p < .05$

** $p < .01$

*** $p < .001$

Table 7. Study 2: Regression on II usage (Coefficients and Standard Errors) ^a

	II usage						
	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7
Intercept	-1.94** (.58)	-.76 (.66)	-.42 (.65)	-.59 (.67)	-.68 (.67)	-.66 (.66)	-.19 (.68)
Size	.31** (.09)	.14 (.11)	.10 (.10)	.11 (.11)	.13 (.11)	.13 (.11)	.09 (.10)
Age	-.002 (.005)	-.005 (.005)	-.006 (.005)	-.004 (.005)	-.004 (.005)	-.004 (.005)	-.004 (.005)
Unionization	.14 (.27)	.08 (.27)	.12 (.26)	.05 (.27)	.04 (.27)	.02 (.27)	-.04 (.27)
Existing II	-.30*** (.04)	-.29*** (.04)	-.32*** (.04)	-.33*** (.04)	-.29*** (.04)	-.30*** (.04)	-.34*** (.04)
Existing EE	.06 (.04)	.01 (.04)	.01 (.04)	-.002 (.04)	.01 (.04)	.009 (.04)	-.004 (.04)
Prior firm performance (07-09)		.007 (.01)	.01 (.01)	.01 (.01)	.01 (.01)	.01 (.01)	.04* (.02)
Job satisfaction (10)		.51 (.31)	.30 (.38)	.26 (.34)	.56 (.31)	.47 (.35)	.24 (.39)
Labor shortage (10)		-1.66*** (.42)	-1.30** (.42)	-1.43** (.42)	-1.77*** (.43)	-1.72*** (.42)	-1.41** (.42)
Industry dynamism (07-09)		-.13 (1.49)	1.27 (1.66)	-1.78 (1.70)	-.14 (1.48)	-.71 (1.74)	.70 (3.76)
Clan culture			.85* (.35)				.38 (.45)
Adhocracy culture				.77** (.29)			1.07* (.48)
Hierarchy culture					-.36 (.33)		-.43 (.39)
Market culture						.16 (.37)	-.57 (.59)
Prior firm performance × Clan culture			-.02 (.07)				-.12 (.12)
Prior firm performance × Adhocracy culture				.03 (.06)			.27 (.14)
Prior firm performance × Hierarchy culture					-.04 (.04)		.03 (.06)
Prior firm performance × Market culture						-.08 (.09)	-.27 (.18)
Job satisfaction × Clan culture			-.68 (.45)				-.27 (.75)
Job satisfaction × Adhocracy culture				-.42 (.46)			-.19 (.78)
Job satisfaction × Hierarchy culture					-.07 (.61)		.42 (.83)
Job satisfaction × Market culture						-.55 (.53)	-.36 (1.08)
Labor shortage × Clan culture			2.66* (1.03)				3.81** (1.44)
Labor shortage × Adhocracy culture				.57 (.94)			-1.51 (1.40)
Labor shortage × Hierarchy culture					-1.62 (1.33)		-1.84 (1.67)
Labor shortage × Market culture						-1.14 (1.15)	-.34 (1.67)
Industry dynamism × Clan culture			3.51 (4.26)				2.39 (9.62)
Industry dynamism × Adhocracy culture				5.00 (4.47)			17.30 (11.24)
Industry dynamism × Hierarchy culture					-6.06 (8.65)		4.63 (10.03)
Industry dynamism × Market culture						4.74 (5.17)	-18.98 (13.08)
Log Likelihood	-661.87	-614.30	-604.25	-609.40	-612.02	-612.09	-595.24

