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TROJAN HORSES OR LOCAL ALLIES:

HOST-COUNTRY NATIONAL MANAGERS IN DEVELOPING MARKET SUBSIDIARIES

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ABSTRACT: [128 words]

We investigate a multinational corporation's (MNC) decision to appoint host-country national (HCN) managers to foreign subsidiaries based on the institutional context of and familiarity with the host country. HCN managers are commonly associated with specialized knowledge, superior responsiveness, and higher legitimacy. Yet, we argue that local familiarity of HCNs can also be perceived as risky or harmful by MNC parents. We analyze how formal and informal institutions affect the trade-off between positive effects and potential costs associated with HCN managers (*"Local allies"* vs. *"Trojan horses"*). We find that legal institutions protect foreign MNCs from potential costs, encourage the use of HCNs and reinforce their benefits. Corruption and corruption distance, however, increase perceived costs associated with HCN managers up to a point at which they outweigh their perceived benefits.

Keywords: Multinational corporations, subsidiary staffing, institutional theory, corruption, institutional distance

INTRODUCTION

Multinational corporations (MNC) operate in countries that differ in their external institutional environments and often require specialized, local knowledge. At the same time they need to organize the internal institutional environment and manage their foreign subsidiaries across country borders (e.g. Kostova and Zaheer, 1999; Roth and Kostova, 2003b). Subsidiary staffing is one important strategic instrument for MNCs to cope with the different environments. Ideally, subsidiary managers implement MNC strategies and act in the MNC's interests, while they are also responsive to and knowledgeable about the external host-country environment. Unlike domestic staffing in independent firms, however, foreign subsidiary staffing is complicated by institutional duality (Kostova and Roth, 2002). A foreign subsidiary has to comply with strategic decisions of the MNC parent (i.e. within organization domain), and is exposed to the host-country institutional context (Kostova and Roth, 2002). Hence, foreign subsidiary managers face isomorphic pressures from two potentially competing domains.

Researchers have found that expatriates can support MNC-internal integration. However, these managers may not be as knowledgeable about the host-country institutional context as host-country national (HCN) managers (Gaur et al., 2007; Gong, 2003a, b). They do not possess contacts or legitimacy to an equal extent (Athanassiou and Nigh, 2000; Tan and Mahoney, 2006). As a result, literature has widely agreed on the overall benefits of hiring HCNs (Mezias and Mezias, 2010), describing them as *"a unique nonmarket strategic advantage"* (White et al., 2015, p. 343).

Nevertheless, it is also widely acknowledged that the goals of individual managers and the MNC can be misaligned, and managers might act opportunistically (Kostova et al., 2016). Institutional duality can aggravate conflicts between the MNC, subsidiary managers and external stakeholders (e.g. cheap labor vs. well-paid jobs) (Kostova and Roth, 2002). Hence, institutional duality puts MNCs in a situation in which they are dependent on HCNs'

knowledge, while at the same time facing higher information asymmetry about their behavior. This can be even more problematic for the MNC, when the host-country context does not protect from opportunistic behavior sufficiently (Dieleman and Boddewyn, 2012; Hearn, 2015; Marquis and Raynard, 2015). In such a situation of institutional duality, HCNs may be perceived as more risky or more likely to engage in opportunistic behavior by the MNC. As a result, MNCs may forego the benefits of HCNs in their foreign subsidiaries.

MNC subsidiary staffing of top management teams and boards has attracted considerable scholarly interest. Yet, we believe the topic needs to be revisited for a number of reasons. First, subsidiary staffing literature has focused predominantly on the potential benefits of HCN subsidiary managers (Gaur et al., 2007; Tan and Mahoney, 2006) and board members (Du et al., 2015; Oxelheim et al., 2013). Little research has accounted for potential costs of HCN subsidiary managers as perceived by the MNC parent (notable exceptions being Shin et al., 2016; Tan and Mahoney, 2006). In doing so, existing studies have oversimplified subsidiary staffing, hypothesizing unidirectional average effects, where, in fact, there are theoretically compelling arguments for higher-order relationships, i.e. trade-offs and curvilinear effects (Alcácer et al., 2013). In particular, research has failed to acknowledge the fact that HCNs may be perceived as more risky by the MNC, because they may use their superior knowledge and local contacts to the detriment of the MNC (Gong, 2003a).

Second, some recent studies have used institutional theory to hypothesize about subsidiary staffing with HCNs or expatriates (Baik and Park, 2015; Gaur et al., 2007). These studies have examined the effects of differences between the MNC home- and subsidiary host-country institutional context. The effect of specific host-country institutions that potentially facilitate or protect from opportunistic behavior, however, remains under-examined (Kostova and Zaheer, 1999; van Hoorn and Maseland, 2016).

We aim to address these gaps integrating institutional theory (Doh et al., 2012; Henisz, 2000; Kostova and Roth, 2002; Kostova et al., 2008; Peng et al., 2008). Following Granovetter (1978, 1985) and Granovetter and Soong (1983), we contend that MNC subsidiary staffing with HCNs is characterized by a trade-off between their benefits of knowledge (local allies) and their costs resulting from potential opportunistic behavior, as perceived by the MNC parent (Trojan horse cost). By separating benefits and costs conceptually, we theorize about and empirically measure a trade-off in subsidiary staffing with HCN managers.

However, empirical verification of potential cost associated with HCNs is of little value without understanding boundary conditions of variations in the cost (Alcácer et al., 2013). Hence, we hypothesize how the specific host-country institutional context in terms of corruption, corruption distance, property rights and contracting institutions, affects the cost of HCN managers as perceived by the MNC parent, and ultimately their net probability to be appointed (i.e. benefits minus cost) (Acemoglu and Johnson, 2005; La Porta et al., 1998; North, 1981; van Veen et al., 2014). Our study extends institutional subsidiary staffing literature by integrating the potential cost of HCNs and theorizing about institutional boundary conditions. By investigating host-country institutional mechanisms that can restrict the potential misappropriation of value from an MNC, our study also offers important managerial implications (Casciaro and Piskorski, 2005; Dieleman and Boddewyn, 2012; Siegel, 2007).

We use a unique dataset covering 4,029 developing market subsidiaries to test our hypotheses on subsidiary staffing with HCNs. We identify non-linear effects, which are consistent with our trade-off argument and the hypothesized potential costs of HCN managers in environments with high corruption, low familiarity of the MNC and weak legal protection from opportunism.

LITERATURE BACKGROUND

Researchers have widely enhanced our understanding of the composition and diversity of top management teams and boards. They have theorized about aspects such as size (Carpenter et

al., 2004; de Andres et al., 2005), gender (Terjesen and Singh, 2008; Westphal and Milton, 2000), and professional background or experience (Geletkanycz and Black, 2001; Kor and Misangyi, 2008; Papadakis and Barwise, 2002; Yoo and Reed, 2015) in general firm staffing, as well as nationality (Gong, 2006; Masulis et al., 2012; Oxelheim et al., 2013; van Veen and Marsman, 2008; van Veen et al., 2014) in the context of MNC staffing in particular. Other studies have focused on consequences, finding evidence for a link between board or top management team composition and company performance (Carpenter et al., 2004; Certo et al., 2006; Dalton et al., 1998), diversification (Greve et al., 2015; Sanders and Carpenter, 1998; Tihanyi et al., 2000) and market entry strategies (Nielsen and Nielsen, 2011) in MNCs. Such studies have clearly identified staffing as a key strategic instrument. However, they have often looked into domestic staffing in independent firms in the absence of institutional duality. While scholars have emphasized the potential to transfer insights from research on domestic independent firms to MNC subsidiaries, they attest a need for theoretical adaptations (Alpay et al., 2005; Reuer et al., 2014). We claim that nationality of subsidiary managers (i.e. top management team and board members), in particular, is one such field that requires theoretical adaptations due to institutional duality.

MNC subsidiary management staffing and institutional theory

It is widely acknowledged that *"multinational organizations are substantially different from domestic firms"* (Kostova et al., 2008, p. 997), and more complex. Their organizational units are spread across institutional and country contexts, which often require local responsiveness and knowledge (e.g. Kostova and Zaheer, 1999; Roth and Kostova, 2003a). After all, one of the most important roles of subsidiary managers is to connect to and bargain with host-country stakeholders, and thereby pursue the goals of the MNC (Barringer and Harrison, 2000; Peng et al., 2008; Young et al., 2008). At the same time, however, the MNC needs to strive for integration of subsidiaries within the organization. For subsidiaries, this complexity implies a need to react to host-country pressures and cope with pressures from within the MNC. This

situation is referred to as institutional duality and differentiates foreign subsidiaries from independent firms (Kostova and Roth, 2002).

Institutional duality leads to a number of differences between managers of foreign subsidiaries and independent firms. First, subsidiary managers are affected by the liability of foreignness in the host country and, if expatriated they may not possess relevant host-country knowledge (e.g. Bjorkman et al., 2007). Second, subsidiary managers face external host-country interests (i.e. host-country domain) that often differ from MNC-parent interests. This makes MNCs a fruitful ground for theorizing from an institutional perspective (Kostova and Roth, 2002; Westney, 1993).

Researchers have acknowledged the complexity of the MNC and its influences on MNC subsidiary staffing. Gaur et al. (2007) and Baik and Park (2015), for instance, have examined how differences between MNC home- and host-country institutional contexts affect subsidiary staffing. By focusing on complexity deriving from cultural distance, however, most studies disregarded the effect of host-country institutions (a recent exception being Shin et al., 2016 , who theorized about the impact of the cultural context on subsidiary staffing).

