GLOBAL CHALLENGES TO REPLICATING HR: THE ROLE OF PEOPLE, PROCESSES, AND SYSTEMS

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Global firms often struggle to replicate practices among their culturally and geographically dispersed subsidiaries. Part of the reason for this is that certain practices, including human resource management (HRM) practices, are complex and context specific. In this study, we develop a framework to help identify how firms might overcome challenges of practice replication through alignment of information systems, application processes, and people. We find that managerial alignment of formal processes and systems, along with informal alignment of people (shared objectives), improve the capability of a multinational corporation (MNC) to replicate human resource practices across subsidiaries. We also discuss managerial implications. © 2009 Wiley Periodicals, Inc.

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Introduction

As part of the broader field of knowledge-related competition, replication is defined as reproducing a successful practice in a new location (Winter & Szulanski, 2002). International business scholars have studied how replication of human resource (HR) practices can be important to firm objectives (Pudelko, 2005; Teagarden & Von Glinow, 1997). In general, they conclude that multinational corporations (MNCs) able to replicate practices among their subsidiary units more effectively than their competitors will typically gain a competitive advantage (Morris, Snell, & Wright, 2006). For example, a firm able to link pay to performance across geographical units consistently is expected to outperform competitors who cannot coordinate such an effort, all else being equal (Schuler & Tarique, 2007).

Even though researchers recognize that replication can lead to competitive advantage, MNCs still struggle to replicate practices across their boundaries. For example, research
has shown that factors such as national culture and coordination failure limit transferring and replicating HR practices (Beechler & Yang, 1994; Ferner, 1997; Gomez-Mejia & Welbourne, 1991; Schuler & Rogovsky, 1998; Myloni, Harzing, & Mirza, 2004). Moreover, we know very little about how MNCs might align internal mechanisms across their subsidiaries more effectively to replicate HR practices.

Recent debates in the knowledge replication literature have turned this into a significant HR issue (Winter & Szulanski, 2001). This debate revolves around internal mechanisms of templates versus principles to help a subsidiary replicate practices from other parts of the firm. On one hand, templates focus on formal systems and processes that can be managed to show people exactly how to replicate a practice. On the other hand, principles focus on people to motivate or explain why a practice should be replicated in the first place. While often presented as competing models, theory and practice show a conceptual and causal linkage between a formal focus on processes and systems and an informal focus on people leading to a subsidiary’s capability to replicate (Baden-Fuller & Winter, 2008).

Our interest in this paper is to understand conditions under which HR practices are replicated globally. By doing so, we extend existing research on HR practice adoption by turning to internal factors of people, process, and system alignment (Cascio, 2005) that might influence replication capability in MNC subsidiaries. Alignment refers to something common or shared across various firm boundaries (in this case, subsidiaries). When people are aligned, they share a common goal or vision. When processes are aligned, they have shared steps or guidelines in how work needs to be done. And when systems are aligned, they have integrated or common technologies and platforms. We find that the level of people, process, and system alignment has a positive effect on a subsidiary’s replication capability. We also find replication capability, controlling for cultural distance, improves the likelihood that a subsidiary will adopt and use more commonly held practices.

To organize this discussion, we divide this paper into four parts. First, we examine the significance of replicating practices for the global HR function. Second, we build upon knowledge replication literature to understand better how aligning formal processes and systems might improve people alignment across subsidiaries and their capability to replicate practices. Third, synthesizing these insights, we develop and empirically test a framework that helps us understand how specific formal processes and systems alignment and informal people alignment might be related to a firm’s replication capability and to what extent that capability leads to effectively replicating commonly used HR practices. Finally, we discuss the implications for HR managers.

**Practice Replication**

Von Glinow, Teagarden, and Drost (2002) pointed out that while some HR practices are not suitable across different countries, others are. If replicated, these practices can help capitalize on economies of scale and scope—offering common platforms, decreased redundancies, informal norms, and greater knowledge sharing among employees. An example of such practices might be formal job orientation for new employees or wage and salary surveys used to determine external equity. While they may need to be modified to fit each culture, such practices are a replication of the said practice if the core principles are still used. According to Schuler and Jackson (2005), these forms of replication where the “universal principles” of the practice are maintained give the firm consistency and internal integrity.

Regardless of whether the firm uses a multidomestic, multinational, or transnational strategy, the HR function is increasingly answering the call for more competitive and globally integrated HR practices (Schuler & Jackson, 2005). In fact,
many HR functions today focus on developing internal mechanisms to help replicate practices throughout the MNC to gain a competitive advantage. Many HR subsidiaries adapt well to their local environments but find it difficult to adapt useful human resource management (HRM) practices to other parts of the firm (Schuler, Budhwar, & Florkowski, 2002; Boudreau, Ramstad, & Dowling, 2003). Individual subsidiaries often find competing tensions in local culture and legal demands (e.g., Gomez-Mejia & Welbourne, 1991; Javidan, Stahl, Brodbeck, & Wilderom, 2005). Not only do these cultural demands create obstacles, but they also make replication even more difficult because HR practices are often complex and context specific.

**Practice Replication through Internal Mechanisms**

The replication literature examines internal mechanisms that improve a subsidiary's ability to replicate a practice or routine (Winter & Szulanski, 2001). Based on this objective, two seemingly contrasting approaches are used: (1) informal mechanisms tied to motivating individuals through people alignment (e.g., retentive capacity: Cohen & Levinthal, 1990; motivation of imitator: Porter, 1996) and (2) formal mechanisms tied to showing people how to replicate by aligning systems and processes (e.g., codifiable systems: Zander & Kogut, 1995; templates: Nelson & Winter, 1982).

Research often neglects the relationship between these two approaches because they are often seen as separate approaches to transferring and replicating practices (Baden-Fuller & Winter, 2008). On one hand, when people share a cognitive framework of the overall firm objectives, they will understand why it is important to adopt a set of common practices in the firm. On the other hand, when formal systems and processes are aligned across the MNC, subsidiaries will understand how to replicate practices more efficiently. Aligning these people, process, and system mechanisms stimulates replication in the MNC (Bartlett & Ghoshal, 1989).