^a $N = 333-352$. † $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

Table 8. Study 2: Regression on EE usage (Coefficients and Standard Errors)^a

	EE usage						
	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7
Intercept	-2.09*** (.51)	-1.63** (.58)	-1.20* (.60)	-1.43* (.60)	-1.58** (.58)	-1.33* (.59)	-1.60** (.61)
Size	.36*** (.08)	.28** (.09)	.23* (.10)	.25* (.10)	.28** (.09)	.24* (.10)	.27** (.10)
Age	.001 (.005)	.001 (.005)	.000 (.005)	.002 (.005)	.001 (.005)	.002 (.005)	.002 (.005)
Unionization	-.12 (.25)	-.08 (.26)	-.10 (.26)	-.06 (.25)	-.10 (.26)	-.11 (.26)	-.06 (.26)
Existing II	.04 (.03)	.07 (.04)	.06 (.04)	.05 (.04)	.07 (.04)	.06 (.04)	.04 (.04)
Existing EE	-.34*** (.04)	-.34*** (.04)	-.35*** (.04)	-.35*** (.04)	-.34*** (.04)	-.35*** (.04)	-.37*** (.04)
Prior firm performance (07-09)		.009 (.007)	.02 (.01)	.02* (.008)	.004 (.008)	.02 (.009)	.009 (.007)
Job satisfaction (10)		-.05 (.29)	.13 (.36)	-.34 (.32)	.02 (.30)	.02 (.32)	.06 (.37)
Labor shortage (10)		-.70 (.40)	-.74 (.40)	-.67 (.40)	-.74 (.40)	-.71 (.40)	-.68 (.40)
Industry dynamism (07-09)		.35 (1.46)	.04 (1.61)	-.34 (4.08)	.36 (1.45)	.37 (1.66)	-3.17 (3.03)
Clan culture			.15 (.29)				-.16 (.38)
Adhocracy culture				.54* (.24)			.45 (.37)
Hierarchy culture					-.13 (.32)		-.59 (.36)
Market culture						.26 (.28)	.37 (.43)
Prior firm performance × Clan culture			-.04 (.03)				-.003 (.08)
Prior firm performance × Adhocracy culture				-.03 (.02)			-.05 (.10)
Prior firm performance × Hierarchy culture					.04 (.04)		.03 (.05)
Prior firm performance × Market culture						-.04 (.03)	.05 (.10)
Job satisfaction × Clan culture			-1.09* (.43)				-1.07 (.69)
Job satisfaction × Adhocracy culture				-.37 (.43)			1.19 (.68)
Job satisfaction × Hierarchy culture					-.90 (.60)		.53 (.78)
Job satisfaction × Market culture						-1.24* (.50)	-1.56 (.96)
Labor shortage × Clan culture			-1.41 (.99)				-.60 (1.37)
Labor shortage × Adhocracy culture				-1.54 (.89)			-1.40 (1.36)
Labor shortage × Hierarchy culture					-1.28 (1.27)		-.77 (1.61)
Labor shortage × Market culture						-1.22 (1.07)	.79 (1.63)
Industry dynamism × Clan culture			-1.62 (4.14)				-10.76 (7.76)
Industry dynamism × Adhocracy culture				-.34 (4.08)			2.47 (10.39)
Industry dynamism × Hierarchy culture					-8.03 (8.40)		-15.76 (9.62)
Industry dynamism × Market culture						.03 (4.46)	3.33 (10.48)
Log Likelihood	-715.35	-672.56	-667.04	-666.59	-669.41	-666.97	-658.08

^a $N = 356$. † $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

Table 9. Study 2: Regression on Firm Performance (Coefficients and Standard Errors)^a