Comparative institutionalism suggests that business and social activities are organized consistently within national borders (Morgan and Kristensen, 2006; Whitley, 1999). Thus, national economies appear to be characterized by distinguishing sets of regulatory, cognitive and normative institutions (North, 1981, 2004). While institutional settings play an important role in international business, research has been criticized for oversimplifying the impact of the institutional context, viewing *"institutional diversity as variation along discrete parameters at a high level of aggregation"* (Jackson and Deeg, 2008, p. 545). Scholars have advocated a more fine-grained approach to theorizing and analyzing the impact of institutions on firm strategies. We follow their line of thought. More specifically, we study the impact of particular types of informal and legal institutions (namely corruption, corruption distance, and property rights

institutions, contracting institutions), which are directly related to the perceived costs associated with subsidiary managers' nationality.

MNC subsidiary management staffing and manager nationality

Previous research suggests that subsidiary management may take on a number of different roles within the MNC. It is important in managing an MNC's relations with external stakeholders and/or monitor internal compliance of subsidiary staff in the host-country context (Du et al., 2015; Leksell and Lindgren, 1982). Moreover, MNC subsidiary management staffing is described as *"a primary strategic means for MNCs to share knowledge, to coordinate activities, and to exercise control over their subsidiaries"* (Gaur et al., 2007, p. 613). In particular, subsidiary management staffing allows MNCs to promote strategic goals by appointing appropriate managers, who act in their interests (Gaur et al., 2007). However, the question remains as to what constitutes appropriateness? One theoretically important characteristic that relates to institutional duality is a manager's nationality.

MNC subsidiary staffing literature is suggestive about the potential benefits of HCN and expatriate managers (e.g. Gong, 2003b; Harzing, 2001; Widmier et al., 2008). Thus, depending on the MNC's needs, for instance, for local responsiveness versus control, the appointment of HCN subsidiary managers is seen as more or less appropriate. HCNs have been accredited with a number of advantages: They provide the MNC with access to networks (i.e. social capital), specialized host-country knowledge, and legitimacy (Du et al., 2011, 2015; Luo and Shenkar, 2011). Furthermore, they may be more responsive to changes in the host country (Colakoglu and Jiang, 2013), and potentially more efficient in monitoring local subsidiary staff. Finally, HCNs were found to signal an MNC's commitment to stakeholders in a host country (Kriger, 1988; Kriger and Rich, 1987). This can in turn reduce its liability of foreignness (Zaheer, 1995). Expatriated managers, on the contrary, may often lack such host-country-specific benefits. In fact, they are often treated less favorably by host-country stakeholders (Kostova and Zaheer,

1999; Zaheer, 1995). Hence, when an MNC strives for efficient interaction with external stakeholders in the host-country context, HCN subsidiary managers (i.e. local allies, as we refer to them) are arguably the more appropriate choice. This is especially true in developing markets, where weak, ambiguous, or discriminating institutions preclude MNCs from fully exploiting their firm-specific advantages. In such contexts, MNCs require both specialized knowledge and local networks (Cuervo-Cazurra, 2008).

Nevertheless, this narrative of local allies is based on the assumption that HCNs invariably use their superior abilities for the benefit of the MNC. Institutional theory, however, provides compelling arguments that speak against the unconditional benefits of HCN managers. In fact, HCNs can be argued to have superior abilities, incentives and opportunities to abuse their position at the expense of the MNC. First, HCNs' knowledge of the host-country context might give them superior opportunities to collude with external stakeholders, or obtain personal benefits by misappropriating value from the MNC (Granovetter, 1985; Provan, 1993; Uzzi, 1997). Second, HCNs' embeddedness in the socio-economic context makes them more vulnerable to external pressures. Granovetter (1985, p. 491), for instance, emphasized that *"social relations […] may even provide occasion and means for malfeasance and conflict on a scale larger than in their absence"*. HCNs are thus more likely to be coerced by stakeholders to damage the MNC, even if they did not have bad intentions themselves. In fact, social pressures were found to go along with fraud, cronyism and illegal activities (Daboub et al., 1995; Zahra et al., 2007). Third, socio-economic embeddedness suggests that HCNs are more closely attached to host-country interests. Thus, HCNs have higher incentives to transfer value from the MNC to external stakeholders. In sum and despite clear benefits, institutional theory suggests that HCNs may be, or at least may be perceived by MNC parent managers as, less reliable (i.e. Trojan horses, as we refer to them).

Previous research on subsidiary manager nationality focused almost exclusively on the potential benefits from HCNs' knowledge, responsiveness and legitimacy (Boddewyn, 1988; Du et al., 2011, 2015). Yet, institutional theory suggests costs of HCNs that MNC parents take into account when they make subsidiary staffing decisions. Focusing on either only benefits or cost of HCNs, subsidiary management staffing is conceptually oversimplified. More specifically, ignoring either side of the trade-off omits a theoretically and empirically important variable. In the worst case, such omission leads to over-generalizing the benefits of HCNs and to empirically spurious results. We argue thus that subsidiary staffing with HCN managers should be conceptualized as a trade-off, accounting for both potential benefits and cost of HCNs. We follow Haans et al. (2015) in theoretically spelling out both benefit and cost functions, and hypothesize on the net probability of HCN subsidiary managers to be appointed by an MNC parent (i.e. benefit minus cost). This allows us to contest the prevailing linearity assumption and over-generalization of the benefits of HCNs.

Acknowledging average costs that need to be balanced with the benefits of HCNs, however, has little managerial value in itself. Rather, we need to understand the institutional contingencies under which the costs associated with HCNs are perceived as high or low by an MNC parent (Alcácer et al., 2013). Hence, we theorize about the cost associated with HCN managers from an institutional perspective (Kostova et al., 2008; North, 2004; Scott, 1995): We argue that the cost of HCNs as perceived by an MNC parent is a function of the host-country institutional context, as it determines the opportunities for, the familiarity with, and the protection from opportunistic behavior.

HYPOTHESES DEVELOPMENT

One key argument in our paper is that HCNs provide a multitude of potential benefits to foreign subsidiaries. Such benefits include knowledge, contacts, responsiveness, diversity and legitimacy, which to some degree transcend legal institutional contexts. While not strictly

necessary for determining the shape of the net effect, we propose that the benefits of HCNs are marginally decreasing. As the proportion of HCN subsidiary managers increases, there is considerable overlap in their knowledge and contacts, and we expect the benefits attributed to HCNs to diminish.

In addition, we simultaneously consider and hypothesize about the potential or perceived costs of HCNs associated with opportunistic behavior. Activities of opportunistic behavior may range from outright illegal activities, such as stealing corporate funds, to providing locals or competitors with important information (e.g. bidding information, insider information, technological know-how), misuse of corporate resources to extend favors to suppliers, customers and politicians (e.g. supply contracts, infrastructure, expense accounts, cronyism hiring). Unlike the broader benefits, the perceived costs of HCNs clearly depend on the perceived opportunities for illicit behavior in the host country, the ability of the MNC to monitor subsidiary managers, and the perceived protection provided by host-country legal institutions. Subtracting these contextually-determined cost functions from the benefit function allows us to hypothesize about, and test for the net probability of HCNs to be appointed as subsidiary managers by an MNC parent (following Haans et al., 2015). The question remains, which institutional characteristics are theoretically most important in explaining potential costs related to opportunistic behavior by HCNs from the perspective of MNC parents.

More recently, institutional researchers have advocated for a more fine-grained approach to theorizing about and measuring the impact of institutions on MNC strategic management (Berry et al., 2010; Jackson and Deeg, 2008; Salomon and Wu, 2012). Accordingly, each research question *"require[s] the use of different* [institutional] *dimensions"* (Berry et al., 2010, p. 1477) that are based on theoretical reasoning. In line with this literature, we study the impact of specific types of institutions on MNC subsidiary management staffing, rather than the impact of broad proxies. More specifically, we focus on institutions with a more immediate influence

on the costs associated with Trojan horses from the viewpoint of an MNC parent: prevalence of corrupt practices, internal monitoring capabilities due to an MNC's familiarity with the host country, and external protection from opportunism by private individuals (i.e. managers or stakeholders) and public stakeholders (i.e. government officials) (Meyer et al., 2009; Patibandla and Petersen, 2002).

Cost of HCNs and corruption perception

Corruption comprises uncodified customs, societal norms, practices or *"implicit rules of the game"* (North, 2004; Tonoyan et al., 2010, p. 804). Cuervo-Cazurra (2016, p. 36) broadly defines corruption as *"the abuse of entrusted power for private gain"*. It has been found to influence MNC strategy especially in developing countries (Cuervo-Cazurra, 2006, 2008, 2016; Martin et al., 2007; Spencer and Gomez, 2011; Weitzel and Berns, 2006). Corruption also directly relates to the Trojan horse argument. From the perspective of MNC parents that make subsidiary staffing decisions, a subsidiary manager's exposure to a certain level of corruption in the host country determines his or her opportunities for opportunistic behavior. Irrespective of actual costs of HCN opportunistic behavior, hence, an MNC parent will probably consider hiring HCN subsidiary managers as more risky when it perceives high host-country corruption.

Corruption is implicit and uncodified in nature. Coping with corruption, thus, requires some country-specific knowledge and contacts, and is somewhat discriminatory against foreigners (Zaheer, 1995). As the level of host-country corruption increases, MNCs have to deal with an even more uncodified and ambiguous host-country context. As a reaction, the value of HCNs from the viewpoint of an MNC parent increases (benefit function): By hiring HCN subsidiary managers, MNCs can acquire contacts as well as specialized knowledge about the functioning of corruption in the host country. Again, it is important to stress that the benefits of HCNs are very broad and not solely linked to participating in corruption. However, such a possibility would increase the benefits of HCNs, while fully maintaining our trade-off argument on the

cost side. Thus, we expect that the proportion of HCNs increases with the level of host-country corruption (as illustrated in the benefit function in Figure 1).

