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ORIGINAL ARTICLE

Employee participation in employee stock ownership plans: Cross-level interaction effects of institutions and workgroup behavior

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In this multilevel study, the authors investigate the influence of country-level formal institutions and workgroup behavior on foreign subsidiary employees' participation in employee stock ownership plans (ESOPs). Based on the perspectives of bounded rationality, transaction cost theory, and psychological ownership, the authors argue that weak formal institutions restrain multinational enterprises from effectively implementing ESOPs due to reduced employee participation. However, the authors expect that workgroup behavior—more specifically, the participation of the workgroup's members and superiors in ESOPs—has a positive influence on employees' ESOP participation. Furthermore, the authors analyze whether cross-level effects of institutions and workgroup behavior function as substitutes or complements. They empirically examine the ESOP participation of 185,291 foreign subsidiary employees in 28 countries. The results confirm the hypotheses about direct effects of weak institutions and workgroup behavior and additionally provide support for a complementary relationship between institutions and workgroup behavior.

KEYWORDS

bounded rationality, employee stock ownership plan (ESOP), institutional context, multilevel analysis, psychological ownership, transaction cost theory

1 | INTRODUCTION

The introduction of employee stock ownership plans (ESOPs) positively affects firm performance (Kalmi, Pendleton, & Poutsma, 2005; Sesil & Lin, 2011), increases employees' levels of productivity (Pendleton & Robinson, 2010) and affective commitment (Bayo-Moriones & Larraza-Kintana, 2009), and reduces employee turnover (Sengupta, Whitfield, & McNabb, 2007) and absenteeism (Brown, Fakhfakh, & Sessions, 1999). For multinational enterprises (MNEs) seeking to improve their business success, ESOPs represent an interesting human resource (HR) practice because employee fluctuation, for example, is a common problem for subsidiaries of MNEs (Zheng & Lamond, 2010). The effectiveness of an ESOP depends on the willingness of employees to participate. Researchers have begun to develop insights into individual- and firm-level effects that are relevant to employees' participation in ESOPs (Babenko & Sen, 2014; Caramelli & Carberry, 2014). However, we argue that research has

overlooked potential participation determinants at two major levels: the workgroup level, represented by units of colleagues to which employees feel cognitively close (Zhang, Chen, Chen, Liu, & Johnson, 2014), and the country level, represented by country-level institutions such as regulatory systems and mechanisms for contract enforcement (Miller, Lee, Chang, & Le Breton-Miller, 2009). We intend to fill this gap by (a) arguing that weak host-country formal institutions can prevent MNEs from effectively implementing ESOPs, (b) arguing that the participation behavior of workgroup members affects effective ESOP implementation, and (c) investigating how country-level institutions and workgroup-level mechanisms interact to influence effective ESOP implementation.

Stock-purchase plans are the most prevalent form of ESOP (Rénaud, St-Onge, & Magnan, 2004). With stock plans, “workers can purchase, under favorable terms, common shares of the firm within a given time frame and at a given price, to be paid immediately or in installments” (Rénaud et al., 2004, p. 121). We will follow this

definition in our article. Drawing on the concept of bounded rationality, we argue that employees' decisions to participate in ESOPs are exposed to transaction costs and are based on cognitive heuristics. With reference to the transaction cost theory, we claim that a host country's institutional environment can have a significant effect on individuals' economic evaluation of ESOPs. Weak institutions can lead to high transaction costs of stock ownership for foreign subsidiary employees, which reduce the economic value of these stocks for employees and hence reduce employees' willingness to participate in ESOPs. Drawing on the perspectives of cognitive heuristics and psychological ownership, we then argue that this economic evaluation on the part of employees is accompanied by a psychological evaluation. Due to bounded rationality, employees cannot fully grasp the potential financial value of investment in ESOPs and will thus draw on heuristics to determine the estimated financial value. The behavior of the workgroup can shape these heuristics. Additionally, when making decisions regarding their participation, employees assess not only the financial value of ownership associated with ESOP participation but also the value of psychological ownership. Psychological ownership represents "the feeling of possessiveness and of being psychologically tied to an object" (Pierce, Kostova, & Dirks, 2001, p. 299)—in our case, to the MNE. After that, we use cross-level interaction effects to investigate the relationship between economic and psychological factors. These interaction effects may be either complementary or substitutionary.

Our study contributes to current research in three ways. First, we expand upon the research on the antecedents of employee ESOP participation. We add two largely overlooked determinant levels—the workgroup level and the institutional level—to the ESOP-participation literature, and our results indicate that both the behavior of the members of an employee's workgroup as well as the institutional context in which the employee is situated affect the employee's willingness to participate in an ESOP. Beyond adding the additional levels of determinants, our study makes an important theoretical contribution to ESOP literature by developing a theory-based participation-decision framework that captures previous empirical results as well as our own hypotheses. We thereby address the ESOP literature's lack of theoretical grounding (Caramelli & Briole, 2007). Second, we approach the subject of weak institutions from an actor-centered perspective. We generally follow new institutional economists' understanding of institutions as "the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction" (North, 1990, p. 3; for a detailed overview of different streams of literature about the role of institutions in international business [IB] research, see also Hotho & Pedersen, 2012). More specifically, the theory of institutional voids has been used primarily to explain why organizational forms such as business groups are more prevalent in certain institutional environments. In this article, we lend further support to arguments that institutions also influence the behaviors of individual actors such as employees. Third, we discuss the potential substitutionary and complementary cross-level interaction effects of workgroup- and country-level determinants. Our findings suggest that these cross-level effects work together in a complementary rather than substitutionary fashion. We show that

workgroup behavior as an internal mechanism is most effective when it operates in the context of supportive institutions.

2 | THE RELEVANCE OF ESOPs TO MNEs

This section provides a brief overview of ESOPs, why they are beneficial for MNEs and their employees, and the determinants of effective ESOP implementation that have been identified in previous research.

Scholars have identified several potential advantages of ESOPs for firms, and particularly for MNEs. For example, studies have found empirical evidence that ESOPs are related to greater performance (Blasi, Conte, & Kruse, 1996; Kalmi et al., 2005; Sesil & Lin, 2011).¹ Firms can use ESOPs to raise capital (Babenko, Lemmon, & Tserlukovich, 2011; Core & Guay, 2001) and thwart hostile takeovers (Chaplinsky & Niehaus, 1994; E. H. Kim & Ouimet, 2014). Additionally, ESOPs build a strong stakeholder relationship between managers and employees (Marens, Wicks, & Vandra, 1999) and have been associated with reduced workplace turnover (Sengupta et al., 2007) and absenteeism (Brown et al., 1999), greater commitment to firms (Bayo-Moriones & Larraza-Kintana, 2009; Coyle-Shapiro, Morrow, Richardson, & Dunn, 2002; Sengupta et al., 2007), and positive effects on employee productivity (Jones & Kato, 1993; Pendleton & Robinson, 2010). In sum, ESOPs align the interests of employees and employers (Pendleton, 2010a) and "mitigate dysfunctional effects of individual incentives by engendering cooperation and trust" (Pendleton, 2006, p. 753). This alignment of employees and employers addresses issues that are of special importance to MNEs, such as high employee turnover. MNEs suffer from severe employee fluctuation problems (Zheng & Lamond, 2010), and the (cultural) distance of subsidiary employees to the headquarters may reduce employees' embeddedness (Yamin & Andersson, 2011).