Inside the HR function, we identified two specific formal mechanisms found in a large MNC’s HR subsidiary: (1) HR technology system alignment and (2) HR (nontechnology) process alignment. We also identified an informal mechanism of HR people alignment that has to do with common objectives and goals. The formal mechanisms have the potential to orient subsidiaries on the fundamental steps they need to take to replicate a practice. In many ways, they provide a template for improving the capability to replicate. At the same time, such elements can also lead to common objectives among subsidiaries—providing the principles for improving the capability to replicate. For example, in Orr’s (1996) popular Xerox case, the company provided formal step-by-step documented processes that helped to give workers a sense of vision or common goal in identifying the core problems that lay behind the symptoms of copying machines not working.

**Hypotheses**

To further existing discussions on replication in a global context (e.g., Jensen & Szulanski, 2004, 2007), we examine a subsidiary’s informal mechanisms of people alignment and formal mechanisms of system and process alignment. This area of research remains largely unconnected with the capability to replicate. Likewise, just because a subsidiary has the capability to replicate commonly used practices does not necessarily mean it will actually do so. Factors of cultural difference and geographical distance have shown it is difficult for firms to replicate practices across borders. For the HR function, this issue is all the more important, as some observers have suggested that how firms manage their human resources is among their most culturally specific and complex practices (e.g., Rosenzweig & Nohria, 1994).
Informal People Alignment

Informal people alignment consists of a common understanding of specific organizational objectives and why those objectives are important. This alignment consists largely of shared understanding that comes from social interaction and identified similarities. In society, this shared understanding is a desire for the good of the community. Strategy scholars have recently focused on these cognitive notions of community (Conner & Prahalad, 1996; Grant, 1996; Kogut & Zander, 1992). For example, Kogut and Zander (1996) argued that as individuals in an organization identify with one another through shared understanding or vision, this sets the entire process “by which learning is developed socially through the formation of values and convergent expectations” (p. 506).

Such people alignment may prove to be a key mechanism in a subsidiary’s willingness actually to replicate a practice from outside its operation.

People alignment is an alignment of goals and direction across an MNC’s subsidiaries. This alignment is primarily at the company level, where subsidiaries agree with one another on the MNC’s overall HR direction and goals. For example, people in a subsidiary could share the goal of being one of the top two companies in training and developing managers. Shared vision helps people align their goals to understand better why new knowledge from one another might help in their existing operations. Similarly, the literature on shared cognition suggests that similarity of team members’ mental models supports team ability to replicate individual knowledge (e.g., Cannon-Bowers & Salas, 2001; Klimoski & Mohammed, 1994; Mohammed & Dumville, 2001). Tsai and Ghoshal (1998) also showed that a shared vision or objective improves a subsidiary’s ability to share and integrate knowledge.

Furthermore, in their study of mature European firms, Stopford and Baden-Fuller (1994) found that shared strategic objectives across the organization were a vital feature that distinguished successful from unsuccessful replication because they reinforced the people’s need at the unit level to take risks and try ideas from other parts of the organization. Senge (1990) also showed that clear direction in the firm provided the impetus for double-loop learning that may help a unit to develop better learning capabilities. In fact, a lack of shared direction may make potentially useful HR practices from other parts of the firm look much like “flavors of the month” or “here comes another one” types of practice. As Juran (1989, p. 77) stated, unit-level managers who do not have shared goals often do not give credence to the latest innovative HR practice developed at headquarters (HQ) or in other parts of the firm with the energy required for success. We therefore expect:

Hypothesis 1: The more an HR subsidiary’s people are aligned with those of other peer subsidiaries, the more the subsidiary will be able to replicate practices from other parts of the company.

Formal Process and System Alignment

Replicating and hence integrating a practice into existing operations require processes and systems that provide common platforms or guidelines to adopt and hold onto the practice (Grant, 1996). Aligning such systems and processes provides a template for overcoming complexities and ambiguities in implementing a new practice. For example, in Procter & Gamble (P&G), Web-based interfaces support the so-called communities of practice used to share knowledge and thus provide a platform for integrating these shared practices with the existing practices. Such replication capabilities need to come from mechanisms that allow the subsidiary to capture and combine practices in a way internal HR members understand.

Previous research has shown that formal systems and processes influence how an organization integrates knowledge or practices (e.g., Snell, Youndt, & Wright, 1996). We identify HR application process alignment among subsidiaries to understand better how process might help to improve replication. Application processes consist of set routines.
or guidelines in how firms should apply and maintain HR practices. Along with process alignment, we also focus on systems alignment. We specifically identify information system alignment as the alignment of HR technology across the MNC’s subsidiaries. Information systems include a focus on codification and documentation (Hall, 1992; Itami, 1987; Subramaniam & Youndt, 2005; Walsh & Ungson, 1991).

Information System Alignment

Though often considered an enabler and thus left out of the picture when discussing knowledge replication, information systems are a powerful dimension of a firm’s technology. This is especially true in the global firm, where people are separated by geographical distances. Integrated information systems offer established databases and technology conduits that provide an appropriate structural mechanism to replicate practices (Brockbank & Ulrich, 2002; Davenport & Prusak, 1998). Practices become decontextualized and articulated in databases and other codified systems that allow an MNC’s multiple units more easily understand how a practice might be helpful to them in their specific context. At the same time, replicating and capturing knowledge for application require templates and systems that enable a subsidiary actually to hold on to the practices (Grant, 1996). The information systems allow practices from others and the subsidiary to be (1) codified and made simpler to understand and (2) captured in a storage system that allows for longevity of the practice.