In line with our Trojan horse argument, however, there are also potential costs associated with HCN subsidiary managers in corrupt host countries. According to Granovetter (1978) and Granovetter and Soong (1983), widely accepted social behavior is likely to be reproduced by other individuals and institutions. Similarly, Spencer and Gomez (2011, p. 282) note: *"When managers perceive that a corrupt practice […] has become institutionalized in a society, they are more likely to conform to those societal expectations to obtain legitimacy."* Thus, the higher the level of host-country corruption, the more likely an MNC parent will expect HCNs to engage in corrupt behavior too. Moreover, due to their social contacts, HCNs are perceived as being more easily able to identify counterparties to misappropriate value from the MNC. Corrupt practices that can be used to the detriment of an MNC will probably influence subsidiary staffing decisions by means of perceived costs of HCNs.

As stated by Granovetter (1985, p. 491), *"in the business world, certain crimes, such as embezzling, are simply impossible for those who have not built up relationships of trust that permit the opportunity to manipulate accounts."* In general, being socio-economically embedded and emotionally attached to the host-county context, HCN managers may be perceived as more likely to trade-off MNC for other interests. Finally, HCNs knowledge of host-country practices potentially allows them to collude with external parties more easily. In sum, under high levels of corruption, otherwise valuable local allies may be, or at least may be perceived by MNC parent managers, as Trojan horses, or conduits of collusion. Thus, the potential Trojan horse problem associated with HCN subsidiary managers becomes more pressing with increasing levels of corruption (Figure 1). It is not a necessary precondition for the shape of the net effect, but we propose that the perceived cost of HCN managers are likely increasing with the proportion of HCNs, resulting in a concave cost function (illustrated in

Figure 1). A single HCN manager may have the knowledge and contact to abuse his or her position, but is constrained by non-HCNs' monitoring. As the proportion of HCNs increases, monitoring becomes more difficult from the viewpoint of the MNC parent. In the worst case, HCNs collude and the MNC fears a subsidiary culture of opportunism.

This illustrates the trade-off between HCNs' potential roles as local allies and Trojan horses that MNCs face in subsidiary management staffing. According to Haans et al. (2015), such a strategic trade-off resembles a higher-order net effect. More specifically, the cost function is subtracted from the benefit function to arrive at the net effect of HCN managers (illustrated in row one in Figure 1). Combining the two mechanisms suggests that the proportion of HCN subsidiary managers exhibits an inverted u-shape or concave net effect with regard to the level of host-country corruption (Haans et al., 2015). This indicates that the marginal benefit of additional HCNs' knowledge and social capital is at some point outweighed by their risks of collusive behavior as perceived by the MNC parent (Benito et al., 2005; Shin et al., 2016; Tan and Mahoney, 2006). Accordingly, we hypothesize:

> H1: The relationship between the proportion of HCN subsidiary managers and corruption in the host country is inversely u-shaped.

Cost of HCNs and MNC familiarity with host-country corruption

An MNC's assessment and perception of HCNs' costs also depends on the MNC's familiarity with the host-country environment, and the degree to which it is capable of monitoring HCNs (Colakoglu and Caligiuri, 2008; Gong, 2003a; Tomassen et al., 2012). Previous literature has frequently operationalized familiarity by using measures of cultural distance between MNC home and host countries (Bae and Salomon, 2010; Berry et al., 2010). While cultural distance proxies an MNC's ability to interpret and understand local norms, distance in levels of corruption offers a more direct operationalization of ability to prevent opportunistic behavior.

There is no theoretical argument that the broad benefits HCNs will turn negative with decreasing familiarity. Rather, extant literature suggests that it might actually boost the value of locally knowledgeable managers, when the MNC lacks host-country knowledge about corruption (Shin et al., 2016). Hence, we continue to hypothesize a positive benefit function of HCNs with increasing levels of unfamiliarity. Familiarity with the host-country level of corruption, however, clearly affects the cost function of HCNs (Benito et al., 2005). When MNC home- and host-country contexts are similar, the MNC parent can more easily monitor HCN subsidiary managers. This reduces the MNC parent's perceived costs of HCNs (Benito et al., 2005). As familiarity decreases, monitoring becomes more difficult: This in turn results in an increase in the perceived costs of HCNs (illustrated in Figure 1). Again, it is not a necessary assumption, but we propose that the costs associated with HCNs marginally increase with unfamiliarity of the MNC, which leads to a convex cost function (as also argued by Shin et al., 2016). This is, because monitoring becomes more difficult with higher distance and an increasing proportion of HCNs.

Following the same linear addition of the cost and benefit functions as before, we thus hypothesize an inversely u-shaped net effect between corruption distance and HCN subsidiary managers (as illustrated in the second row of Figure 1). Accordingly, we hypothesize:

H2: The relationship between the proportion of HCN subsidiary managers and corruption distance is inversely u-shaped.

Cost of HCNs and MNC legal protection

Internal monitoring is not the only means to prevent opportunistic behavior of HCNs. Rather, host countries themselves can offer legal institutions to protect MNCs from opportunistic behavior. Again, there is no theoretical argument suggesting that the manifold potential benefits of HCN managers will cease or even turn negative, when legal protection is in place. The benefit function of HCNs remains essentially untouched. HCN still provide benefits of superior

responsiveness to local customers and politics, higher legitimacy and knowledge to the intricate local context, irrespective of the legal frameworks that protect MNCs.

On the cost side, however, codified and enforced laws can protect MNCs against Trojan horse costs and therefore affect perceptions of MNCs. Qi et al. (2010), for instance, show that legal institutions can reduce problems associated with corruption and expropriation. If non-discriminatory legal protection is in place and executed by appropriate bodies in a host country, MNCs are ex-ante protected from illicit behavior. Furthermore, MNCs can resort to laws ex-post to recover misappropriated value. Famously, Granovetter (1985, p. 489) describes the effect of institutions on illicit behavior as follows: *"Malfeasance is […] seen to be averted because clever institutional arrangements make it too costly."* This suggests that formalized laws directly influence the perceived cost of HCNs. However, in his observation Granovetter (1985) is rather unspecific about the types of institutions. We draw on fine-grained institutional dimensions, namely institutions that protect MNCs from opportunistic behavior. More specifically, we follow Acemoglu and Johnson (2005), who distinguish between contracting and property rights institutions.

Contracting institutions govern exchange relationships between private parties. They refer to the cost and formalities involved in *"contract enforcement when the defendant has no justification and avoids payment"* (Acemoglu and Johnson, 2005, p. 951). These institutions are especially important, because they determine whether or not, to what extent, and at what cost the MNC is able to seek legal recourse for illicit behavior. When contracting institutions are efficient, the perceived costs of HCNs are low or even fully eliminated (as illustrated in the cost function in Figure 1).

While contracting institutions relate to the MNC's ability to have legal recourse and reclaim losses accruing from private stakeholders, property rights protect *"against expropriation by the government and powerful elites"* (Acemoglu and Johnson, 2005, p. 949). Similar to contracting

institutions, efficient property rights institutions decrease or fully eliminate the perceived cost of Trojan horses, who may collude with host-country government officials (as illustrated in the cost function in Figure 1).With efficient institutions in place, the cost of Trojan horses weigh less or ideally turn zero.

In both cases, the cost function of HCNs is decreasing or ideally even equal zero. This results in an overall positive net effect of HCNs (as illustrated in the third and fourth rows of Figure 1). In the ideal case, there are theoretical reasons why legal institutions encourage MNCs to hire HCNs, which could lead to a u-shaped net effect of HCNs. In case that an MNC parent perceives reliable legal protection against Trojan horses in a host country, MNCs would base their subsidiary management staffing decision predominantly on the benefits of locally knowledgeable allies. We thus hypothesize:

> H3: When the contracting institutions in a host country provide high protection, the proportion of HCN subsidiary managers is higher.

> H4: When the property right institutions in a host country provide high protection, the proportion of HCN subsidiary managers is higher.

We explicitly do not hypothesize about the presence of a non-linear effect in the case of MNC legal protection. The reason is that unlike corruption, which is implicit and uncodified, formal institutions are codified, explicit and executed by authorities. Hence, they protect MNCs from Trojan horses, essentially cancelling the cost function associated with HCNs, while fully maintaining their benefits (Figure 1). As a result, there is no theoretical reason to expect that costs outweigh benefits at some point of protection, and no theoretical argument for a non-linear effect of formal institutions. Figure 1 summarizes our theoretical model, illustrating cost and benefit functions for HCNs as functions of institutional context and distance.

Figure 1

EMPIRICAL SETTING AND DATA

Dataset

We compiled a dataset of foreign-owned subsidiaries located in developing countries from the Orbis database (Bureau Van Dijk). Developing countries were identified in accordance with the International Monetary Fund's definition (IMF, 2015, p. 151-152). We did not include subsidiaries located in the country of the parent, since domestically-owned subsidiaries are not subject to institutional duality (Kostova and Roth, 2002)[1]. A subsidiary is defined as a company that has a foreign MNC parent (i.e. located in a different country) with a controlling stake (i.e. at least 50% plus one share), more than 5 million USD in reported sales and, at least, 10 employees (for a similar approach see Shin et al., 2016). Consequently, our definition excludes small subsidiaries and 50-50 joint ventures. Only 22% of our observations have ownership shares of less than 90%, and only 12% of them have ownership shares between 60 and 50.1%. The foreign parent company is identified using the same 50% plus one share-rule but includes possible higher-level paths (i.e. when a foreign owner itself is majority-owned, its second-level company is considered as the parent).