The effects of ESOPs have motivated many researchers to examine the determinants of firms' motivations to implement ESOPs. Most studies have concentrated on firm-level attributes that potentially drive the use of ESOPs. These studies have shown that larger firms (Poutsma, Nijs, & Poole, 2003) and firms with greater labor power (Rousseau & Shperling, 2003) and low performance (Jones & Kato, 1993) are more likely to implement ESOPs. However, as an effective ESOP implementation depends on employees' participation (which is usually voluntary) it is also relevant to understand determinants of employees' motivations to participate in ESOPs. Whereas some researchers have examined individual-level determinants of participation, such as gender, income, age, tenure, education, and liquidity constraints (Babenko & Sen, 2014; Pendleton, 2010a, 2010b), others have analyzed firm- and program-level characteristics such as the firm's past stock performance (Caramelli & Carberry, 2014) and the firm's communication regarding the ESOP (Klein, 1987; Klein & Hall, 1988).

Taken together, these research findings motivate us to consider ESOPs as an important HR practice that helps to embed foreign subsidiary employees in MNEs (in this context, embeddedness comprises the organizational factors link, fit, and sacrifice, which increase the likelihood that employees will stay with their firm [e.g., Mitchell,

Holtom, Lee, Sablinski, & Erez, 2001; Peltkorpi, Allen, & Froese, 2015)). The effective implementation of such practices depends not only on the initial motivations of firms to implement them but also on the participation of employees. However, not every employee accepts the offer to participate in an ESOP. To better understand what prevents employees from participating, we argue that in addition to certain preconditions identified by previous research—that is, that employees must know about the program (supply) and must be able to afford the investment (demand)—employees must evaluate the outcome of an ESOP investment positively. In the next section, we examine how individual evaluations of ESOPs are informed by assessments of transaction costs and ownership benefits.

3 | EMPLOYEES' EVALUATIONS OF ESOP PARTICIPATION

Decision makers violate most rules of the theory of rational choice (Tversky & Kahneman, 1986). Hence, we draw on the general idea of bounded rationality (Cyert & March, 1963; Simon, 1955) and argue that employees' investment evaluations are affected by incomplete information and cognitive limitations. Therefore, the investment in ESOPs is associated with transaction costs, and the decision to invest is based on heuristics. The following sections outline how the institutional environment shapes employees' evaluation of transaction costs associated with ESOPs, how workgroup behavior shapes employees' evaluation of ownership benefits, and how these two effects are linked to each other.

3.1 | Evaluation of transaction costs and the institutional environment

Employees' decision to participate in ESOPs depends on their evaluation of the transaction. Transaction costs of ownership “are not simply the ‘frictions’ associated with trading—finding trading partners, writing contracts, hiring lawyers—but are more generally the resources spent on delineating, protecting, and capturing *de facto* property rights” (Foss & Foss, 2015, p. 395). We argue that the country-level institutional environment shapes the transaction costs to which employees who consider investing in ESOPs are exposed. Weak institutions that compromise individuals' contract enforcement and property rights result in transaction costs that reduce employees' willingness to invest in ESOPs. Employees of MNE subsidiaries have to face the institutional contexts of their host countries. The host country's formal institutional environment affects the behaviors of employees and hence influences employee participation in ESOPs within subsidiaries.

In general, institutions form sets of rules to support the proper functioning of society (North, 1990; Ocasio, 1999). Institutions subsume regulative, normative, and cultural-cognitive conditions that determine organizations' behavior (Scott, 1995, 2008), whereas regulative conditions are considered as formal institutions, and normative and cultural-cognitive conditions as informal institutions (Bell, Moore, & Filatotchev, 2012; Peng, Wang, & Jiang, 2008). Recent research indicates that institutions affect firms in terms of, for

instance, their research and development (R&D) expenses (Hillier, Pindado, de Queiroz, & de la Torre, 2011), compensation contracts of their executives (Hüttenbrink, Oehmichen, Rapp, & Wolff, 2014; van Essen, Heugens, Otten, & van Oosterhout, 2012), the effectiveness of value-based management (Firk, Schrapp, & Wolff, 2016), and the strategic influence of their board of directors (Heyden, Oehmichen, Nichting, & Volberda, 2015; Oehmichen, Schrapp, & Wolff, 2017). Institutions are especially relevant to decision making in MNEs that must deal with the differing institutions of host countries (Hoskisson, Eden, Lau, & Wright, 2000; Meyer & Peng, 2005).

We follow the new institutional economics, which focus primarily on formal institutions, generally at the country level, and the question of how they affect transaction costs and “constrain the actions of actors in the pursuit of their interests” (Hotho & Pedersen, 2012, p. 242). Institutional weaknesses comprise weaknesses in relevant institutions such as political stability, government effectiveness, regulatory quality, and rule of law. These weaknesses in host-country institutions increase uncertainty, which consequently increases transaction costs (Hotho & Pedersen, 2012; Meyer, 2001) and shapes the behavior of individual actors (G. Jackson, 2010; North, 1990). Previous research, for instance, showed how weak institutions prevent individuals from market participation, as is evidenced by the lack of entrepreneurs in the poorest developing countries (Mair & Martí, 2009). Hence, we claim that weak institutions and consequential higher transaction costs might also influence employees' ESOP investment decisions.

Institutions that might compromise contract enforcement and property rights and hence reduce employees' willingness to invest in ESOPs are political stability, government effectiveness, regulatory quality, and rule of law. In the context of a strong rule of law, individuals have more power to enforce their rights (Kaufmann, Kraay, & Mastruzzi, 2013); more specifically, employees can better enforce their ownership rights. Regulatory quality is a country's ability to “formulate and implement sound regulations that permit and promote private sector developments” (Abdi & Aulakh, 2012, p. 485; Kaufmann, Kraay, & Mastruzzi, 2010). In combination with strong government effectiveness, which ensures the political independence of government actions (Kaufmann et al., 2013), regulatory quality helps employees who invest in ESOPs feel confident that regulatory changes will not come into effect that could, for instance, allow the state to expropriate their private investors. Political stability ensures the stability of the regulatory system and hence promises investing employees that the enforcement of the contractual details of their ownership will not be subject to changes in the future. Consequently, weaknesses in these dimensions cause transaction costs for employees who intend to invest in ESOPs. Weak institutions impede contracting due to reduced and unstable enforcement rights and constrain property rights due to the increased likelihood of expropriation by potentially opportunistic actors such as the MNE or the state itself.