One particular company we interviewed demonstrated this. The HR groups pointed out the importance of drawing on their integrated information systems such as shared databases and electronic manuals. The ability to codify knowledge and embed it into their existing operations allowed them to capture, roll out, maintain, promote, and distribute performance management practices such as an appraisal system that required drawing on past performance evaluations, regardless of where the employee was in the organization. We therefore expect:

Hypothesis 2a: The more an HR subsidiary’s information systems are used and aligned in the company, the more the subsidiary will be able to replicate practices from other parts of the company.

At the same time, firms often see information systems as facilitators to cognitive and structural aspects of knowledge embedded in the firm. As Snell, Stueber, and Lepak (2002) state, “While the operational impact of IT focuses on efficiency and productivity improvements in HR, IT also influences HR’s relationships with other parties in the organization. IT allows HR to ... [increase] their ability to connect with other parts of the corporation” (p. 87). We cannot fully understand current transformations in the form of shared objectives in the workplace without considering the systems aspects that have recently changed the way organizations operate (Barley & Orlikowski, 2001). Past research trying to combine information systems with organizational factors has looked at integrated information systems, which include electronic storage and messaging systems, shared collaboration systems, and other technologies that enable multiunit participation in organizational activities through sophisticated information management (Huber, 1990). Of course, many scholars argue that the effect of these advanced technologies on organizational attitudes is less a function of simply having the resource and more a function of whether the dispersed members of the organization use the resource (DeSanctis & Poole, 1994).

While their findings are mixed, information systems scholars have argued that integrated information systems tend to influence workers’ cognitive mindset as it changes the way things get done. In fact, some have shown that the use of these resources can improve group consensus across an organization’s different boundaries (DeSanctis & Galupe, 1987; DeSanctis & Poole, 1994; Huber, 1984). This is partially because the use of these systems allows individuals easier and quicker access to one another, and also because it codifies and embeds ideas agreed upon by spatially distant people and groups that would normally have a difficult time
frequently discussing these issues. While these databases and shared communication systems may not always convey valuable knowledge, the standard platform provides a common medium for understanding other subsidiary groups’ objectives and preferences. In relation to this research, Arias, Eden, Fischer, Gorman, and Scharff (2000) found information systems aligned in the organization increased shared goals among urban planning and community development employees. We therefore expect:

**Hypothesis 2b:** The more an HR subsidiary’s information systems are used and aligned in the company, the more the subsidiary’s people will be aligned with those of peer subsidiaries.

**Application Process Alignment**

Black and Lynch (2005) say that an organization’s formalized processes help to raise the firm’s productive capacity through coordination of ideas. Such processes are manifest in an organization’s or subsidiary’s “clearly mandated procedures and rules for retrieving, sharing, and utilizing knowledge” (Subramaniam & Youndt, 2005, p. 452). Application processes play a similar but separate role from technologies because they facilitate capturing and replicating more complex and fine-grained knowledge since people must still interact to obtain the specifics and details of the practice itself. In the MNC, geographically dispersed HR units who have such processes in place are able to follow well-established and codified guidelines for applying and replicating practices from other parts of the organization. While these processes do not mandate which practices (or even which aspects of a practice) need to be adopted from which parts of the firm, they offer a map and a mandate of how a practice can be more efficiently and appropriately introduced into the subsidiary once that practice has been identified. While the practice may be more rigidly defined in terms of how it is replicated (Brown & Duguid, 1991), it nonetheless will likely increase a subsidiary’s overall ability to replicate practices from other parts of the firm.

Though processes cannot fully capture tacit knowledge, they can provide a process that takes the know-how to a level of know-what to actually use and maintain a particular practice. This means everyone in the subsidiary does not need to understand exactly how the HR practice works as long as there is a standard process in place that allows him or her to replicate it to the current operations. Subramaniam and Youndt (2005) found that using more structured processes and guidelines to capture knowledge leads to a firm’s greater ability to apply and build upon existing knowledge in the organization. In our interviews, we also found subsidiaries that have clear mandates and guidelines for how practices from other parts of the firm can be effectively shared, introduced, put into practice, and promoted in the unit were more likely to succeed in their attempts to adopt identified useful practices from other peer units or HQ. We therefore expect:

**Hypothesis 3a:** The more an HR subsidiary’s application processes are aligned in the company, the more the subsidiary will be able to replicate practices from other parts of the company.

Not only do we hypothesize that application process alignment leads to greater replication capability, but it may also influence a subsidiary’s people alignment. Guidelines and processes provide the context in which subsidiaries can develop shared language and mental maps of what needs to be done and how (Kang, Morris, & Snell, 2007). When an organization mandates or puts in place specific processes for adopting practices, it first sends an implicit message that knowledge transfer and learning from others are important in the firm. Second, it creates another context (along with information systems) in which people can develop a shared cognitive frame of reference (Grant, 1996; Nonaka, 1991). In many ways, these application processes provide a common platform for subsidiaries to absorb ideas and practices from other parts of the organization.

For example, IKEA uses a set of guidelines and templates for coordinating people and
practices. In the past, IKEA was known for mandating all of its practices from HQ. It had specific guidelines for what practices needed to be standardized across the units. Over time, however, IKEA realized that some ideas for more effective practices were coming from subsidiaries in host countries that had run up against cultural and institutional pressures. As a result, instead of mandating all of the practices that needed to be standardized, the company left some aspects of HR to the subsidiaries themselves. To help these subsidiaries share and apply practices more efficiently, IKEA provided specific guidelines and templates on how to replicate the practices in the individual subsidiaries. Not only did this ensure that practices were more consistent across the firm, but it also created a common objective in HR of the importance of actually sharing and using practices from other parts of the firm. So, instead of only having guidelines on performing an HR practice (such as hiring), the managers in the subsidiaries also had guidelines for executing HR practices in general. Specifically, if a store identified a hiring practice of using referrals as better than the traditional practice being used, the adopting HR unit had specific informal and formal mandates and guidelines on how to learn from the other HR unit and apply its referral-based hiring system. Based on this, we argue that HR application processes will help HR units to develop stronger shared objectives. We therefore expect:

Hypothesis 3b: The more an HR subsidiary's application processes are aligned, the more the subsidiary's people will be aligned with those of peer subsidiaries.