Our search yielded 5,398 foreign subsidiaries. Yet, as we had missing values for some of those subsidiaries (e.g. missing manager information), we were left with a full sample of 4,029 subsidiaries (75% of the initial sample) for our analysis. Using t-tests, we found that the subsidiaries in our full sample are on average larger than the originally identified 5,398 subsidiaries (both in terms of sales and number of employees). Thus, our results may be generalizable rather towards larger foreign-owned subsidiaries.

Our subsidiaries are located in 50 different developing countries, exhibiting substantial variance regarding the key institutional factors in our study. Large shares of our subsidiaries are located

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[1] In the absence of institutional duality, the firm is fully familiar with the context (H2), and is not relying on legal protection to an equal extent (H3 and H4).

in Malaysia (24%), Czech Republic (13%), Thailand (13%), and Romania (10%). We checked whether our sample (n = 4,029) differed from the 5,398 originally identified subsidiaries in terms of the distribution across countries. Indeed we found that our sample is biased positively towards Romania, Russia, Malaysia, Thailand, Slovakia, and the Czech Republic, in which a large share of subsidiaries report management data, whereas subsidiaries in China, India, Brazil, Philippines and Morocco underreport.

Studies that examine subsidiary staffing inevitably run into potential biases on both the company and the country level, since reporting of top management varies across companies and countries. Essentially, the empirical trade-off boils down to the simultaneous need to maintain country-level variance of our independent variables (i.e. including a large number of countries), while avoiding countries with possible reporting bias (i.e. including only countries with high coverage). Using the full-sample data inevitably includes companies from countries with low reporting rates, which may induce bias. More conservatively, studies can choose countries with high reporting rates (i.e. low company-level bias), but lower generalizability across countries, for their sample. To address reporting-bias issues, we chose a dual approach. First, we conducted our main analysis with a more conservative sample of countries with low company-level bias (n = 4,000). We defined countries with extensive reporting as those 14 countries, where at least five percent of all foreign-owned subsidiaries, irrespective of size and employment, reported full information on managers (n = 12,350)[2]. Only after using this conservative sample, we run our analysis with the full sample that includes all countries with potentially higher company-level, but lower country-level bias. Tables 1-3 show industry-sector, home- and host-country distributions of our full sample.

Insert Tables 1-3

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[2] We ran further robustness checks, whereby we included only countries, for which we had a minimum of 90% (30 countries), 50% (44 countries) or 30% (47 countries) of firm coverage for our full sample of 4,232 foreign subsidiaries.

Measures

Dependent variable. Our dependent variable is the *proportion of HCNs in subsidiary top management* as of 2015. We derive it from information about top managers and board members in the Orbis database. Our data includes 16,244 top managers and board members. We exclude all staff, whose job description does not include the terms *"executive"*, *"officer"*, *"chair"*, *"head of"*, or *"chief"*. For further analyses, we calculate the same variables separately for top managers and board members. This allows us to capture heterogeneity across potentially different roles of managers.

Independent variables. We use Transparency International (2015) Corruption Perception Index to measure *host-country corruption*. The use of a perceived measure is warranted, because staffing decisions of the foreign parent are most likely to be influenced by their perception of the host country. Yet, the measure is more narrowly focused on public sector corruption and thus does not capture all facets or types of corruption. However, as a publicly available country-level index it is frequently used and arguably instrumental in shaping foreign perceptions of business practices and as a consequence MNC staffing decisions. The index is an inverse measure of corruption between 0 and 100, with Denmark being the least corrupt country in the world (91). We inverted the measure to reflect exposure to corruption, i.e. higher values mean higher corruption. *Corruption distance* is measured as the absolute difference in corruption between the MNC host- and its home-country. A German (2.1) subsidiary in Mexico (4.9), for example, has a corruption distance of 2.8. We use absolute distance, because our theoretical mechanism is related to familiarity with the host-country level of corruption (Berry et al., 2010; Salomon and Wu, 2012). The maximum degree of familiarity is zero distance for an MNC investing in its home-country. Using relative rather than absolute distances would imply that an MNC from a low-corruption country investing into a high-corruption country is more familiar with the level of corruption than HCNs themselves (negative distance).

Regarding formal institutions, we follow Acemoglu and Johnson (2005). More specifically, we use the legal formalism index developed in Djankov et al. (2003) as a measure of *contracting institutions*[3]. We invert the measure so that it reflects ease, or quality of contract enforcement. To capture *property rights institutions*, we use protection against expropriation (Acemoglu and Johnson, 2005). This is based on Polity IV's *"constraint on the executive"*-measure by Marshall and Gurr (2012). The measure is scaled as a quality measure. Both measures are prominently used in political economy (Djankov, La Porta, et al., 2008) and finance literature (Djankov, Hart, et al., 2008; Djankov et al., 2007; Qi et al., 2010), suggesting high reliability and comparability. On the negative side, the data has not been updated recently, and we are forced to accept time inconsistency on these measures[4]. We standardized all institutional variables, in order to allow for a meaningful interpretation of the direct effects of the models including square terms (UCLA, 2016).

Control variables. By nature of our institutional research question, we are faced with multi-level data. We seek to control for characteristics on both the country and company-level following similar research (e.g. Shin et al., 2016) and we run additional robustness checks to account for the hierarchical nature of our data. We control for a wide range of variables on different levels of analysis. With regard to the subsidiary level, we control for *subsidiary profitability* using last year's EBIT scaled by subsidiary assets, because profitable subsidiaries may offer more opportunities for misappropriation of profits. We run robustness checks using three- and ten-year average EBIT and operating profits. Eight subsidiaries had not existed for ten years, so we used maximum available year-observations. Interestingly, subsidiary profitability is positively, but insignificantly correlated with the presence of HCNs. This lends

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[3] Unfortunately, the indices are not available for the year 2015 and we had to resort to the most recent data (i.e. 2003). Such issues can introduce bias, but given the low variation across time in measures of legal institutions, we are confident that such issues do not drive our results across multiple countries.

[4] We do not consider this time inconsistency to drive our results for two reasons. First, legal institutions develop rather slowly with little year-to-year variation. Second, staffing decisions are unlikely driven by single-year changes, but rather by long-term trends. Finally, there is a general trend towards improving legal institutions. Hence, identifying significant country-level effects, while using current staffing data, is likely to be more conservative.

support to our core argument that average benefits of HCNs may be positive overall, but conditional on the institutional context. On the level of the subsidiary, we also control for the *size of the management team* in terms of the total number of managers.

We control for *subsidiary size* in terms of sales (assets and employees as alternative measures for robustness checks) (Boyacigiller, 1990), and *subsidiary industry* using NACE 2 classifications. We control for *subsidiary age*, as the use of HCNs was shown to decrease over time (Boyacigiller, 1990; Collings et al., 2008; Lynall et al., 2003; Shin et al., 2016). Moreover, we add subsidiary's extent of *debt financing*, because it determines both the degree of external monitoring by banks (Chung et al., 2005; Datta et al., 1999), and the availability of free cash flows for managers to misappropriate funds (Jensen, 1989). It is possible that subsidiary staffing decisions depend on the distribution of the residual ownership structure of the subsidiary. In subsidiaries with more dispersed minority shares, possibly across shareholders in the host country, staffing may be different from subsidiaries with a single strong minority shareholder. Research also found a relationship between staffing and firm ownership (Oxelheim et al., 2013). Therefore, we include the *number of shareholders* of the subsidiary as a measure of shareholder concentration, and the direct ownership share of the parent. While caution needs to be applied to this variable since large publicly owned companies commonly only provide estimates of the number of shareholders, it is well suited to distinguish subsidiaries with highly dispersed from those with highly concentrated residual ownership.

Moreover, we control for MNC parent-level factors, namely the overall *number of subsidiaries in the MNC* (i.e. the number of recorded subsidiaries with the same MNC parent) as an indicator of MNC internationalization experience. We also include a MNC size measure of *total assets* (employees as an alternative measure) in our robustness checks. Furthermore, we obtain the *number of shareholders* of the parent to control for potential differences in subsidiary staffing between MNCs with highly dispersed public ownership, and MNCs with lean ownership

structures and dominant owners (Boyacigiller, 1990). Finally and quite conservatively, we include a measure of *geographic distance* between the MNC parent and the subsidiary to account for difficulties that MNCs may have in monitoring the subsidiary. As geographic distance is not independent from our independent variables, it may capture some of the hypothesized country-level differences (Brouthers et al., 2016). We run robustness checks with measures of cultural distance (Berry et al., 2010).

One key issue in subsidiary staffing is staffing culture or strategy. We try to capture MNC-specific staffing culture. For that purpose, we have extracted data on all reported subsidiaries of the same MNC parent from the Orbis database. We then calculated the *average proportion of HCNs* across these subsidiaries. This variable allows us to analyze staffing in our subsidiaries compared to an MNC's average subsidiary staffing culture. The variable proxies MNC-level staffing culture, and stands in marked contrast to proxies of national culture that *"implicitly assume lack of corporate culture variance"* (Shenkar, 2001, p. 524). In theory, corporate culture is superior to measures of national culture, because it accounts for possible firm-level heterogeneity. Nevertheless, we test for robustness including cultural distance and home-country fixed effects.

On the host-country level, we control for several other aspects. First, we control for the availability of qualified HCNs in the host-country context, using the share of a country's population with *tertiary education* from the UN World Development Indicator (2014 or most recent). We include each host country's average ten-year *GDP growth* from the UN World Development Indicators to capture growth options. In addition, and following Acemoglu and Johnson (2005), we control for the origin of the *host-country legal system*. We differentiate between English, French, or German host-country legal traditions, as the legal context might have an effect on staffing. Tables 4-6 show descriptive statistics, pairwise correlations and variable descriptions.