	Firm Performance						
	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7
Intercept	-30.04*** (6.52)	-41.35*** (6.01)	.98 (1.38)	.14 (1.39)	1.57 (1.36)	.61 (1.34)	.77 (1.35)
Size	5.75*** (1.05)	7.37*** (.95)	.54* (.22)	.59** (.22)	.36 (.21)	.59** (.21)	.54* (.21)
Age	-.02 (.06)	-.02 (.05)	-.02 (.01)	-.01 (.01)	-.008 (.01)	-.01 (.01)	-.01 (.01)
Unionization	-.18 (3.02)	.51 (2.70)	-.35 (.55)	-.19 (.55)	-.41 (.55)	-.28 (.54)	-.09 (.54)
Existing II	.07 (.42)	.32 (.41)	.20* (.09)	.23* (.10)	.09 (.09)	.22* (.09)	.20* (.09)
Existing EE	-.24 (.46)	-.42 (.41)	-.23* (.09)	-.20* (.09)	-.19* (.09)	-.19* (.09)	-.20* (.09)
Prior firm performance (07-09)		-.82*** (.07)	.83*** (.03)	.78*** (.02)	.82*** (.02)	.84*** (.03)	.87*** (.04)
Job satisfaction (10)		4.38 (2.98)	-.40 (.78)	-.63 (.69)	-.50 (.62)	-.59 (.69)	-.32 (.76)
Labor shortage (10)		-4.48 (4.13)	-.95 (.88)	-.74 (.88)	-.31 (.87)	-1.00 (.86)	-1.17 (.83)
Industry dynamism (07-09)		11.75 (14.82)	-16.79*** (3.44)	-1.62 (3.46)	-10.83*** (2.93)	-1.08 (3.44)	-3.74 (7.69)
Clan culture			-1.39 (.72)				-.88 (.88)
Adhocracy culture				-.95 (.60)			-1.21 (.96)
Hierarchy culture					-.52 (.67)		-.96 (.78)
Market culture						-2.11** (.73)	.12 (1.16)
Prior firm performance × Clan culture			-.42** (.14)				-.36 (.23)
Prior firm performance × Adhocracy culture				-.21 (.12)			-.17 (.28)
Prior firm performance × Hierarchy culture					-.46*** (.08)		-.53*** (.11)
Prior firm performance × Market culture						-.83*** (.18)	-.04 (.35)
Job satisfaction × Clan culture			-.15 (.92)				-.47 (1.47)
Job satisfaction × Adhocracy culture				.62 (.93)			1.25 (1.55)
Job satisfaction × Hierarchy culture					-.50 (1.23)		.32 (1.65)
Job satisfaction × Market culture						.50 (1.06)	-.55 (2.14)
Labor shortage × Clan culture			-.88 (2.13)				-1.42 (3.15)
Labor shortage × Adhocracy culture				-.97 (1.93)			.18 (2.85)
Labor shortage × Hierarchy culture					.97 (3.02)		2.11 (3.66)
Labor shortage × Market culture						-1.30 (2.34)	-1.60 (3.26)
Industry dynamism × Clan culture			-37.53*** (8.52)				-7.83 (19.50)
Industry dynamism × Adhocracy culture				-32.14*** (9.09)			-45.62* (22.99)
Industry dynamism × Hierarchy culture					21.55 (17.53)		-12.01 (20.19)
Industry dynamism × Market culture						-15.44 (10.03)	15.39 (26.03)
II usage			-.05 (.11)	-.03 (.11)	-.10 (.11)	-.09 (.11)	-.07 (.11)
EE usage			.06 (.11)	.08 (.11)	.14 (.11)	.06 (.11)	.09 (.11)

Log Likelihood	-1558.80	-1492.97	-830.07	-831.61	-827.62	-824.34	-805.16
^a $N = 329$ -359. [†] $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$							

Table 10. Study 2: Hierarchical Linear Modeling Results for Intercept and Slope of II and EE

Variable	II		EE	
	Estimate	SE	Estimate	SE
Intercept				
Coefficient	-.16	.10	-.18*	.09
Variances	4.11***	.27	3.85***	.29
Linear term of time				
Coefficient	.05*	.02	.05*	.02
Variances	<i>ns</i>		.12***	.01
Model fit				
AIC	12155.6		12411	

2758 observations for II. 3110 observations for EE.

Note. Fixed effect model was used for II and random effect model was used for EE.

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 11. Study 1 Supplementary Analyses: Exploratory Factor Analysis of the Items of Organizational Culture

Items	Factor			Dimension
	1	2	3	
A dynamic and entrepreneurial place - people stick their necks out and take risks (<i>Adhocracy</i>)	.75	.13	-.16	Flexibility-oriented Culture
An outcome-oriented place - reaching milestones is of utmost importance (<i>Market</i>)	.70	.18	.19	
An idea-oriented place - people develop and generate new thoughts and ideas (<i>Adhocracy</i>)	.69	.36	.12	
An innovative place - there is a strong emphasis on being first to provide services (<i>Adhocracy</i>)	.63	.02	.41	
A task and accomplishment place - people are concerned with reaching goals (<i>Market</i>)	.55	.15	.43	
A traditional and loyal place - commitment here runs high (<i>Clan</i>)	.15	.78	.13	Internal-oriented Culture
A stable place - people are concerned with permanence and stability (<i>Hierarchy</i>)	.01	.72	.21	
A personal place - like an extended family. People share a lot of themselves (<i>Clan</i>)	.26	.67	-.24	
A human resource-oriented place - the morale of the workforce is a high priority (<i>Clan</i>)	.39	.63	.24	
A rule-oriented place -following rules is important (<i>Hierarchy</i>)	.09	.02	.82	
A formal and structured place - people pay attention to procedures (<i>Market</i>)	.09	.12	.76	-
A production-oriented place - people are concerned with getting the job done (<i>Market</i>)	.18	.34	.42	