Common Practice Use

While having capabilities does not necessarily mean that a subsidiary will actually replicate practices common in the global environment, given the trend toward global convergence among global HR practices (Pudelko, 2005; Smith & Meiksins, 1995; Teagarden, 1997) and the previous discussion of HR alignment, we argue that subsidiaries that have greater replication capabilities will be more likely to adopt and use these globally common practices. In other words, if an HR function focuses on aligning its people, processes, and systems to overcome historical influences based on its HQ culture and/or local culture, then its subsidiaries will be more adept and willing to adopt a set of globally convergent practices (Almond & Ferner, 2006). As firms increasingly call for more alignment of people, processes, and systems, they will be able to overcome issues of knowledge being hoarded and seen as a source of power (Pfeffer & Salancik, 1978). When subsidiaries across the organization share in objectives, processes, and systems, they are more likely to see knowledge as a common and shared resource that must be replicated. This will likely reduce obstacles that could possibly come from units that have a strong replication capability but also might have peers who do not want to share knowledge of a practice.

By aligning people, processes, and systems, organizations are not necessarily telling the units what practices have to be replicated. Rather, they are providing formal and informal mechanisms for increasing the likelihood that subsidiaries will adopt a practice from outside their local environment in a way that allows them to be selective in which practices they choose to replicate and what specific aspects of those practices they apply or discard. Such mechanisms that do not mandate what practices need to be replicated help to avoid “cynicism and a lack of trust among employees” (Stiles, Gratton, Truss, Hope-Hailey, & McGovern, 1997, p. 64). For example, many firms, such as Siemens and P&G, use an internal system for benchmarking/sharing knowledge in common practice through an outside consulting firm that performs the internal benchmark for them.

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Siemens’s interlinked/coupled system of HR councils at the national, regional, and global levels also helps them to keep track of which practices are globally applicable and useful. Likewise, P&G makes good use of communities of practice in the different HR practice fields to decide which practices are considered globally useful. While MNCs often widely identify these practices as useful, they often do not mandate them for replication. To get their subsidiary to replicate them, they focus, rather, on building capabilities that will allow them to replicate. By identifying globally applicable practices and aligning the people, processes, and systems in subsidiaries to develop a strong replication capability, a firm will thus more likely ensure greater use of common practice and receive less pushback from both practice recipient and practice provider. We therefore expect:

Hypothesis 4: The more a subsidiary has the capability to replicate practices from other parts of the company, the more the subsidiary will use common practices.

The upshot of this discussion is that a firm’s replication capability likely depends on a combination of informal people alignment and formal system and process alignment. As companies develop the capability to take knowledge from one part of the firm and replicate it in their existing practices, they potentially can align themselves more with globally converging practices. When these causal mechanisms align rather than control the HR subsidiary’s interests, this may lead to a more rapid response to a global environment and greater potential for competitive advantage (see Figure 1 for hypotheses).

Methods
To develop and test these hypotheses, we used a multimethod study of global HR practices and learning in HR subsidiaries of large MNCs. The first phase consisted of 19 case studies. On average, we conducted approximately 15 to 20 interviews per company with country-level, regional-level, and corporate-level HR managers and line managers. We selected the
companies from the United Kingdom (6), Continental Europe (6), Asia-Pacific (5), and the United States (2). We selected companies for inclusion based on superior business performance and reputation as an employer based on 2004 Fortune listings. We also selected companies based on regional headquarters to ensure diversity of country of origin, including Europe, America, and Asia.

We used a case study approach, in part, to understand the common HR practices MNCs used today and the causal mechanisms associated with replicating these practices in the global HR function (Crossan & Berdrow, 2003; Eisenhardt, 1989). This method allows for delineating and isolating some essential qualities of complex social phenomena, including practice replication (Dougherty, 2002; Langley, 1999). We followed a logic of inductive reasoning and used the case studies to build theory that would clarify the relationship among the HR function, HR practice, and knowledge management. The case approach allowed us to see how individuals understood the knowledge issues in the HR department. To improve the validity of the research, we used triangulation to construct the cases from a variety of information sources that included semistructured interviews, internal publications, media reports, and other published sources.

The semistructured interview followed a working structure developed before the beginning of data collection. Interviews ranged from one to two hours and were audiotaped. We also took extensive notes. We began with a rough framework to focus the data collection process that centered on what HR individuals actually said about HR practices, systems, and processes (Glaser & Strauss, 1967; Miles & Huberman, 1984; Eisenhardt, 1989). We searched for consistent elements across the cases. We interviewed individuals in the HR function and tried to confirm their accounts through alternative sources (archives, secondary data) wherever possible. At the end of the interview program, we discussed findings across the group and developed codes using a standard content analytic approach. We subjected our data collection, analysis, and initial drafting to each other’s scrutiny. In addition, we reported verbally and in draft report form to the organizations themselves.

To test our hypotheses we sent out a multi-item survey to 404 regional and country-level HR unit managers from 20 MNCs headquartered in the United States, Europe, and Asia. We identified the MNCs based on a strict guideline of substantial operations in three major world regions (Asia, Europe, and the Americas). Based on these criteria, we invited some 50 large MNCs to participate. Twenty responded positively. Of the original 19 companies in the qualitative portion of the study, 8 of them participated in the follow-up survey. We identified HR unit managers through the senior vice president of HR for all of the 20 firms. We then had the vice presidents send out letters to all identified HR unit managers asking them for voluntary participation in the study. Two to seven days after the letter from the vice president, we followed up with an electronic survey asking each manager to respond to questions on behalf of his or her country or regional HR unit. We surveyed the HR unit managers because they are responsible for all management practices and activities that occur in the country or regional operations. We conducted all surveys in English because this was the primary language of business for all the HR managers involved. The total number of completed surveys was 263; this 65% response rate represented responses from, on average, 13 subsidiary HR heads for each of the 20 MNCs.