ANALYSIS AND RESULTS

To account for the truncation of our dependent variable as a proportional measure between zero and one, we run heteroskedastic fractional response models (GLM) with a probit link and robust standard errors (Williams, 2016; Wooldridge, 2011). Our dependent variable in the fractional response model is the percentage of HCN subsidiary managers. The coefficients in our models can be interpreted as percentage increases or decreases. Because of naturally high correlations, we include institutional variables in a stepwise manner, before we run a full model. For our hypothesized curvilinear effects, we follow the empirical standards published by Haans et al. (2015).

Table 7 illustrates the stepwise models for our conservative, reduced sample of 4,000 subsidiaries. Due to missing information on subsidiary age and profitability, we lose 686 observations. Model 1 shows that host-country corruption is significantly associated with a higher proportion of HCNs. A one standard deviation increase in host-country corruption, which is roughly equivalent to a move from Czech Republic to India, is associated with an increase in HCN subsidiary managers of 45%. This supports our argument of local allies, i.e. HCNs provide important knowledge and contacts that are necessary to conduct business in host countries characterized by high corruption. However, and in line with our arguments, due to the non-linearity of the effect such an interpretation is grossly overgeneralizing. In Model 2, we add the squared term of host-country corruption to test if the benefits of HCNs are outweighed at some point by perceived costs. We find evidence for an inverted u-shape or concave relationship between host-country corruption and the proportion of HCNs (p = 0.000). This supports our Hypothesis 1. MNCs in our sample appoint up to 80% of HCNs in countries with medium corruption, but this share decreases to only 20% in countries with high corruption perception. We use an incremental Wald test to check for improvement of fit. The F-Test of

36.19 (p = 0.000) indicates that the quadratic term significantly improves model fit. The inversely u-shaped effect clearly illustrates the importance of modelling the net effect of HCNs as a trade-off: Focusing on the benefits only, while omitting potential costs, leads to an overestimation of the benefits of HCNs, which in the worst case can be potentially negative in countries with very high corruption. Also, it illustrates that estimating an average benefit of HCNs leads to a false generalization in that it is assumed that these benefits apply throughout the whole variation of institutional contexts, irrespective of the scale of corruption.

Insert Table 7

In Model 3, we add corruption distance as a measure of MNC familiarity, i.e. the absolute distance in corruption between MNC home and host country. Our results strongly support the notion that higher distance or unfamiliarity in terms of corruption between the MNC parent location and a host country increases the benefit of host-country knowledge, and in turn the proportion of HCNs (p < 0.000). A one standard deviation increase in corruption distance is associated with an increase of 14% HCNs. Again, this linear effect makes a crucial omission, assuming that the effect is linear and applies to all degrees of familiarity, irrespective of potential monitoring problems. Therefore, we include the quadratic term of corruption distance in Model 4 to check if costs outweigh benefits at some point. We find very strong support for our Hypothesis 2 and the inversely u-shaped relationship (p < 0.000). Again, we ran an incremental Wald test, to see whether the polynomial term of corruption distance improves model fit. The F-score is 21.89 (p < 0.000), indicating a significant improvement in fit, which strongly supports the presence of the inverse u-shape relationship between corruption distance and the proportion of HCNs. Both results on the squared term attest that the benefits of HCNs are not linear, as often hypothesized. Rather, their benefits are outweighed by potential costs in the presence of high corruption or low familiarity.

In Models 5 and 6, we add contracting and property rights institutions respectively, as our measures of MNC protection. There is no data available for Slovakia, Slovenia, Estonia and Lithuania, which reduces our sample to 3,114 subsidiaries. Our results support Hypothesis 3, i.e. that MNCs appoint more HCNs when there are well-functioning contracting institutions in place ($p < 0.000$). A one standard deviation increase in host-country contracting institutions is associated with a 69% increase in HCNs. In Model 6, we add the measure of host-country property rights as an indicator of protection from government expropriation. Consistent with Hypothesis 4, we find that MNCs increase the use of HCNs in the presence of well-functioning, strong property rights ($p < 0.000$). The effect is slightly lower than for contracting institutions with a 56% increase. Our data allows us to rule out non-linear effects empirically, providing support for our argument that legal institutions reduce Trojan horse costs. Indeed, the Wald Test does not indicate a u-shape. In the case of property rights, we even found an increasing marginal proportion of HCNs ($p = 0.0288$), suggesting that such institutions can actually boost the benefits of HCNs.

Finally, in Model 7 we include all institutional measures jointly. The results mirror our results of the stepwise regressions, though with some variation in coefficient sizes and significances. In particular, we find strong support for Hypotheses 1 and 2, which both acknowledge the cost-benefit trade-off in subsidiary management staffing, and underline the potential Trojan horse problem[5]. Due to the high collinearity between institutional measures, standard errors are inflated, while the parameter estimates in Model 7 are unbiased (Cohen et al., 2013). Hence, Model 7 is conservative in that significances are more difficult to achieve, whereas coefficients are largely unaffected, supporting our hypothesized trade-off. The effect of host-country

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[5] Note that the opposing sign on the direct effect of corruption in Model 7 indicates the slope conditional on corruption = 0, and is formally determined by differentiating the regression equation y = b0 + b1*x + b2*x2 with respect to x (i.e. y' = b1 + 2*b2*x) (UCLA, 2016). Hence, the change in sign does not represent a reversal of the direct effect, but corresponds to a shift in the inverted u-shape from below to slightly above the mean of our standardized measure of corruption (mean = 0). That is due to additional countries in the sample. The concave shape of the effect of corruption is maintained and significant, as evidenced by the squared term in Model 7.

property rights institutions turns negative and insignificant in Model 7. The effect of host-country contracting institutions is insignificant, but positive. Given inflated standard errors in Model 7, the lack of significance does not necessarily falsify a positive effect.

We further conduct tests on the shape of the non-linear relationships, following Haans et al. (2015). First, we calculate the turning points for the inverted u-shapes by setting the first derivative zero (Haans et al., 2015). The turning point for our host-country corruption measure derived from the fully specified Model 7 is -0.33. This is well within our span of observations (-3.38 and 1.58 standard deviations). The turning point for the u-shape on corruption distance is at 2.65, and positioned quite centrally in relation to our scope of observations (1.07 to 5.30). We plot the inverted u-shapes, holding other variables at sample means in Figures 2 and 3. Plots for the hypothesized effects of MNC protection are positive and linear with very low variation across our independent variables, which is why we do not include their plots.

Insert Figures 2 & 3

There are additional interesting observations from some control variables, especially on the subsidiary and the MNC level. In line with past research, older subsidiaries have significantly more HCNs (Boyacigiller, 1990; Collings et al., 2008; Gong, 2003b; Lynall et al., 2003; Shin et al., 2016). Geographic distance is associated with fewer HCNs, which indicates possible monitoring problems in host countries that are geographically distant from MNC parents. Subsidiaries with large numbers of shareholders have higher proportions of HCNs. This is consistent with our expectation as dispersed ownership of the residual minority share will likely involve local shareholders, which require a signal of legitimacy and encourage local hiring. As expected, MNCs with a culture of hiring HCNs on average use more HCNs in our sample subsidiaries. MNCs that are generally more internationalized and experienced tend to use more HCNs, too. Furthermore, a higher level of people with tertiary education in the host country is

associated with a higher proportion of HCNs. Overall the results on our control variables give us strong confidence in the accuracy of our models.

ROBUSTNESS CHECKS

We run a series of robustness checks to scrutinize our findings. The most pressing, but unfortunately inevitable, concern in our study relates to country-level sampling bias. To test if individual countries in our analysis drive our results, we checked for robustness, using the full sample (n = 4,816). Host-country corruption and the proportion of HCNs exhibit a significant inverted u-shaped relationship in the separate model (p = 0.025). This lends support to our Hypothesis 1, i.e. that the knowledge benefit of HCNs is at some point outweighed or at least reduced by the perceived increasing risk of collusive behavior (Trojan horses) in host countries with high corruption. However, the turning point for the inverted u-shape is close to the upper boundary of our realm of observations at 1.5 (-4 to 2) (Haans et al., 2015). Again, the incremental Wald test shows that adding the squared term of corruption significantly improves model fit (F =21.90; p = 0.000). The squared term of corruption distance is also significant (Wald test: F = 17.88; p = 0.000). The turning point of the inverse u-shape is 3.53 and within our scope of observations. Hence, MNCs are more hesitant to appoint HCNs in a context of high corruption distance (H2).

In addition, we run robustness checks using only countries with at least ten observations in our sample, and countries for which we have at least 90%, 50% and 30% of observations (as compared to our full sample of 4,323 subsidiaries). We obtain qualitatively similar results. Both the inverted u-shapes on host-country corruption and corruption distance are significant throughout all sample specifications. However, the turning point for host-country corruption is at times beyond our scope of observations. This suggests that the Trojan horse problem may be more severe under conditions of corruption distance than host-country corruption. We also include host-country clustered standard errors with little change in results (the squared term for

corruption distance is significant at only at p = 0.06). Another sampling issue is whether our minimum size requirements for subsidiaries, i.e. focusing on subsidiaries with minimum 10 employees and 20 million USD in sales, drive our results. We run sensitivity analyses using thresholds of 50, 100 and 200 employees and 20, 30 and 50 million USD in sales, but our results do not change.

Second, there may be differences in staffing decisions between up- and downstream investments (i.e. subsidiaries where an MNC parent's home-country corruption is higher/lower than subsidiary host-country corruption). For example, upstream investors may be less risk-averse, hiring more HCNs. By nature of our sample of developing market subsidiaries, the majority of MNC investments are downstream. To address potential bias, we use a subsample of downstream subsidiaries only. We find support for all our hypotheses. The sample of upstream investments (n = 341) is too small for a separate analysis. Hence, we concede that our results may be not generalizable to upstream investments.