Note. Extraction method: principal component analysis; Rotation method: Varimax with Kaiser normalization. Loadings larger than .40 are in bold. The first dimension (flexibility-oriented culture) had an eigenvalue of 4.13 and accounted for 34.37% of the variance. The second dimension (internal-oriented culture) had an eigenvalue of 1.44 and accounted for 12.90% of the variance. Together, these two dimensions accounted for 47.27% of the variance. The third dimension had an eigenvalue of 1.18 and accounted for 9.85% of the variance.

Table 12. Study 2 Supplementary Analyses: Exploratory Factor Analysis of the Items of Organizational Culture

Items	Factor		Dimension
	1	2	
Our company is properly rewarded for innovation. (<i>Adhocracy</i>)	.82	.08	Flexibility/Control
Our company encourages change and new initiatives. (<i>Adhocracy</i>)	.80	.09	
Our company values unity and oneness (<i>Clan</i>)	.79	.22	
Our company values teamwork more (<i>Clan</i>)	.79	.23	
Our company has a family-like organizational atmosphere (<i>Clan</i>)	.77	.12	
In our company, creative people are treated more than sincere people (<i>Adhocracy</i>)	.75	.10	
In our company, we value the professional knowledge and ability necessary to perform tasks (<i>Market</i>)	.70	.36	
Our company is evaluated based on job performance and performance. (<i>Market</i>)	.68	.36	Internal/External
Our company values formal procedures, rules, and policies (<i>Hierarchy</i>)	.62	.44	
Our company has an organizational atmosphere that emphasizes a sense of rank (<i>Hierarchy</i>)	.04	.85	
Communication or information flow in our company is top-down (<i>Hierarchy</i>)	.14	.81	
Our company emphasizes competitive atmosphere and achievement (<i>Market</i>)	.43	.58	

Note. Extraction method: principal component analysis; Rotation method: Varimax with Kaiser normalization. Loadings larger than .40 are in bold. The first dimension (flexibility-oriented culture) had an eigenvalue of 6.11 and accounted for 50.90% of the variance. The second dimension (internal-oriented culture) had an eigenvalue of 1.44 and accounted for 11.99% of the variance. Together, these two dimensions accounted for 62.89% of the variance.

Table 13. Study 1 Supplementary Analyses: Regression Results Using Two-dimensional Organizational Culture

	II Usage	EE Usage	Vehicle Out-of- Service Rate	Driver Out-of- Service Rate
Intercept	2.50 (1.55)	.47 (.68)	15.56*** (4.24)	5.42* (2.71)
Size (log)	.006 (.09)	.06 (.04)	.20 (.65)	.21 (.42)
Age (log)	-.03 (.06)	-.01 (.03)	-.19 (.44)	-.53 (.28)
Unionization	.001 (.003)	.001 (.001)	.03 (.02)	-.02 (.01)
Tractor age	-.03 (.03)	-.02 (.01)	.29 (.22)	-.17† (.14)
Carrier type	-.04 (.26)	-.01 (.11)	-.41 (1.91)	2.38† (1.22)
Owner-operator percentage	.000 (.003)	.001 (.001)	.05* (.02)	.03* (.01)
Prior firm performance	-.01 (.02)	-.004 (.007)	-.04 (.04)	.03 (.02)
Flexibility-oriented culture	3.21 (2.14)	1.01 (.94)	-1.40 (.93)	.69 (.59)
Prior firm performance × Flexibility-oriented culture	-.03 (.02)	-.01 (.01)	.01 (.06)	-.02 (.04)
II usage			-1.02* (.51)	-.55† (.33)
EE usage			.52 (1.16)	1.71* (.74)
R ²	.02	.03	.09	.13

Note. $N = 219$. † $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

Table 14. Study 2 Supplementary Analyses: Regression Results Using Two-dimensional Organizational Culture