**Measures**

Based on the interviews with HR managers and previous measures used in the literature, we crafted multi-item scales (using a 5-point Likert format of 1: “strongly disagree” to 5: “strongly agree”) for many of the constructs. For the global common practice use measure, we created an index from a list of identified common practices. See Appendixes 1 and 2 for lists of items.

**Informal People Alignment**

We based people alignment measures on goal alignment, which captured a horizontal
perspective looking at shared objectives with other HR groups. The people alignment scale based on three items demonstrated high reliability ($\alpha = .76$).

Formal Process and System Alignment

We based the measures for processes and systems alignment on (1) information systems and (2) application processes. We designed measures for information system alignment to assess the HR subsidiary's level of common databases and information systems used for knowledge capture (Davenport & Prusak, 1998). We developed four items to assess the information systems. The scale used to measure information system alignment demonstrated high reliability ($\alpha = .77$).

To measure application process alignment, we assessed the HR subsidiary's degree of company-mandated guidelines and in-place processes the HR subsidiary used for applying practices (Walsh & Ungson, 1991). In all, we used two questions for application process alignment. The scale used to measure coordination processes demonstrated marginal reliability ($\alpha = .56$) but was high enough to include in a structural equation model where some of the error variance would be accounted for.

Replication Capability

We developed a measurement scale for the replication capability from the interviews as well as theoretical discussions of knowledge replication. We measured the replication capability using questions focused on how well the subsidiary is able to combine or engrain new HR practices from other parts of the firm. These measures focus on the knowledge recipient's capability to replicate practices that have been shared by others in an existing HR system. The scale used to measure replication capability demonstrated high reliability ($\alpha = .75$).

Common Practice Use

For a unit to be using the exact practice that has been identified as globally common cannot occur in the strictest sense since cultural contexts and individuals are different across borders. Drawing from Popper (1959), we must base commonality on point of view. This point of view is based on the subsidiary HR manager who examines a list of what are commonly considered globally useful practices and indicates to what extent his or her subsidiary is using a practice. The more the practice is modified and changed from its original form, the lower the score that practice will receive in terms of whether or not it is used. This way we can understand to what extent a practice is actually used rather than a simple response of yes, we use it, or no, we do not.

We generated the index for common practice use through the following process. First, we conducted an exhaustive review of the academic literature on HR practices and performance and identified a list of practices that have been used as measures of globally useful HR practices (i.e., those that should be associated with higher firm performance) (e.g., Arthur, 1994; Huselid, 1995; MacDuffie, 1995; Snell, 1992). Second, while conducting the case studies described, we identified practices the company interviewees thought constituted globally useful HR practices that might not have been identified in the academic literature. We then reviewed the potential pool of practices to identify the relevant practices and ensure that the wording would be understandable across the global sample and organized them into six major areas: Staffing (10 practices), Training and Development (11 practices), Appraisal (14 practices), Rewards (11 practices), Employee Relations (10 practices), and Leadership and Succession (8 practices). We asked respondents to what extent they used each of these practices (1: not at all, 5: a lot). We then averaged all the practices scores for each subsidiary to create an index of global HR practice use.

Control Variables

Consistently with previous literature, we controlled for subsidiary size and age. Larger HR subsidiaries may have less need for repli-
cating practices from other, smaller, units, while smaller HR subsidiaries may need to develop specific capabilities for replicating ideas from others. In this study, we measure subsidiary size as the number of HR staff working on site. We determined subsidiary age by number of years the subsidiary unit has been in operation. Age may influence the level of replication capability as capabilities are developed over time (Dierickx & Cool, 1989).

Finally, we measured for cultural distance from the HR subsidiary host country culture to its parent country culture. Based on previous research, the more culturally distant the subsidiary’s country from the parent or country of origin, the more likely that the subsidiary will not adopt or use the former’s practices or ideas (Javidan et al., 2005; Joshi, Labianca, & Caligiuri, 2002). Such arguments have been found in much of the MNC literature using transaction cost economics. For example, a firm may exert less control over a subsidiary in countries that have high cultural distance from the firm’s country of origin. That stream of research makes the argument that firms are less likely to invest in culturally distant markets and that foreign entries begin in countries with less cultural distance (e.g., Johanson & Vahlne, 1977). Based on this research, we believe that when subsidiaries share ideas at the strategic level, cultural distance may be a basis for synergy as companies are trying to bring new ideas into the firm. When it comes time for actually replicating these capabilities at the operational level, however, cultural distance may have a negative influence on a firm’s actual use of global HR practices.

To cover a wider cultural perspective and avoid some of the criticisms of using Hofstede’s (1980) cultural index measures (Shenkar, 2001), we developed a cultural index using all nine dimensions from the GLOBE study (House, Hanges, Javidan, Dorfman, & Gupta, 2004). This study provides nine cultural value indexes and covers more countries and a larger sample. Using Kogut and Singh’s (1988) cultural distance index formulation, we developed a separate index from the nine GLOBE indices and the deviation along each index (assertiveness, institutional collectivism, in-group collectivism, future orientation, gender egalitarianism, humane orientation, performance orientation, power distance, uncertainty avoidance) from the subsidiary country to the country of firm origin. We corrected for differences in variation for each dimension and took the average.

**Results**

To test the hypotheses, we used a structural equation modeling (SEM) approach in accordance with Anderson and Gerbing (1988). We selected SEM because it allows for the simultaneous analysis of multiple dependent variables and path dependent sequences of variables (Joreskog & Sorbom, 1996). This approach allowed us to conduct an omnibus test of the overarching theoretical framework by providing the ability to test an overall model rather than just coefficients individually (Bollen, 1989). Before testing our hypotheses, however, we accounted for clustering effects that might result from nested data (see Appendix 3).