Several historical and recent cases demonstrate how MNE subsidiaries can suffer from weak property rights. For instance, in 1965 the Indonesian Heineken subsidiary Bintang Beer was placed under control of the Indonesian government (Sluyterman & Bouwens, 2015), and in 2012, the Argentinian government confirmed the

expropriation of the Argentine subsidiary YPF from the Spanish company Repsol (Costamagna et al., 2015). The existence of political risk insurance for MNEs demonstrates that these are not isolated cases (Jensen, 2008).

In summary, we argue that weak institutions lead employees to evaluate the transaction costs of ESOP investment as higher and hence reduce their willingness to participate. Thus, we hypothesize:

Hypothesis 1: *Weak host-country institutions have a negative influence on the ESOP participation of foreign subsidiary employees.*

3.2 | Evaluation of ownership benefits and workgroup behavior

In addition to transaction costs, employees have to evaluate the benefits of ownership itself. We argue that this evaluation of ownership benefits of ESOP investment depends not only on individual characteristics such as attitudes (Caramelli & Carberry, 2014; C. Jackson & Morgan, 2011) and risk preference (DeGeorge, Jenter, Moel, & Tufano, 2004) but also on the employee's immediate work environment. Hence, we take a closer look at employee workgroups and more specifically at the behavior of workgroup colleagues as well as the workgroup superior.

We argue that employees use their immediate work environment—more specifically, their workgroup colleagues and workgroup superior—as a reference point. The workgroup can serve as reference point because employees tend to trust members of their immediate work environment (Williams, 2001). Previous research has found that ESOP participation depends on collective and participative ideals (Hochner & Granrose, 1985). Within workgroups, employees develop a collective perception of the value of HR practices (Kehoe & Wright, 2010)—in our case, ESOP participation.

In detail, we assume that two mechanisms are underlying this effect of the workgroup environment on ESOP participation: (a) effects of the workgroup environment on the evaluation of the financial value of ESOP participation and (b) the evaluation of psychological ownership associated with ESOP participation. This idea is grounded in the general ownership literature, which claims that ownership in any kind of asset is associated with return and control rights (Ben-Ner & Jones, 1995). Hence, for employees, stock ownership involves a financial value and the value of participation in the company (Caramelli & Briole, 2007). This right to participate can result in a psychological contract between firms and their employees (Rousseau & Shperling, 2003) and creates the feeling of psychological ownership in employees (Pierce et al., 2001). Therefore, both the evaluation of the financial value of ownership and the evaluation of psychological ownership affect employees' decisions to participate in ESOPs.

To evaluate the potential financial value of ownership resulting from ESOP investment, employees resort to cognitive heuristics. Previous research has identified financial opportunism as a major reason for individuals to invest (C. Jackson & Morgan, 2011). The evaluation of the financial value of ownership resulting from ESOP investment is thus actually a decision among several alternative investment

products. However, due to bounded rationality, employees have neither the information about all potential investment alternatives nor the capacity to rank the estimated payouts in a complete preference order to identify the best option. Hence, we argue that employees' decisions to participate in ESOPs are based on cognitive heuristics. This is in line with previous research providing evidence that both a representative heuristic, according to which decision makers base their evaluation of future return on knowledge of past returns, as well as a familiarity heuristic, according to which individuals exhibit a preference for investing in firms they know better, shape employees' participation decisions (Caramelli & Carberry, 2014).

With respect to psychological ownership, we follow the understanding of Pierce and colleagues that “formal ownership leads to psychological ownership and an integration of the employee-owner into the ownership experience, resulting in a number of social-psychological and behavioral outcomes” (Pierce, Rubenfeld, & Morgan, 1991, p. 122) and that “the core of psychological ownership is the feeling of possessiveness and of being psychologically tied to an object” (Pierce et al., 2001, p. 299). Investing in “the target” is one of three routes that generate psychological ownership (Pierce et al., 1991). Thus, we argue that employees' decisions to invest in ESOPs depend in part on their evaluation of psychological ownership.

To assess both the financial value of ownership and the value of psychological ownership, employees resort to their knowledge of their workgroup's participation behavior. With respect to the financial value of ownership, the observed behaviors of workgroup colleagues and superiors are mechanisms that can reduce perceived risk and hence affect employees' heuristics for evaluating the financial performance of a potential ESOP investment. As a result of bounded rationality, individuals use simple payoff functions, such as classifying options as satisfactory or unsatisfactory, to choose among alternatives (Simon, 1955). The evaluation of an investment opportunity as satisfactory depends on a specific reference point (Tversky & Kahneman, 1991) or aspiration level (Simon, 1955). As argued previously, we assume that the behavior of workgroup colleagues sets this reference point. With respect to the value of psychological ownership the behavior of workgroup colleagues can signal the legitimacy of stock ownership to individual subsidiary employees and hence improve their evaluation of psychological ownership. This idea is in line with current psychological ownership literature, which understands psychological ownership as a group-level phenomenon (Pierce & Jussila, 2010). The value of psychological ownership is even stronger when the perception that “I am part of this” becomes “we are part of this” (Pierce & Jussila, 2010). In general, psychological ownership satisfies three human needs: “‘home’ (having a sense of place), efficacy and effectance, and self-identity” (van Dyne & Pierce, 2004, p. 442). The behavior of the workgroup indicates the importance of these needs to employees. Hence, they evaluate psychological ownership as more valuable when members of their workgroup participate. In summary, we argue that individuals derive reference points from their immediate working environments (the workgroups to which they belong) and that a high participation rate among workgroup members is likely to suggest the substantial financial and psychological benefits from ESOP investments to employees. Therefore, we anticipate that the

participation of colleagues in employees' workgroups can have a positive effect on employees' willingness to participate in ESOPs. In other words:

Hypothesis 2a: *High ESOP participation within the workgroup is associated with a higher likelihood of ESOP participation of foreign subsidiary employees.*