	II usage				EE usage				Firm performance
	Step 1	Step 2	Step 3	Step 4	Step 1	Step 2	Step 3	Step 4	
Intercept	-1.18 (.66)	-1.16* (.58)	-1.99** (.58)	-1.90** (.58)	-1.52** (.58)	-1.69** (.53)	-1.99*** (.53)	-2.22*** (.53)	.01 (1.39)
Size	.19 (.11)	.21* (.09)	.31** (.09)	.29** (.09)	.26** (.09)	.31*** (.09)	.36*** (.08)	.36*** (.08)	.64** (.22)
Age	-.004 (.005)	-.004 (.005)	-.001 (.005)	-.001 (.005)	.001 (.005)	.000 (.005)	.003 (.005)	.002 (.005)	-.01 (.01)
Unionization	.16 (.27)	.10 (.26)	.22 (.26)	.15 (.27)	-.03 (.26)	-.14 (.25)	-.12 (.24)	.009 (.25)	-.02 (.55)
Existing II	-.37*** (.04)	-.30*** (.04)	-.37*** (.04)	-.36*** (.04)	.03 (.04)	.03 (.04)	.007 (.04)	-.002 (.04)	.22* (.09)
Existing EE	.02 (.04)	.009 (.04)	.01 (.04)	.02 (.04)	-.34*** (.04)	-.36*** (.04)	-.35*** (.04)	-.35*** (.04)	-.22* (.09)
Prior firm performance	.01 (.01)				.02* (.01)		-.09 (.35)		.81*** (.02)
Labor shortage		-1.28** (.39)				-.75* (.37)			-.99 (.88)
Job satisfaction			.13 (.38)				-.09 (.35)		-.54 (.79)
Industry dynamism				-.49 (1.89)				1.94 (1.81)	-5.54 (4.03)
Flexibility-oriented culture	1.16*** (.33)	.86** (.29)	1.43*** (.39)	1.32*** (.31)	.45 (.29)	.44 (.28)	1.11*** (.36)	.64* (.30)	-1.57 (.87)
Internal-oriented culture			-.95** (.34)	-.67* (.31)			-.56 (.32)	-.44 (.30)	-.66 (.72)
Prior firm performance × Flexibility-oriented culture	.001 (.06)				-.04 (.03)				-.50*** (.13)
Labor shortage × Flexibility-oriented culture		1.50 (1.09)				-1.71 (1.05)			-1.86 (2.41)
Job satisfaction × Flexibility-oriented culture			-.97 (.51)				-1.57** (.48)		.47 (1.08)
Industry dynamism × Flexibility-oriented culture				4.54 (5.24)				-3.23 (5.06)	-30.22** (10.98)
Job satisfaction × Internal-oriented culture			-.56 (.99)				.97 (.95)		-2.77 (2.04)
Industry dynamism × Internal-oriented culture				-2.57				1.06	5.07

				(8.90)				(8.37)	(18.97)
Flexibility-oriented culture × Internal-oriented culture	1.17		.72			.03	.01		-30.22**
	(.82)		(.57)			(.79)	(.55)		(10.97)
Job satisfaction × Flexibility-oriented culture × Internal-oriented culture	.75					-1.10			2.54
	(.94)					(.90)			(2.10)
Industry dynamism × Flexibility-oriented culture × Internal-oriented culture			-7.02				42.85		31.77
			(22.55)				(21.78)		(48.41)
II usage									-.05
									(.11)
EE usage									.05
									(.11)
Log Likelihood	-617.14	-647.85	-649.37	-649.32	-671.36	-710.62	-706.02	-708.33	-823.68

Note. $N = 329-355$. * $p < .05$ ** $p < .01$ *** $p < .001$

Figure 1. Integrative Framework for Influences on HRM Practices

Figure 2. Proposed Theoretical Model

Figure 3. Study 1: The Two-Way Interaction between Prior Firm Performance and Clan Culture on II Usage.

Figure 4. Study 1: The Two-Way Interaction between Prior Firm Performance and Market Culture on EE Usage.

Figure 5. Study 2: The Two-Way Interaction between Labor Shortage and Clan Culture on II Usage.

Figure 6. Study 2: Observed Mean Levels of II Practices from Time 1 (2004) to Time 7 (2016).

Figure 7. Study 2: Observed Mean Levels of EE Practices from Time 1 (2004) to Time 7 (2016).