In testing our hypotheses, we first measured the fit of the hypothesized model and made sure it was positively identified. We found the goodness of fit measures for the hypothesized structural model acceptable ($\chi^2 = 141$, $df = 72$, $p < .00$; CFI = .90, IFI = .90, RMSEA = .06). The chi-square was also less than three times its degrees of freedom (141/72 = 1.9) (Carmines & McIver, 1981). Table I reports the means, standard deviations, and correlations among the data for this model.

Examining the regression coefficients indicated that five of the six hypothesized relationships were significant at the .05 or .10 level (see Figure 2). Support of our hypothesized model revealed that the formal processes a global firm uses influence a subsidiary’s alignment of people. It also revealed that a subsidiary must align its people, processes, and systems to develop replication capabilities and adopt global HR practices effectively. Specifically, we found full sup-
port for H1 regarding the effects of informal people alignment. In other words, people alignment had a significant positive effect on a subsidiary’s replication capability. According to Orton and Weick (1990), this may largely be a result of the fact that the more people or groups share in a common goal or purpose, the more likely they are to accept and adopt ideas on how to reach those common goals—in this case, those ideas would be people management practices.

We found partial support for H2 that formal systems influence a subsidiary’s people alignment and capability to replicate practices. Information system alignment positively influences a subsidiary’s ability to replicate knowledge (H2a). Quite unexpected to us, however, was that we found no significant positive relationship between information system alignment and people alignment (H2b). Revisiting the information systems literature reveals, however, that sometimes the ease of use of these aligned systems may actually backfire because the time needed to interact and develop shared goals is less than it would be if the information systems were not as efficient a mechanism. This can be seen when an HR manager in Korea, for instance, calls an HR manager in Hong Kong to get better information about a practice documented in the database. Had the information been more complete and effective, the Korean HR manager would not need to make the call, thus decreasing the likelihood that the two managers would discuss the direction of the company, their subsidiaries, and even their individual goals and aspirations. While possessing an integrated information system is thus probably still important in developing common objectives, the more effective that system is in making sure people do not have to interact with one another, the less likely that unit will align its people with other units in the firm.

We found full support for H3a and H3b regarding application process alignment leading to greater people alignment and replication capability.

In support of H4, we found a positive relationship between a subsidiary’s replication capability and the degree to which that subsidiary uses common practices in its own operations. This is important to show because if a group has the replication capabilities, it is more likely actually to adopt identified useful practices found from others inside and outside the firm.

Finally, we found that cultural distance had a negative significant relationship with a firm’s actual use of common practices but it does not necessarily influence the subsidiary’s replication capabilities. From this we conclude that while cultural differences may not influence how well a subsidiary replicates practices, it does influence whether or not that subsidiary will actually use practices considered useful across multiple cultural contexts. This also gives interesting insight for future research in how cultural distance should be considered an additional factor alongside learning capabilities to see whether practices are locally created and/or replicated.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<tbody>
<tr>
<td>1. Subunit Age</td>
<td>18.71</td>
<td>22.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2. Subunit Size</td>
<td>31.83</td>
<td>54.59</td>
<td>0.24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Cultural Distance Index</td>
<td>1.40</td>
<td>1.31</td>
<td>0.00</td>
<td>-0.14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Information System Alignment</td>
<td>2.99</td>
<td>0.77</td>
<td>0.30</td>
<td>0.06</td>
<td>-0.19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Application Process Alignment</td>
<td>3.66</td>
<td>0.66</td>
<td>0.28</td>
<td>0.16</td>
<td>-0.03</td>
<td>0.23</td>
<td></td>
<td></td>
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<tr>
<td>6. People Alignment</td>
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<td>0.14</td>
<td>0.03</td>
<td>-0.10</td>
<td>0.24</td>
<td>0.48</td>
<td></td>
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<tr>
<td>7. Replication Capability</td>
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<td>0.65</td>
<td>0.15</td>
<td>0.00</td>
<td>-0.03</td>
<td>0.17</td>
<td>0.15</td>
<td>0.39</td>
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<tr>
<td>8. Common Practice Use</td>
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<td>0.27</td>
<td>-0.11</td>
<td>0.46</td>
<td>0.37</td>
<td>0.47</td>
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</tbody>
</table>
Implications

This research attempts to extend discussions of knowledge replication by (1) examining both formal process and system alignment mechanisms with informal people alignment mechanisms (cf. Baden-Fuller & Winter, 2008) and (2) examining HR’s role in a global competitiveness context (cf. Schuler & Tarique, 2007). In line with our first objective, we have shown how formal process alignment leads to greater informal people alignment. This is important because interunit alignment is a key factor in a unit’s replication capability. In other words, formal process mechanisms may very well precede informal mechanisms based on people. As a result, organizations that do not know where to begin in building their units’ replication capabilities can first align their processes to help align their people. On the other hand, investing in formal systems alignment may not lead to people alignment, but it will increase the subsidiary’s replication capability. This is likely due to the fact that effective use of information systems may actually decrease the amount of time people spend talking and aligning their goals and vision. Nonetheless, effective replication capabilities require that these systems be effectively aligned to ensure better practice replication. Implications for this are that managers should invest in systems alignment but make sure they invest in other mechanisms, such as processes and people, to ensure that HR subsidiaries develop a common strategy.

In addition, in an attempt to understand not only a unit’s underlying mechanisms of replication capabilities, we examined whether these capabilities led to the end goal of replication capability development—actual use of identified common practices. We found that if a subsidiary has high replication capabilities, it will be more likely to use common practices. While cultural distance may not affect a subsidiary’s ability to replicate, however, it negatively affects the subsidiary’s actual use of common practices. This means that not only is it important for managers to invest in internal mechanisms, but they must also account for external factors, such as culture, in knowing whether they will be
able to coordinate and integrate their operations.