Furthermore, we claim that the behavior of workgroup superiors has an effect similar to that of workgroup colleagues. The ESOP participation of superiors is also a group-level mechanism that has a positive effect on subsidiary employees' evaluation of ownership and hence on their ESOP participation. The observed participation of superiors in ESOPs decreases employees' perceptions of risk and uncertainty and suggests to employees that ESOP investment has substantial benefits. The behavior of superiors therefore serves as an additional reference point for evaluating ESOP benefits. Employees might be willing to use the behavior of superiors as a reference point because superiors have an information advantage due to their greater access to firm information. Employees associate their superiors with greater experience, knowledge, and expertise. Their status, social success, power, and competencies are often seen by subordinates as associated with appropriate behaviors that have been rewarded in the past (Bandura, 1977; Weiss, 1977). Thus, employees commonly align their behaviors with those of their superiors (Weiss, 1977). In this regard, superiors are a critical source of social influence and social exchange (van Knippenberg & Hogg, 2003) and function as role models for employees to imitate via social learning (Bandura, 1977). Hence, the participation of superiors in ESOPs signals a greater value of psychological ownership to employees. We therefore assume that:

Hypothesis 2b: *The participation of workgroup superiors in ESOPs is associated with a higher likelihood of ESOP participation of foreign subsidiary employees.*

3.3 | Cross-level interaction as substitutionary or complementary

Recent literature has emphasized the importance of bridging micro and macro levels and integrating potential interactive effects across these levels (e.g., Abdi & Aulakh, 2012; Hillier et al., 2011). An important use of cross-level interaction is the analysis of the impact of country-level effects on firm-level behavior (Aguinis, Gottfredson, & Culpepper, 2013). From a general contingency perspective, firm mechanisms can be influenced by institutional environments. The extant literature has offered compelling arguments for two distinct directions of these relationships: substitutionary and complementary cross-level interactions (Enikolopov, Petrova, & Stepanov, 2014). Abdi and Aulakh (2012) showed that for interfirm governance arrangements and country-level institutional frameworks, both competing directions of relationship are possible.

Given our research question, the evaluation of transaction costs (on the institutional level) and the evaluation of ownership based on observations of behavior (on the workgroup level) can have an either

substitutionary or complementary relationship. In other words, a high evaluation of ownership could outweigh strong institution-based transaction costs (substitutions), or both values (ownership value and the inverse of transaction costs) could add up and complement each other in the sense that both values must be high so that employees decide to participate. The emergence of either substitutes or complements in cross-level interactions depends on the specific situation. In our context, we translate the challenge of the cross-level effect into a microeconomic problem to distinguish complements and substitutes (Basmann, 1956; Hicks & Allen, 1934). Two goods are complements if individuals are better off when they have more of both, whereas two goods are substitutes if a lack in one good can be compensated for by another good to achieve the same utility. In the following, we apply these arguments of adding up (complementarity) or compensation (substitution) to the context of cross-level interaction and derive a set of competing hypotheses.

3.3.1 | Substitutionary effect of institutional quality and workgroup behavior

The substitutional perspective on the cross-level interaction of workgroup-level behavior and institutional quality posits that the value of ownership and the value of the transaction (inverse of transaction costs) replace each other. More precisely, the effect of workgroup behavior on employee ESOP participation substitutes the effect of institutional voids on employee ESOP participation. We ground this idea in previous research that has shown that trust helps reduce transaction costs (Connelly, Crook, Combs, Ketchen, & Aguinis, 2015).

When weak institutions affect the success of business practices, firms can introduce structures that rebuild trust in practices and hence help fill these voids. The majority of the literature on this subject has focused on business groups that can offset the effects of weak institutions with internal market mechanisms such as trust and self-regulation (e.g., Leff, 1978; Mair & Martí, 2009). From the literature on business groups, we adopt the idea that internal mechanisms within firms can assist in substituting weak institutions. As weak institutions increase perceived transaction costs, participating in ESOPs becomes less attractive. When employees observe the ESOP participation of their workgroup colleagues and superiors, this provides a positive signal and increases the value of ownership. In cases where the high transaction costs resulting from a weak institutional environment could actually prevent employees from investing in stocks, the observed participation of their workgroup members might convince them to invest nonetheless. In sum, we argue that, in a weak institutional environment, observed ESOP participation of workgroup members makes ESOP participation more attractive to individual employees, which hence increases the effect of workgroup behavior in environments with weak institutions. We conclude that workgroup behavior and institutional weaknesses voids substitute each other across levels:

Hypothesis 3: *Country-level institutions and workgroup behavior (i.e., behaviors of colleagues and of superiors) are substitutes with respect to their effects on subsidiary employee ESOP participation.*

3.3.2 | Complementary effect of institutional quality and workgroup behavior

Alternatively, the cross-level effects of workgroup behavior and institutional quality can also complement each other. This means that the effect of workgroup behavior on subsidiary employee ESOP participation complements the effect of weak institutions.

The concept of cross-level complements offers a way to understand the conditions under which firm-level mechanisms work effectively. More precisely, internal firm-level mechanisms work more effectively when supportive country-level institutions are present. Recent research has shown, for example, that firm-level research and development (R&D) investments are supported by strong country-level institutions (Hillier et al., 2011) and that effective firm-level governance mechanisms are contingent on the presence of strong institutions (Enikolopov et al., 2014). We adopt the idea that the effectiveness of firm-level mechanisms requires the support of country-level institutions and argue as follows.

Within a strong institutional environment, employees perceive the transaction costs of ESOP investment as low. Additionally, as explained above, employees perceive the value of ownership that results from ESOP investment as higher when members of their workgroup participate. Through the lens of the complement hypotheses, these values add up. The complementary effect provides employees with different types of values. Whereas strong formal institutions signal low transaction costs, workgroup participation signals that stock ownership has additional value. Therefore, employees are even more convinced to participate in an ESOP when both values are high. This is in line with the concept of complementary preferences: individuals perceive the highest utility when they have more of both of the goods in their good bundle (Allen, 1938). The strong institutional environment hence catalyzes the positive effect of workgroup behavior. The observed ESOP participation of workgroup members and a strong institutional environment that supports stock investment by reducing transaction costs work as mutually reinforcing validations of the employee's decision to participate in an ESOP. In the presence of less-supportive country-level institutions, the complementary lens suggests that firm internal workgroup-level mechanisms work less effectively. If institutions are weak, the effect of workgroup behavior is reduced. Even where employees perceive the value of ownership resulting from ESOP investment as high, high transaction costs reduce the overall value of the investment. This lower overall value consequently reduces employees' willingness to participate in the ESOP.

Taking the complementary perspective, we therefore argue that a strong institutional environment catalyzes workgroup-level effects, whereas institutional voids reduce the effectiveness of the workgroup behavior. Therefore, we hypothesize:

Hypothesis 4: *Country-level institutions and workgroup behavior (i.e., behaviors of colleagues and of superiors) are complements with respect to their effects on subsidiary employee ESOP participation.*

Figure 1 summarizes our theoretical model.