Third, a number of MNC-level control variables deserve further attention: As our measures of MNC parent internationalization exhibits high t-statistics throughout all specifications, the question is if biases in these variables drive our results. To address this issue, we run robustness checks using MNC parent assets and employees as alternative measures of size. Our results are robust, although the inverted u-shape for host-country corruption (H1) is of slightly weaker significance (p < .1). Similarly, scaling of subsidiary EBIT with assets may affect our results. We run the specifications using subsidiary EBIT and subsidiary assets separately without changes in results. Subsidiary profitability measured as last year's EBIT can potentially introduce biases because of earnings management and high EBIT volatility in general. We run robustness checks using three- and ten-year averages, as well as last year's operating profit as robustness checks, without changes in our coefficients of interest.

Fourth, one concern regards potential home-country culture effects on subsidiary staffing. In our main specification we preferred using an MNC-specific measure of staffing culture rather than a home-country-level proxy. Thus, we included home-country fixed effects to control for MNC home-country. Also with these specifications, we find support for our hypotheses. Also, we include cultural distance measure from Berry et al. (2010) without changes in results, and run an exploratory analysis using Hofstede's (1994) cultural dimensions (updated in 2010).

Fifth, staffing may be related to the status of the subsidiary within the MNC and the relationship between the MNC parent and the subsidiary in terms of vertical or horizontal integration (Colakoglu et al., 2009). We lack details on the strategic roles of subsidiaries. Yet, we attempt to check for bias due to subsidiary roles by including a dummy variable based on sector similarity of the NACE 2 industry codes of the MNC parent and its subsidiary (for a similar approach see Shin et al., 2016). We run additional tests including the listing status of subsidiaries in their host countries. We also run robustness tests with clustered standard errors on the MNC parent-level. Throughout, our results are qualitatively identical.

Sixth, a variable of major theoretical importance in subsidiary staffing is direct ownership share of the parent. To test for bias resulting from variation in ownership, we dummy-code subsidiaries with less than 60% parent ownership. We also run two robustness checks by including only subsidiaries with more than 90% parent ownership. These specifications are more conservative than specifications in comparable studies, which use cut-off points of 80% (Dhanaraj and Beamish, 2004; Shin et al., 2016). Our results hold across all specifications.

Finally, an important question relates to the role, services or positions of managers included in our sample. In the construction of our dependent variable, we intentionally included both board members and top managers to achieve more generalizability in terms of subsidiary management staffing strategies. To address potential differences between board members and top managers, we run robustness checks using two separate dependent variables. The results are in line with

our hypotheses, despite smaller samples. Moreover, using two separate dependent variables also shows some interesting differences in effects: It appears that the inverse u-shape of host-country corruption (H1) is more closely related to board staffing, while top management appointment is very strongly related to the inverse u-shape of corruption distance (i.e. familiarity with the host-country context) (H2). Because of a combination of smaller sample size and differences in the prevalence of subsidiary boards and/or top management teams across countries, these results must be interpreted with caution. Preliminary analysis shows that boards are more common in lower corruption host countries. As a natural consequence, the inverse u-shape on board member staffing is truncated. This results in a consistent, but insignificant coefficient for the inverse u-shape on host-country corruption (H1). We do not find evidence for an inversely u-shaped relationship on corruption distance (H2) for board members, but strong support for such a trade-off for top managers. Regarding the benefits of contracting institutions (H3) and property rights (H4), results are largely consistent across the two groups with the exception of an insignificant effect of contracting institutions on HCN board members.

DISCUSSION

Our study analyzes the use of HCN subsidiary managers. Most international business research portrays HCNs as beneficial, as they can provide access to local knowledge, superior responsiveness to the host-country environment, signal commitment to markets, and increase MNCs' legitimacy. Surprisingly, data on subsidiary managers suggests that MNCs do not take full advantage of these potentials. A more intriguing interpretation could be, however, that international business research is missing an important cost element that leads MNCs to willingly forgo the benefits of HCN managers. In our paper, we introduce the perceived cost of opportunistic behavior as one such explanation.

Drawing on institutional theory (Kostova and Roth, 2002; Kostova et al., 2008) and seminal works of Granovetter (1978, 1985), we acknowledge that HCNs have both increased

opportunities and superior incentives to abuse their position. Such potential costs and benefits affect subsidiary staffing by foreign MNCs. Accordingly, staffing of subsidiaries with HCN managers needs to be theorized and modelled as a trade-off, accounting for both benefits and costs (Blomqvist et al., 2002; Shin et al., 2016). Hence, our first contribution strongly resonates with calls for addressing trade-offs rather than unidirectional average effects in strategic management research, e.g. in studying foreign market entries and acknowledging both benefits and costs (Alcácer et al., 2013; Haans et al., 2015).

We extend research on subsidiary management staffing in at least two important ways. First, theorizing about subsidiary staffing has predominantly focused on the benefits of HCNs, while omitting potential costs both theoretically and empirically. This omission is evident in the comparison of Models 1 and 2 in our analysis. When modelling subsidiary staffing only as a function of corruption, the benefit of HCN managers is overestimated. More importantly, it is implicitly assumed that this average benefit applies to all institutional settings, irrespective of the extent of corruption and the potential costs resulting thereof. Only when acknowledging potential costs and modelling a non-linear term of corruption, it becomes evident that MNCs refrain from hiring HCNs in contexts of high corruption.

As a second contribution of our study, we link the cost associated with HCNs to the host-country institutional setting. By analyzing institutional boundary conditions of the trade-off between benefits and cost of HCNs, our research adds to subsidiary staffing literature from an institutional perspective. We show that the real or perceived threat of Trojan horses is most severe, when corruption is pervasive in the host country. As corruption increases, HCNs' knowledge benefits are outweighed by Trojan horse cost at some point and their net effect turns negative. Similarly, the cost of HCNs relate to an MNC's familiarity with the level of corruption in a host country, as shown in previous research (Baik and Park, 2015; Gaur et al., 2007; Shin et al., 2016). MNCs refrain from appointing HCNs, when the corruption distance between MNC

home and host country exceeds a certain point, at which the MNC can no longer efficiently monitor HCN managers' behavior.

Moreover, the costs associated with HCNs are affected by legal protection of the MNC in the host country. Contracting institutions, in particular, protect MNCs from misappropriation of value, and provide means of recovering misappropriated value. From our results in the full model, it appears that property rights (i.e. protection from government opportunism) have less of an effect on subsidiary staffing with HCNs. However, this result could be due to multicollinearity between the two measures of legal protection. In sum, MNCs benefit from the protection by legal institutions by reaping the benefits of HCNs as knowledgeable allies, while limiting the potential costs of illicit behavior, i.e. Trojan horse cost.

We also gain some interesting insights into differences between subsidiary boards and top management. Our results are preliminary only, and further research requires proper theorizing on the differences between the two sub-groups. Yet, our results indicate that our hypothesized trade-off holds for boards, but MNCs seem to be generally more hesitant to install subsidiary boards in high-corruption countries. Furthermore, institutional distance appears to be more closely associated with fewer HCN top managers. This possibly indicates that monitoring top managers is more of a concern to MNCs than monitoring board members. Results on MNC legal protection are consistently positive for both board members and top managers. We interpret this as an indication that formal protection of MNCs equally applies to both board members and top management.

Our results also offer important managerial and policy insights: To capitalize on HCNs' knowledge benefits, MNCs should anticipate loopholes for opportunistic behavior, and assess options to monitor managers (familiarity). Formal legal host-country institutions can substitute for MNC monitoring, if they provide reliable protection of MNCs. Furthermore, MNCs may choose to staff their subsidiaries with non-HCN managers as a buffering strategy against host-

country opportunism (Dieleman and Boddewyn, 2012). Following our trade-off model, however, MNCs that use expatriates to avoid the cost of HCNs also forego their potential benefits. Accordingly, our finding must not be mistaken for a recommendation to MNCs to refrain from hiring HCNs, but rather an ultima ratio: Ideally, MNCs should devise strategies to address potential costs of HCNs, while maintaining their benefits.

Organizational research and research on subsidiary autonomy have offered some helpful insights in that respect, e.g. relating to the role of governance, incentives, reporting and performance evaluation (Foss et al., 2012; Gong, 2003a; Kim et al., 2005; Kostova et al., 2016; Mezias and Mezias, 2010). In addition, expatriate literature has provided hints for organizational practices to address information asymmetry and decrease Trojan horse cost on a micro level, e.g. short-term or virtual expatriate assignments (Collings et al., 2007; Shin et al., 2016). On a macro level, our study suggests that policymakers in developing countries can potentially support the employment of HCNs in foreign MNCs' subsidiaries by establishing formal legal institutions to protect MNCs. Such measures can serve as an impetus to upgrading HCN human capital in the long run. Corruption, by contrast, may increase the immediate need for HCNs in MNC subsidiaries, but this effect is likely to fade as MNCs perceive HCNs as too risky.

There are a number of limitations to our study, which point to further avenues of research. First, as with all cross-country subsidiary staffing research, our data is potentially biased on a country and company level. Despite elaborate robustness checks, future research should scrutinize our findings in a more balanced sample of companies, ideally using panel data.