In line with our second objective, we have shown that knowledge replication as a key source of firms’ competitive advantage can be applied to the HR function and how a company manages its people. While researchers widely recognize that MNCs can gain an advantage by replicating broader HRM policies and practices proven effective across an organization’s various geographical locations, we still know little about how HR units can better replicate these practices in the first place. By examining HR-related systems, processes, and people, we have been able to offer initial findings that point to the potential of aligning aspects of HR in the MNC. This alignment can be done in a way that is not top-down or controlling but provides opportunities, motives, and abilities more effectively to replicate best practices and capitalize on economies of scale and scope—for example, offering common platforms, decreasing redundancies, informal norms, and greater knowledge sharing among HR members.

**Implications for Practitioners**

In addition to theory development, this research offers a framework that might benefit global HR managers. Through our interviews, we found that one of global HR managers’ consistent concerns is how to get their globally dispersed HR units up to speed. For example, the global HR director for a large Asian-based electronics firm lamented his frustration that domestic HR was much ahead of the HR in the different geographical subsidiaries. Part of his frustration concerned how he could get his HR managers across the globe to adopt HR practices more efficiently and effectively to achieve greater economies of scale and scope. Most of his struggle came in not knowing where to begin.

Our framework offers a starting point. Firms often try to align people without aligning their formal processes and systems first. To align people, a firm must first align its processes. This means developing common templates, platforms, and guidelines about how HR should be done. This establishes precedent in HR members’ minds that this commonality is here to stay and not another flavor of the month. In many ways, it follows the supply-side approach of “If you build it, they will come.” Once these templates, platforms, and guidelines are in place, a subsidiary will begin to solidify its strategy around these processes, and its people will see the importance of aligning their activities across the company.

Next, firms must not forget the importance of aligned or integrated information systems that allow for more efficient knowledge transfer. Be careful, however: A pure focus on technology can actually detract from aligning your people. Be sure processes are in place that require HR managers and staff to interact with others across the company. Effective technology use must be coupled with constant discussion and information. Regardless of an increasing ease with technology, geographical distance and time distance can make new IT alignment projects intimidating—especially for HR.

Finally, once you have aligned your people, processes, and systems, you need to take into account cultural differences and geographical distances. Such factors can block effective replication, even when the HR unit has exceptional replication capabilities. There needs to be constant discussion of culture and developing people’s abilities to interact effectively across different cultures. Some of the companies we have talked to have gone to great lengths to ensure their HR managers have the cross-cultural skills needed to adopt practices across borders effectively. For example, one HR manager stated his company had sent him on multiple out-of-country assignments when he was younger in the company; this has helped him to understand that practices can be universally applicable across any geographical boundary. But the trick is to know the culture you are adopting the practice from and separating locally specific culture from globally useful practice.

Another manager stated that her time in multiple countries has helped her understand that most practices have a core principle about them that can be universally applicable to the company. Overall, these discussions of
how to decrease cultural distance might be useful since there is a constant tension between HQ and subsidiaries. In the words of HQ, subsidiaries just are not aligned with what we are trying to do as a whole. And in the words of subsidiaries, HQ just is not sensitive to or knowledgeable of the local complexities and difference we face out here.

Limitations and Future Research

There are several limitations to this study. First, it relied on data collected from single respondents, increasing the likelihood of common method variance (Harrison, McLaughlin, & Coalter, 1996). We took steps both to limit and to assess potential effects. For many of the perception-based variables, we included multi-item constructs. Researchers have proven response biases to be more likely at the item level than at the construct level (Harrison et al., 1996). We also spatially separated the dependent variables from the independent variables by having respondents answer the dependent variables in a separate section they could not view simultaneously with any of the independent variables (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). We used an additional procedure to protect respondent anonymity (Podsakoff et al., 2003).

Aside from pretests, we also assessed how much common method bias might present a problem by subjecting all the scale items to principal component analysis using varimax rotation (Seibert, Kraimer, & Liden, 2001). There was no overlap between any dependent and independent variable items. Also, because we used confirmatory factor analysis, the model accounted for some of this systematic error (Bollen, 1989; Podsakoff et al., 2003).

Future research should examine how these relationships play out over time. For example, as MNCs open new subsidiaries, they can track how alignment of formal mechanisms may lead to shared vision over time and how this combination of people, process, and system alignment helps subsidiaries develop replication capabilities. Such research could also examine how subsidiaries that develop this capability will be more effective at adopting best practice by examining the rate of practice replication from other units in the firm. As the capability increases, does the replication of best practice increase? Such questions might help understand path dependencies that exist between capabilities and best practices.

Another interesting direction would be to examine how replication capability might differ from other capabilities that facilitate local adaptation. Do informal and formal alignment mechanisms help or hinder local adaptation? Such a differentiated approach might help better solve Bartlett and Ghoshal’s (1989) age-old question of how firms solve local/global tensions. Surprisingly, little is known about how people, process, and system alignment might help and/or hinder different aspects of local knowledge adaptation and global knowledge integration. Such research might help us better understand how an organization might simultaneously capitalize on local markets and benefit from economies of scale and scope.
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References


APPENDIX 1  Survey Questions

Practice Replication Capability

To what extent do you agree with how well your HR group(s) does the following?
1. Readily replicates practices from HQ or peer subsidiary groups.
2. Takes practices from others (e.g., HQ or other parts of the HR functions) and replicates them to its own operations.
3. Formalizes or institutionalizes practices and ideas that come from HQ or other countries.

Looking back on the past six months of operation, to what extent do you agree with the following items describing the general state of resources or competencies in your HR group?

People Alignment
1. We share the same goals and vision with the groups we interact with.
2. We are striving for the same outcome from our HR practices as our contacts do from their practices.
3. We agree with those with whom we interact on the direction HR in our company needs to go.

Information System Alignment
1. We use extensive information systems for codifying and storing knowledge.
2. We operate largely using shared IT systems in the company.
3. We possess and use extensive databases, electronic manuals, etc., for HR practices.
4. We utilize and benefit from the information technology we possess.