4 | DATA AND METHODS

4.1 | Data

Our analysis focuses on a large multinational industrial company based in Europe. The company is active in several industrial sectors such as sectors for building-related products, energy-related products, medical products, and transportation products. It generates about 75 billion euros in sales per annum and a solid share price development over the past few decades. The company represents a useful research setting for our study of country-level and workgroup-level effects on employees' ESOP participation for the following reasons: The firm offers the chance to participate in the same ESOP to every employee on a voluntary basis under the condition that the subsidiary has more than 50 employees and the headquarters owns more than 50% of the subsidiary. The firm's ESOP is administered from the headquarters and is homogenous throughout all subsidiaries. It is an economically attractive investment because employees buying three shares get one additional share after a certain vesting period. Employees have freedom of decision concerning how many shares they want to buy. The program design allows for very small investments, which might be important for production workers in countries with low wage levels. Furthermore, the MNE rolled out a global communication project to promote the program in all its subsidiaries after its introduction. Therefore, all employees are likely to have some identical basic knowledge about the existence of the program.

We have access to data on all eligible employees worldwide at the individual employee level in 2012, including data on their ESOP participation and demographic information. Because all individuals in our data set are eligible for the same plan, our study model does not

FIGURE 1 Theoretical model

suffer from either the effects of plan heterogeneity or any nonresponse bias. Within our sample, individuals are categorized by workgroup and country. Our initial sample of employees included 201,140 employees in 49 countries. To avoid small-country bias, we excluded countries with fewer than 50 ESOP participants and those in which only senior managers were eligible to participate in ESOPs (in sum, 16 countries, or 10,458 employees, were excluded). In addition, a few individual and institutional data were not available (in sum, 5 countries, or 5,391 employees). Hence, our final sample consisted of 185,291 employees in 2,008 workgroups across 28 countries. We define a set of specific employees as a workgroup when the same superior oversees all of them. On average, a workgroup contains 610.07 employees. On average, 8.6% of the employees took part in the offered ESOP in 2012. To control for potential firm effects on participation, we decided upon a single-company study.

4.2 | Variables

Our dependent variable *ESOP Participation* was coded 1 if employees participated in the stock plan in 2012 and 0 otherwise.

To capture the effect of formal institutions on individual behaviors, we used a *Void Index* consisting of four institutional variables: political stability, government effectiveness, regulatory quality, and rule of law. These variables were drawn from the 2013 Worldwide Governance Indicators (Kaufmann et al., 2013). They are proxies for individual contract enforcement and property rights that result in ESOP-investment transaction costs. We decided in favor of these four indicators as we believe they represent the best approximation of transaction costs associated with ESOP participation decisions. Regulatory quality and rule of law directly represent the protection of property rights and the quality of the legal framework (Abdi & Aulakh, 2012; P. H. Kim & Li, 2014a). The political stability and government effectiveness represent individuals' trust in the stability of the regulatory system. Previous research has shown, for instance, that political stability positively affects a country's entrepreneurial activity (P. H. Kim & Li, 2014b). Government effectiveness indicates the "unbribe-ability" of a country (Keig, Brouthers, & Marshall, 2015). To build the void index, we used a reversed scale of the variables and standardized each variable between 0 and 1.

Analyzing the effects of workgroup behavior, we used *Group Behavior* and *Superior Behavior* at the workgroup level. *Group Behavior* was measured by the average percentage of member participation per workgroup (employees overseen by the same superior). *Superior Behavior* was coded 1 if a direct supervisor participated and 0 otherwise.

We controlled for other institutional effects at the country level that might influence individual ESOP participation. Individual behavior can differ substantially when there is a great distance between a company's headquarters and host countries (Kostova & Zaheer, 1999). *Cultural Distance* was measured using Kogut and Singh's (1988) index, which is based on the cultural dimensions of Hofstede (1984). Additionally, we controlled for *Stocks Traded*, measured by the total value of stocks traded in percentage of gross domestic product (GDP) in 2012 following the World Development Indicators

(World Bank, 2013) because the relevance of capital markets in a country might influence the probability that employees are accustomed to stocks, that is, the probability that stocks are a common investment in a country. *Stocks Traded* was winsorized at the 1% level.

To control for individual determinants of ESOP participation (Babenko & Sen, 2014; Pendleton, 2010a, 2010b), we used the following variables. We measured *Gender* of employees, coding male 1 and female 0. We used *Superior* to capture the employees' position levels, coding it 1 if the employee held a supervisor position and 0 otherwise. *Work Experience* of employees was measured using a logarithm of tenure in years adding one. *Life Experience* was measured using a logarithm of age in years. We measured *Education* by looking at the highest level of education, coding it 1 if employees had a master's degree and 0 otherwise. We also controlled for employees who had a part-time or permanent contract by coding *Part-time* 1 if employees had a temporary contract and 0 otherwise. At the workgroup level, we controlled for the diversity of groups by calculating an aggregated *BLAU* Index of the heterogeneity of the individual determinants *Gender*, *Superior*, *Work Experience*, *Life Experience*, *Education*, *Part-time*, and *Production* (specifies if employees work in production). High homogeneity of employees toward their colleagues and superiors could bias the imitating behaviors. Finally, we controlled for *Group size* using a logarithm for the number of employees in each group.

4.3 | Method of analysis

Given our study's nested data set and explanation of the relationships and effects at the individual (Level 1), workgroup (Level 2), and country level (Level 3), we used a multilevel analysis (Holman, Frenkel, Sørensen, & Wood, 2009). A multilevel model allows for the integration of micro- and macro-level analysis and takes into account the hierarchical nature of firms (Hofmann, 1997). In a multilevel approach, individual- and workgroup-level residuals are estimated separately, which represents a clear advantage of multilevel analyses over ordinary least squares models (Hofmann, 1997). Thus, we were able to model between and within workgroup and country variances and therefore control for workgroup- and country-level effects.

At the individual level, all variables were grand mean centered (Aguinis et al., 2013). In addition, following Aguinis et al. (2013), we ran a null model without explanatory variables. To test the significance of workgroup and country effects, we conducted a likelihood ratio test to compare the null model with a null single-level model. We found convincing evidence of significant workgroup and country effects and therefore maintained our multilevel approach. Furthermore, we used a log-likelihood measure of model fit for each model. As we added variables to our model, the log-likelihood measure decreased.

We mean-centered our variables before creating interaction terms to avoid multicollinearity (Aiken & West, 1991). Given the binary definition of our dependent variable, we ran a logit regression. We used the *glmer* command in R, because Stata could not deal with the complexity of the model due to our large sample size.

5 | RESULTS

In our final sample, 185,291 individuals were nested within 2,008 workgroups across 28 countries.² Table 1 provides a summary of descriptive statistics and a correlation matrix of our variables. All variance inflation factors were smaller than 2.26, so we did not foresee any multicollinearity issues.