Second, the two mechanisms proposed in our framework, namely benefits and cost of HCNs, cannot be measured directly. They are rather theoretically supported functions of observed subsidiary staffing policies (for a similar approach see Shin et al., 2016, p. 25). Hence, there is no empirical evidence of any wrongdoing on part of HCNs. We encourage further research to

address potential differences between perceived and actual costs of HCNs in a qualitative way. Third, we attempt to explain variation of the cost of HCNs using a perceptional country-level measure of corruption. Future research should develop more direct, fine grained measures of corruption that account for within country variation. Also, our measure focuses on public-sector corruption and may not fully capture private-sector norms in a country. Disentangling the effects of different types of corruption and developing better measures, we believe, would be a rewarding endeavor for future institutional research.

Fourth, our theory and analysis was based on MNC subsidiary staffing decisions in the presence of institutional duality. Institutional duality creates both the need to buy into local knowledge and dare the potential costs associated with HCNs (as hypothesized in H1 to H4). Future research could address Trojan horse issues in a domestic context. It is, for example, conceivable that an MNC in a corrupt country may seek to avoid the cost associated with domestic managers by hiring foreign managers, thus completely foregoing knowledge benefits of domestic managers. Moreover, despite our efforts to control for company-level characteristics, further research should look into company-level strategies to counter Trojan horse problems and extend our discussion on possible company-level variation. The tasks of HCN managers (i.e. R&D, Finance & Accounting, Supervisory role), in particular, could be a valuable extension to our analysis. However, such analysis would, most likely require a larger sample of firms.

Fifth, our study highlights some potential MNC-level boundary conditions of the Trojan horse problem. Though not in the focus of our analysis, we found experience-related variables (number of foreign subsidiaries and age) to be strongly related to the use of HCNs. We attribute this to MNC-specific learning capabilities, as MNCs' perceived risk of Trojan horses is reduced as they learn over time. This adds an interesting extension to our study, implying that the home-country context is not the only valuable source of learning. Rather, MNCs can learn from their international operations and transfer experiences to other corrupt markets.

Finally, with our sample of more than 16,000 subsidiary managers and in line with other large-sample studies (Shin et al., 2016), we are inevitably unable to control for some individual-level characteristics (e.g. the impact of language competence, personal traits, trustworthiness, shared vision, spousal context, manager experience and local social network) that may affect hiring of HCNs on a micro level. Such questions call for more fine-grained, qualitative studies on individual manager characteristics.

Overall, our study challenges the notion that HCNs are superior to MNC home-country managers, by acknowledging the potential costs associated with HCNs' knowledge and embeddedness. We find compelling support that the host-country institutional context is an important boundary condition to the potential costs and benefits related to HCN subsidiary managers. In particular, we find that corruption and corruption distance lead to decreasing and potentially negative marginal benefits of HCNs. This is in line with our hypothesized argument that HCNs can pose an inherent threat of being Trojan horses.

Figure 1: Cost and benefit functions of HCN managers as a function of host-country institutions

Illustration based on Haans et al. (2015)

Illustration based on Haans et al. (2015)
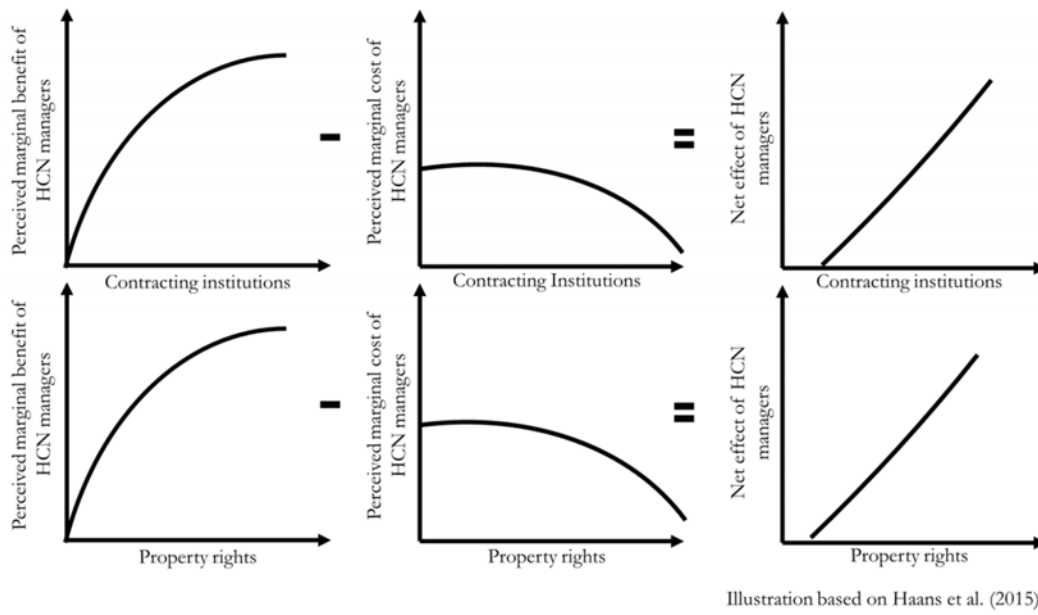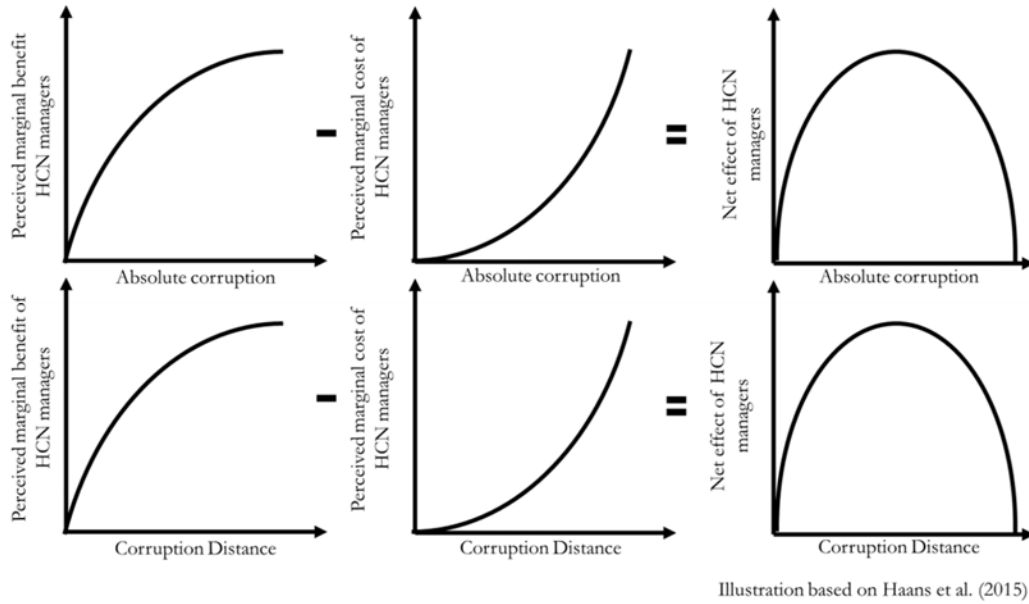
Table 1: Sector distribution in the full sample

Sectors	Freq.	Percent	Cum.
Wholesale & retail trade	834	20.7	20.7
Other services	780	19.36	40.06
Machinery & equipment	769	19.09	59.15
Other	424	10.52	69.67
Chemicals, rubber, plastics	407	10.1	79.77
Metals & metal products	171	4.24	84.01
Construction	123	3.05	87.06
Food, beverages, tobacco	113	2.8	89.86
Transport	82	2.04	91.9
Gas, water, electricity	66	1.64	93.54
Primary sector	60	1.49	95.03
Post & communication	44	1.09	96.12
Wood, cork & paper	42	1.04	97.16
Publishing, printing	36	0.89	98.05
Textiles, wearing & apparel	36	0.89	98.94
Hotels & restaurants	22	0.55	99.49
Banks	10	0.25	99.74
Education, health	6	0.15	99.89
Public administration	4	0.1	99.99
Total	4,029	100.00	

Table 2: Host-country distribution in the full sample

Host-country	Freq.	Percent	Cum.
*Malaysia	950	23.58	23.58
*Czech Republic	532	13.2	36.78
*Thailand	524	13.01	49.79
*Romania	387	9.61	59.4
*Poland	314	7.79	67.19
*Russian Federation	291	7.22	74.41
*Slovakia	211	5.24	79.65
China	207	5.14	84.79
*Bulgaria	83	2.06	86.85
*Hungary	79	1.96	88.81
*India	69	1.71	90.52
Viet Nam	67	1.66	92.18
South Africa	55	1.37	93.55
Greece	36	0.89	94.44
Chile	35	0.87	95.31
Algeria	29	0.72	96.03
Latvia	20	0.5	96.53
*Lithuania	15	0.37	96.9
Malta	13	0.32	97.22
*Ecuador	11	0.27	97.49
Bosnia and Herzegovina	9	0.22	97.71
*Estonia	9	0.22	97.93
Moldova, Republic of	9	0.22	98.15
Indonesia	8	0.2	98.35
Egypt	7	0.17	98.52
Brazil	6	0.15	98.67
Colombia	6	0.15	98.82
Mexico	6	0.15	98.97
*Slovenia	5	0.12	99.09
Argentina	4	0.1	99.19
Ghana	4	0.1	99.29
Philippines	3	0.07	99.36
Cote d'Ivoire	2	0.05	99.41
Jamaica	2	0.05	99.46
Lebanon	2	0.05	99.51
Mozambique	2	0.05	99.56
Nigeria	2	0.05	99.61
Paraguay	2	0.05	99.66
Trinidad and Tobago	2	0.05	99.71
Bahrain	1	0.02	99.73
Barbados	1	0.02	99.75
Cape Verde	1	0.02	99.77
Cyprus	1	0.02	99.79
Guyana	1	0.02	99.81
Morocco	1	0.02	99.83
Namibia	1	0.02	99.85
Pakistan	1	0.02	99.87
Peru	1	0.02	99.89
Saudi Arabia	1	0.02	99.91
Ukraine	1	0.02	99.93
Total	4,029	100	

* Countries with higher company-level reporting of managers included in the reduced sample. To address potential country-level bias, we run robustness checks with the full sample, with a minimum of 10 observations per country, with 80, 50 and 30% non-missing management data.