Application Process Alignment
1. We have set guidelines and processes for how HR practices are to be applied and maintained in our HR group.
2. We have clear mandates on how practices need to be applied.
APPENDIX 2 Common Practice Index Items

Please answer the following questions as they pertain to the operations for which you are responsible.

For each of the management practices listed ...

To what extent do you use this practice?
(1 = not at all, 2 = very little, 3 = somewhat, 4 = very much, 5 = a lot)

Staffing Practices
1. Formal promote-from-within policies
2. Formal succession planning systems with replacement charts
3. Employee referral system (system encouraging employees to refer others they know to apply for a job with the company)
4. Realistic job previews (offer negative and positive aspects of the job to potential hirees)
5. Formal job orientation for new employees
6. Formal assessment of individuals’ personal values to determine fit with company culture
7. Formal knowledge/aptitude tests (e.g., skill-based tests, psychometric tests)
8. Line manager involvement in hiring decisions
9. Formal policies promoting diversity
10. Selective hiring (i.e., we try to maximize the number of applicants to ensure that we can be selective in whom we hire)

Training and Development Practices
1. Job assignments and rotations as a career development tool
2. Formal investments in leadership development
3. Formal assessments of training needs (e.g., individual, task, organization)
4. Web- or computer-based training
5. Executive coaching
6. Formal competency profiles developed for guiding training programs
7. Manual labor apprenticeship programs
8. Formal program of on-the-job training conducted by experienced workers and/or supervisors
9. Personal development programs for all employees
10. Training programs that emphasize quality and performance measurement (e.g., Six Sigma)

Appraisal Practices
1. Appraisals used as a formal development tool
2. Employee potential evaluations (not just based on current performance)
3. Standards and measures aligned to the organization (e.g., balanced scorecard)
4. Individual behaviors measurements (e.g., follows the rules or guidelines)
5. Outputs or results measurements (e.g., sales, production)
6. Formal sessions to provide appraisal feedback
7. Appeals process if an employee disagrees with appraisal results
8. Appraisals used for reward decisions
9. Appraiser training on how to make accurate evaluations
10. Multiple sources of information for appraisals (e.g., 360-degree feedback)

Continued.
10. Separate schemes in place to support high potentials (expected to be promoted quickly) and high performers (excelling in current position but not suitable for promotion)
11. Performance objectives are cascaded to all employees
12. Appraisals occur more than once each year
13. Employees understand what is expected of them

**Rewards Practices**
1. Wage and salary surveys used to determine external equity (e.g., pay competitive to the market)
2. Internal evaluations used to determine internal equity (e.g., pay levels are consistent across the company)
3. Increased compensation for high performers (e.g., bonuses)
4. Pay tied to group or team performance
5. Pay tied to tenure or seniority
6. Pay tied to knowledge, skills, or competencies
7. Base pay distinguished between low and high performers
8. Incentive pay based on organizational performance (e.g., ESOPs, broad-based stock option grants, restricted stock, etc.)
9. Significant nonfinancial rewards for performance (e.g., pick of the jobs)
10. Bonuses based on multiple feedback (e.g., feedback from peers, managers, and subordinates)
11. Flexible benefits plans (e.g., “cafeteria” plans)

**Employee Relations Practices**
1. Formal no-layoff policy
2. Upward information flow through quality circles, suggestion systems, employee surveys, and other participatory programs
3. Consultation with unions about significant strategic decisions
4. Consultation with employees through formal bodies (e.g., works councils)
5. Flexible work patterns (e.g., flexi-time, job-sharing)
6. Alternative dispute resolution (i.e., arbitration or employee voice response)
7. Results of employee surveys
8. Direct participation of employees (e.g., through quality circles, etc.)
9. Policy on work/life balance
10. Policy on equal opportunities

**Leadership and Succession**
1. A scheme to develop potential leaders
2. A scheme to identify potential leaders
3. Defined leadership competencies
4. Leadership behaviors are linked to business performance
5. High proportion of elite hires from outside the organization
6. Potential leaders are rotated through functions
7. Formal succession process
8. Potential leaders are given challenging assignments
Collecting subunit level measures nested in different countries as well as companies, we tested for clustering effects as exemplified in hierarchical data structures. In other words, HR subunits that share the same company, country, or even country of origin membership may be correlated. If such correlations exist in this dataset, the standard errors of the parameter estimates may be underestimated using a standard aggregated structural equation model, requiring hierarchical modeling (Muthen & Satorra, 1995).

To test for clustering effects, we analyzed how the sizes of the company, country, and country of origin variance components influence the size of their intraclass correlations (Koch, 1983; Skinner, Holt, & Smith, 1989). This measure takes into account the degree of similarity in the same cluster (i.e., company, country, country of origin). The larger the correlation, the more likely we can’t assume independence of observations. Researchers usually refer to the distortion caused from this clustering as the design effect. We tested for design effects of company, country, and country of origin clusters on the dependent variables using a common formula for nested data in structural equation modeling where \( c \) is the average cluster size, and \( p \) is the ICC (Muthen & Satorra, 1995; Cochran, 1977; Skinner et al., 1989; Scott & Holt, 1982). Approximate design effects of less than 2 do not result in overly exaggerated rejection proportions at the 5% level. In other words, a design effect under 2 means that the standard error from a conventional analysis may underestimate the true value by under 5%. On the other hand, as Muthen and Satorra (1995, p. 289) mention, a design effect of 5.8 would lead to an underestimation of the standard error by 58%—requiring a multilevel modeling approach. Our analyses showed that the design effects were not significant (see table below). As Cheung and Au (2005) and Julian (2001) suggest, when these correlation effects are not significant, conventional structural equation models present generally reasonable and unbiased results.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean Group Size</th>
<th>ICC(1)</th>
<th>ICC(2)</th>
<th>Design Effect</th>
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<td>0.48</td>
<td>1.75</td>
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<td>Replication capability (clustered by country)</td>
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<td>Replication capability (clustered by origin)</td>
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<td>0.03</td>
<td>0.45</td>
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