Table 2 shows the results of the analysis and reports the tests of our five hypotheses. Hypothesis 1 predicts that voids in formal institutions have a negative influence on the ESOP participation of foreign subsidiary employees. Empirically, we find a significant negative effect of *Void Index* on the ESOP participation of employees. Thus, Hypothesis 1 is supported. Consistent with Hypotheses 2a and 2b, our results also suggest that both workgroup-level variables, *Group Behavior* and *Superior Behavior*, have a positive effect on subsidiary employee ESOP participation.

To test our competing hypotheses 3 and 4, we added to our model the interaction between the *Void Index* and the workgroup-level variables *Group Behavior* and *Superior Behavior* (see cross-level models 1–3 in Table 2). The interpretation of interactions in nonlinear models is more difficult compared to linear models, because it does not result directly from the sign, magnitude, and significance of the coefficient (Hoetker, 2007). Plotting the moderation helps to capture the relationship of the interaction effect (Hoetker, 2007; Zelner, 2009). Hence, we plotted our cross-level interaction according to Zelner (2009) and Maekelburger, Schwens, and Kabst (2012), which resulted in two sets of plots. The first set of plots (Figures 2a and 3a) shows the probability of *ESOP Participation* at different institutional-void levels (low to high) for low and high values of our interaction variables *Groups Behavior* and *Superior Behavior*. The second set of plots (Figures 2b and 3b) shows the delta probability for high versus low *Group Behavior* and *Superior Behavior* to test the significance of our moderator. Figure 2a shows that the effect of group participation on ESOP participation is strong at low levels of institutional voids and weak at high levels. The steeper negative curve of high group participation compared to low group participation accounts for a complementary relationship. The same holds true for Figure 3a, where high levels of superior behavior have a steeper negative slope than low levels of superior behavior. Figures 2b and 3b illustrate the significance of our moderators by showing that the predicted probabilities are different from zero. Thereby, our hypothesis regarding complementarity (Hypothesis 4) is supported, and conversely, our competing hypothesis regarding substitution (Hypothesis 3) is not supported. We used additional approaches to the plotting and interpretation of our interactions effects. They all confirmed our results.³

We also conducted a robustness check to validate our results toward the choice of our void index: We separately tested the four single void variables included in the void index and could confirm our results.

6 | DISCUSSION AND CONCLUSION

We empirically showed that weak host-country institutions negatively and the participation of members and superiors of the

TABLE 1 Descriptive statistics

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. ESOP Participation	0.09	0.28	1.00													
2. Void Index	1.63	0.92	-0.15**	1.00												
3. Group Behavior	0.09	0.09	0.28**	-0.39***	1.00											
4. Superior Behavior	0.01	0.45	0.05***	-0.02***	0.20***	1.00										
5. Stocks Traded	78.02	47.06	0.12***	-0.44***	0.33***	0.04***	1.00									
6. Cultural Distance	1.49	1.22	-0.08***	0.57***	-0.20***	0.00	-0.44***	1.00								
7. Gender	0.71	0.45	0.05***	-0.08***	0.06***	0.01***	-0.11***	1.00								
8. Life Experience (log)	3.68	0.27	0.11***	-0.44***	0.20***	0.02***	-0.34***	0.09***	1.00							
9. Work Experience (log)	2.85	1.00	0.08***	-0.28***	0.10***	-0.01***	-0.22***	0.05***	0.60***	1.00						
10. Education	0.12	0.32	0.09***	-0.06***	0.15***	0.04***	-0.04***	0.03***	0.02***	-0.02***	1.00					
11. Superior	0.01	0.10	0.07***	-0.03***	0.09***	0.01***	-0.02***	0.04***	0.08***	0.06***	0.07***	1.00				
12. Part-time	0.14	0.35	-0.08***	0.55***	-0.13***	0.03***	0.47***	-0.07***	-0.32***	-0.26***	-0.04***	-0.02***	1.00			
13. Group size (log)	5.85	1.25	-0.13***	0.24***	-0.43***	-0.09***	0.16***	0.01***	-0.16***	-0.09***	-0.14***	-0.22***	0.11***	1.00		
14. BLAU Index	2.01	2.31	0.09***	-0.32***	0.26***	0.04***	-0.18***	-0.18***	0.17***	0.11***	0.08***	-0.35***	-0.45***	1.00		

n = 185,291, †*p* < .1, **p* < .05, ***p* < .01, ****p* < .001.

TABLE 2 Regression results

Method	Null model		Institutional void		Work group behavior		Cross-level model1		Cross-level model2		Cross-level model3	
	Logit	ESOP participation	Logit	ESOP participation	Logit	ESOP participation	Logit	ESOP participation	Logit	ESOP participation	Logit	ESOP participation
Dependent variable		SE		SE		SE		SE		SE		SE
Predictor												
Institutional void												
Void index			-0.58***	0.13	-0.37***	0.09	-0.40***	0.09	-0.58***	0.13	-0.40***	0.09
Work group level												
Group behavior					5.68***	0.15	6.03***	0.16			5.93***	0.16
Superior behavior					0.07*	0.03			0.61***	0.05	0.11**	0.04
Cross-level interaction												
Void index group behavior							0.67***	0.15			0.58***	0.16
Void index superior behavior									0.11*	0.05	0.10*	0.04
Institutional-level controls												
Stocks traded	0.01*	0.00	0.01**	0.00	0.01**	0.00	0.01**	0.00	0.01*	0.00	0.01**	0.00
Cultural distance	0.10	0.08	0.08	0.06	0.08	0.06	0.08	0.06	0.10	0.08	0.08	0.06
Individual-level controls												
Gender	0.37***	0.02	0.36***	0.02	0.36***	0.02	0.36***	0.02	0.37***	0.02	0.36***	0.02
Life experience	0.40***	0.05	0.42***	0.05	0.42***	0.05	0.42***	0.05	0.40***	0.05	0.42***	0.05
Work experience	0.09***	0.01	0.08***	0.01	0.08***	0.01	0.08***	0.01	0.09***	0.01	0.08***	0.01
Education	0.55***	0.02	0.53***	0.02	0.53***	0.02	0.53***	0.02	0.55***	0.02	0.53***	0.02
Superior	0.72***	0.06	0.76***	0.07	0.76***	0.07	0.76***	0.07	0.72***	0.06	0.76***	0.07
Part-time	-0.67	0.06	-0.71***	0.06	-0.71***	0.06	-0.71***	0.06	-0.69***	0.06	-0.73***	0.06
Workgroup-level controls												
Group size	-0.10***	0.02	0.05**	0.02	0.05**	0.02	0.05***	0.02	-0.10***	0.02	0.05***	0.02
BLAU index	0.06***	0.01	0.06***	0.01	0.06***	0.01	0.06***	0.01	0.06***	0.01	0.06***	0.01
Constant	-2.49***	0.17	-2.92***	0.29	-3.67***	0.21	-3.68***	0.21	-2.96***	0.28	-3.68***	0.21
Group variance	0.63		0.45		0.14		0.13		0.44		0.13	
Country variance	0.83		0.30		0.15		0.15		0.29		0.16	
N	185,291		185,291		185,291		185,291		185,291		185,291	

Notes:

1. *n* (individual level) = 185,291; *n* (workgroup level) = 2,008; *n* (country level) = 28. ***, **, *, and † indicate significance at the 0.1%, 1%, 5%, and 10% levels, respectively.
2. Gender is coded 1 if male and 0 if female.

workgroup positively influence foreign subsidiary employees' willingness to participate in ESOPs, and that these effects of institutions and workgroup behavior function as complements.

Our study contributes to research in three ways. First, this article contributes to the knowledge of the antecedents of ESOPs. Little research has investigated determinants of individual participation in ESOPs. Most studies have focused instead on determinants of firms' implementation of such programs (e.g., Babenko et al., 2011; Chaplinsky & Niehaus, 1994). Although some of these studies do consider the influence of the institutional environment (e.g., Poutsma et al., 2003), to the best of our knowledge, no study has investigated how the institutional environment affects individual employees' ESOP participation decisions. Thus, by switching the perspective from why firms offer ESOPs to why employees participate, our study follows an important recent trend in ESOP literature (C. Jackson & Morgan, 2011). However, most of the research on determinants of individual ESOP participation has focused on either demand or supply arguments. Previous research has demonstrated that employees invest only when they can afford it (Pendleton, 2010b), are of an age at which saving and investing becomes relevant (Babenko & Sen, 2014; Pendleton, 2010b) (these reasons also matter for individuals' decision to retain stock [Pendleton, 2005]), and are well informed about the program (Klein et al., 1988). We complement this research by adding the aspect of evaluation and thereby the theoretical perspective of bounded rationality. Hence, we not only introduce two new levels (the country and workgroup levels) of potential determinants to the latest research on ESOP participation determinants, but also provide significant theoretical insights into aspects of employees' individual decision making in ESOP participation decisions. Thereby, we build on Caramelli and Carberry (2014), who were among the first to consider bounded rationality in ESOP participation decisions from the perspective of decision heuristics. However, we consider the bounded rationality of employees' decision processes from the perspective not only of heuristics but also of transaction cost theory and the theory of psychological ownership. Our systematic overview of the decision process regarding ESOP participation as supply, demand, and evaluation (of the transaction costs and the value of ownership) may enrich future ESOP research. That is, adding the process phase of evaluation, which includes an evaluation of transaction costs, of the financial value of the ownership, and of the value of psychological ownership, may inspire researchers to develop further intraorganizational or country-level determinants, such as aspects of workgroup identity or cultural difference within and between subsidiaries.

Second, we contribute to the actor-centered perspective of institutional theory (G. Jackson, 2010). Prior studies about firm-level reactions on weak institutions have mainly focused on internal market mechanism (see, e.g., Khanna & Palepu, 1997). Our study expands upon this perspective by arguing that institutions also affect the behaviors of individual actors, such as employees. Thus, we contribute to the development of the theories in this field by elaborating upon the arguments of North (1990) and G. Jackson (2010), who pointed out that institutions play a role in the regulation of the behaviors of individual actors. Therewith, our research also contributes to HRM literature more generally. Our results can be considered additional support for the notion that institutions matter in an HR

context. Earlier studies have shown that distance in MNEs makes management of employees and coordination of work more difficult (Raghuram, Garud, Wiesenfeld, & Gupta, 2001). We show that not only distance but also the absolute values of institutional voids are factors of foreign subsidiary employee behavior. This outcome is also relevant beyond the ESOP context of our study, because the success of many HR practices depends on the effective steering of subsidiary employees.

Third, our study contributes to research on the cross-level interaction effects of country-level and workgroup-level determinants by discussing their substitutionary and complementary relationships. Based on theoretical arguments, both relationships are conceivable. Our results indicate that the cross-level interaction of observed workgroup behavior and weak institutions is complementary with respect to their effects on the ESOP participation of subsidiary employees. This shows that, in our case, internal mechanisms are most effective in the context of supportive institutions. However, it is important to recognize that this complementary relationship holds for our specific context of individual decisions regarding ESOP participation. Researchers might find substitutionary effects for other decision types. Individual behavior always depends on the nature of the decision situation (Bowles & Polanía-Reyes, 2012; Kahneman & Tversky, 1982). Hence, we hope our study inspires researchers to develop theoretical frameworks for classifying different cross-level effects according to their potential to be either complementary or substitutionary. In this stream of research, scholars might, for instance, want to question whether specific institutional phenomena such as general regulatory voids or unexpected situations of political risk have greater chances to be substitutes or complements of workgroup-level effects.

These findings have important implications for both HRM research and practitioners. The offering of ESOPs can be understood as investment in strategic human capital. The effectiveness of these investments is of great importance for firm performance and is of interest for strategy as well as HR scholars (Wright, Coff, & Moliterno, 2014). The effectiveness of the investments depends in part on the participation of employees. Shedding further light on the determinants of participation hence contributes to strategy and HRM research. More specifically, our study contributes to the current knowledge of HRM phenomena by extending the set of investigated levels. This study responds to calls for HRM research that adds a macro perspective (De Cieri, Cox, & Fenwick, 2007) and that bridges micro and macro perspectives (Wright & Boswell, 2002). Although HRM research has begun to use this multilevel approach (e.g., Sarabi, Froese, & Hamori, in press; Snape & Redman, 2010), most studies conceptualize the workplace or firm level as "most macro" (Maynard, Gilson, & Mathieu, 2012; Snape & Redman, 2010). By adding the institutional level, our study therefore significantly contributes to this stream of literature. Furthermore, our study returns individual decision making to the center of HRM research on multilevel effects on employee behavior. We contribute to this literature by offering theoretical lenses with which to tackle issues of the bounded rationality of employees' decision processes. Furthermore, although ESOPs are voluntary, the implications of our results are applicable to mandatory HR practices in general, which are currently receiving significant

FIGURE 2 (a) Predicted probabilities and confidence intervals for high versus low group participation. (b) Delta predicted probabilities for high versus low group participation

attention (Andersson, Björkman, & Forsgren, 2005; Caligiuri, 2014). When implementing human resource practices, MNEs should be aware of the institutional environments of their subsidiaries and adapt their strategies accordingly (Estrin, Baghdasaryan, & Meyer, 2009; Hendry, 1996; Pudelko & Harzing, 2007). These might be achieved by either adapting the HR practice itself to the country-specific environment or by adjusting the communication about the practice or the organizational control structure within the subsidiary toward the country context.

From a practical perspective, our results indicate that MNEs should take a strong interest in closing institutional voids in their host countries. If MNEs do not support the development of host-country formal institutions, the internal implementation of HR practices such as ESOPs is more likely to fail. Therefore, MNEs should support the development of formal institutions, especially where institutions are weak (e.g., speak out against corruption). HRM literature that has observed that HR practices differ across countries (e.g., Harzing, 2001; Schuler & Rogovsky, 1998) supports this notion. Thus, our study recommends that rather than trying to develop one-size-fits-all HR instruments to steer foreign subsidiary employees and influence their behavior, these instruments should always be developed with an awareness of the institutional context. For MNEs, this is not only an ethical and social concern but also an important economic

FIGURE 3 (a) Predicted probabilities and confidence intervals for high versus low superior participation. (b) Delta predicted probabilities for high versus low superior participation

consideration. The transferability of HR practices to subsidiaries with different institutional environments is limited because these HR practices are effective only in the context of supportive institutions. These insights into the effects of the host-country institutional context can be applied to the relationship between headquarters and subsidiaries in general.

This study has certain limitations that suggest future research opportunities. First, we conducted a single-company, single-year study due to reasons of data availability. Therefore, we cannot assert that our results are generalizable or testing firm effects (we leave that for future research); however, our single-company approach is the most efficient way to control for potential firm-level effects. Furthermore, because our home-country institutions are constant, our analysis shows no bias in varying home-country institutions. Future studies might want to investigate whether firm-specific crises such as a dramatic decline of share prices influence employees' willingness to participate in ESOPs and how institutional and workgroup effects influence the degree of severity employees attribute to the crisis. Additionally, due to our single-year data design, we modeled all independent variables as exogenous. Nevertheless, we would like to acknowledge that especially our variables on workgroup level might be endogenous, meaning that these variables themselves are affected

by the institutional context. Future studies on multiyear samples might want to challenge which part of the workgroup effect is actually an additional indirect effect of the institutional environment, and which part is truly driven by effects on the workgroup level. Methodologically, these studies might for instance want to resort to dynamic regression models such as the generalized method of moments (GMM), which provide a rich set of tools to address issues of intertemporal dependencies and endogeneity (Arellano & Bond, 1991; Roodman, 2009; Wintoki, Linck, & Netter, 2012).

Second, for reasons of data availability, our study is also limited with respect to factors on the workgroup, country, and individual level. On the workgroup level, we controlled in our multilevel model for workgroup effects in general. However, it might be a fruitful avenue for future research to investigate how ESOP participation is affected by specific characteristics of workgroup members and superiors, such as the social networks of employees and their superiors, their embeddedness in these networks, and the design of the networks. Additionally, further research could address how workgroup composition depends on the characteristics of superiors, for example, through a specific hiring philosophy and how this hiring philosophy affects ESOP participation. Finally, the identity of superiors might provide further insights into workgroup-level effects. It may be the case that employees prefer to base their participation decisions on the behavior of home-country superiors instead of the behavior of local managers. Thereby, our study provides an opportunity to extend expatriate research. On a country level, our hands were tied with respect to the number of country-level control variables for reasons of multicollinearity. Whereas our theoretical framework focuses on void in formal institutions and only controls for effects of cultural distance, future research might want to investigate effects of culture on the ESOP participation of foreign subsidiary employees in more detail. Our empirical results do not show an effect of cultural distance. However, this does not mean that we can preclude any cultural effect. Most studies concerning the effects of culture have weakness in measuring culture on a country level (Kirkman, Lowe, & Gibson, 2006), although researchers have indicated the importance of within-country differences (McSweeney, 2002). Important cultural determinants might link to regional rather than country borders meaning that culture might also differ within each country, for instance, between urban and rural regions. Hence, future research might want to conceptualize regional-level cultural effects on ESOP participation behavior. Furthermore, it might not only be the home-country institution that has an imprint on an individual's behavior. The global workforce in MNEs consists of several employees from several different countries of origin. Due to international careers, even single individuals might be affected by several institutional experiences, and hence they might not only be influenced by the institutional context of the country in which they are working now. Every employee might have a specific institutional imprint that shapes his or her behavior. Unfortunately, this sort of career data is not available in this research project but might represent an interesting avenue for future research. On an individual level, our study is able to control only for demographic characteristics, but not for specific preference, attitudes, or evaluations of the employees. This would require the additional use of survey data. Future research

might want to look deeper into these individual effects. Showing whether our hypothesized effects of evaluations of financial and psychological ownership actually coexist could be of specific interest.

Third, our study does not provide any insights into the effects of ESOPs. With regard to the potential beneficial effects of firm-level outcomes, such as performance, or the effect of ESOPs on the relationships between firms and their employees, we can only refer to the previous literature. However, we acknowledge that the research on these effects remains contradictory (i.e., there is evidence of both positive and negative performance effects). We therefore strongly advocate expanding upon the research on the consequences of ESOPs. With respect to the effects of ESOPs on performance, we recommend research that sheds more light on the potential contingency effects of institutions on ESOP performance. Beyond the effects of ESOPs on performance, it would be interesting to investigate in greater detail the effects of ESOPs on employees themselves. Some scholars, for instance, have expressed doubts concerning the complementary nature of ESOPs in terms of the actual decision-making participation of employees (Poutsma et al., 2003).

In summary, our study provides important insights into workgroup- and institutional-level determinants of foreign subsidiary employees' ESOP participation. We make the bounded rationality of employees a central concern of our study and shed further light on the factors that affect employees in such investment decisions. Our study should encourage researchers to identify further determinants of individual ESOP participation as well as to apply our framework of transaction costs and psychological heuristics to other research contexts where the behavior of employees with bounded rationality has to be explained.

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NOTES

¹Nevertheless, there is no consensus in the literature regarding the performance effects of ESOPs. Other studies have indicated an

inverted U-shaped relationship between ESOPs and firm performance (Guedri & Hollandts, 2008). Arguments for negative performance effects point to less risk taking, slower growth, or fewer long-term investments (Faleye, Mehrotra, & Morck, 2009).

²Our sample includes the following countries: Australia, Austria, Belgium, Brazil, Canada, China, Czech Republic, Denmark, Finland, France, India, Italy, Malaysia, Mexico, Netherlands, Norway, Poland, Portugal, Saudi Arabia, Singapore, Slovakia, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

³We see a complementary effect using the `prchange` command in Stata (Aiken & West, 1991; Li & Tang, 2010), using the `inteff` command (Faleye, Hoitash, & Hoitash, 2011; Norton, Wang, & Ai, 2004), and using the `margins` command.

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