Table 3: Home-country distribution in the full sample

Home-country	Freq.	Percent	Cum.
Japan	903	22.41	40.43
United States	726	18.02	51.5
Germany	446	11.07	58.5
United Kingdom	282	7	64.68
France	249	6.18	69.67
Singapore	201	4.99	74.24
Switzerland	184	4.57	77.02
Sweden	112	2.78	79.68
Netherlands	107	2.66	82.29
Austria	105	2.61	84.65
Finland	95	2.36	86.78
Belgium	86	2.13	88.82
Denmark	82	2.04	90.41
Ireland	64	1.59	91.97
Australia	63	1.56	93.34
Luxembourg	55	1.37	94.63
Italy	52	1.29	95.87
Korea, Republic of	50	1.24	96.99
Spain	45	1.12	97.66
Norway	27	0.67	98.21
Canada	22	0.55	98.76
Israel	22	0.55	99.13
Portugal	15	0.37	99.25
China	5	0.12	99.37
Malaysia	5	0.12	99.47
Mexico	4	0.1	99.57
New Zealand	4	0.1	99.64
Indonesia	3	0.07	99.71
Taiwan, Province of China	3	0.07	99.76
United Arab Emirates	2	0.05	99.81
Cyprus	2	0.05	99.83
Egypt	1	0.02	99.85
Hungary	1	0.02	99.87
India	1	0.02	99.89
Iceland	1	0.02	99.91
Jordan	1	0.02	99.93
Kuwait	1	0.02	99.95
Philippines	1	0.02	99.97
Poland	1	0.02	99.99
Total	4,029	100	

Table 4: Descriptive Statistics full sample

Variable	Obs.	Mean	Std.Dev.	Min	Max
(1) Proportion of HCN subsidiary managers	4,029	0.58	0.42	0.00	1.00
(2) HC corruption	4,029	-0.26	0.83	-3.85	1.58
(3) Corruption distance	4,029	0.98	0.83	0.03	6.93
(4) HC contracting institutions	3,797	0.45	1.03	-2.76	2.66
(5) HC property rights institutions	3,744	0.47	0.72	-2.49	1.73
(6) Ownership share	4,029	87.43	15.28	50.04	100.00
(7) Subsidiary profitability	3,716	0.02	1.93	-87.20	6.81
(8) Subsidiary age	4,029	2.83	0.55	0.00	5.12
(9) Subsidiary size	4,029	9.62	2.27	1.95	18.86
(10) Subsidiary debt	4,029	46.56	32.73	-99.22	100.00
(11) Subsidiary ownership	4,029	1.09	0.39	0.00	4.17
(12) Subsidiary management size	4,029	1.47	0.59	0.69	3.33
(13) Parent ownership	4,029	3.66	1.11	0.00	5.47
(14) Parent avg. local managers	4,029	0.64	0.19	0.00	1.00
(15) Parent internationalization	4,029	5.10	1.42	0.69	8.56
(16) Geographic distance	4,029	8.24	0.98	5.75	9.80
(17) HC tertiary education	4,029	22.34	11.15	0.06	54.00
(18) HC avg. GDP growth	4,029	4.20	2.35	-0.92	11.48
(19) Home-country legal origin (UK)	4,029	0.26	0.44	0.00	1.00
(20) Home-country legal origin (GER)	4,029	0.12	0.33	0.00	1.00
(21) Home-country legal origin (FR)	4,029	0.31	0.46	0.00	1.00

Abbrev: HC = host-country

Table 5: Pairwise Correlations full sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
(1) Proportion of HCN managers	1.00																			
(2) HC corruption	0.09	1.00																		
(3) Corruption distance	-0.01	-0.02	1.00																	
(4) HC contracting institutions	0.36	0.01	-0.17	1.00																
(5) HC property rights institutions	0.20	-0.15	0.06	-0.07	1.00															
(6) Ownership share	-0.03	-0.05	0.03	-0.11	0.10	1.00														
(7) Subsidiary profitability	-0.01	0.01	-0.03	0.00	0.03	0.02	1.00													
(8) Subsidiary age	0.19	-0.03	-0.12	0.28	-0.10	-0.12	-0.12	1.00												
(9) Subsidiary size	-0.04	0.16	-0.07	0.06	-0.18	-0.03	-0.03	0.28	1.00											
(10) Subsidiary debt	0.03	0.01	-0.08	0.06	0.01	-0.08	-0.08	0.21	0.00	1.00										
(11) Subsidiary ownership	0.01	0.11	-0.06	-0.08	-0.06	-0.15	-0.15	0.15	0.13	0.06	1.00									
(12) Subsidiary management size	0.15	-0.20	-0.13	0.31	0.05	-0.03	-0.03	0.21	0.13	0.01	0.07	1.00								
(13) Parent ownership	0.00	0.01	-0.09	0.02	-0.03	-0.02	-0.02	0.04	0.11	0.03	0.03	0.00	1.00							
(14) Parent avg. local managers	0.22	0.03	0.01	0.07	0.05	0.05	0.05	0.05	-0.02	-0.04	0.04	0.01	-0.13	1.00						
(15) Parent internationalization	0.04	0.06	-0.09	-0.10	-0.01	-0.08	-0.08	0.10	0.16	0.01	0.14	0.04	0.45	0.00	1.00					
(16) Geographic distance	0.07	0.19	0.04	0.36	-0.21	-0.20	-0.20	0.13	0.13	0.05	0.04	0.04	0.31	-0.19	0.09	1.00				
(17) HC tertiary education	0.30	0.20	0.28	0.04	0.36	0.07	0.07	-0.10	-0.21	-0.07	-0.09	-0.04	-0.02	0.04	-0.03	0.00	1.00			
(18) HC avg. GDP growth	0.06	-0.09	-0.19	0.66	-0.35	-0.15	-0.15	0.28	0.16	0.10	-0.01	0.12	0.01	0.02	-0.09	0.32	-0.48	1.00		
(19) Home-country legal origin (UK)	0.37	-0.20	-0.13	0.75	0.02	-0.04	-0.04	0.19	-0.05	0.02	-0.12	0.54	-0.02	0.07	-0.12	0.23	0.05	0.51	1.00	
(20) Home-country legal origin (GER)	0.19	0.47	0.35	-0.16	0.04	0.00	0.00	-0.08	-0.04	-0.06	-0.02	-0.21	0.02	0.01	0.05	0.13	0.62	-0.35	-0.22	1.00
(21) Home-country legal origin (FR)	-0.24	-0.39	0.06	-0.49	0.51	0.10	0.10	-0.16	-0.08	-0.01	-0.07	-0.23	-0.01	-0.05	0.00	-0.30	-0.15	-0.22	-0.39	-0.25

Abbrev: HC = host-country

Table 6: Variable description

Dependent Variables

(1) Proportion of HCN subsidiary managers	Proportion of subsidiary managers that are HCNs. Source: Orbis Bureau Van Dijk.

Independent Variables

|	
(2) Host-country corruption	Subsidiary host-country public-sector corruption perception index (CPI score), 2014 or most recent. (Standardized and inverted measure). Source: Transparency International (2015).
(3) Corruption distance	Absolute distance between inverted parent home-country CPI score and inverted host-country CPI score. Source: Transparency International (2015).
(4) Host-country contracting institutions	Legal formalism index constructed by Djankov et al. (2003) and obtained from Acemoglu and Johnson (2005) (Standardized and inverted measure).
(5) Host-country property rights institutions	Protection against expropriation based on Polity IV's constraint on the executive measure provided by Political Risk Services (Acemoglu and Johnson, 2005; Marshall and Gurr, 2012) (Standardized measure).

Controls

|	
(6) Ownership share	Direct ownership of the MNC parent in the subsidiary in percent, mean imputed Source: Orbis Bureau Van Dijk.
(7) Subsidiary profitability	Subsidiary EBIT of the previous year in million USD, scaled by subsidiary assets of the previous year. Source: Orbis Bureau Van Dijk.
(8) Subsidiary age	Subsidiary age (logged). Source: Orbis Bureau Van Dijk.
(9) Subsidiary size	Subsidiary sales in million USD (logged). Source: Orbis Bureau Van Dijk.
(10) Subsidiary debt	Subsidiary equity/debt ratio. Source: Orbis Bureau Van Dijk.
(11) Subsidiary ownership	Number of shareholders of the subsidiary (logged). Source: Orbis Bureau Van Dijk.
(12) Subsidiary management size	Number of recorded managers in the subsidiary. Source: Orbis Bureau Van Dijk.
(13) Parent ownership	Number of shareholders of the MNC parent (logged). Source: Orbis Bureau Van Dijk.
(14) Parent avg. local managers	Average proportion of host-country national managers in all subsidiaries of the MNC parent. Source: Orbis Bureau Van Dijk.
(15) Parent internationalization	Number of foreign subsidiaries of the MNC parent (logged). Source: Orbis Bureau Van Dijk.
(16) Geographic distance	Geographic distance between MNC parent home and subsidiary host-country (logged). Source: (Berry et al., 2010).
(17) Host-country tertiary education	Percentage of host-country population with tertiary education as of 2014 (or most recent observation). Source World Bank World Development Indicators.
(18) Host-country avg. GDP growth	Host-country 10-year average GDP/capita growth. Source World Bank World Development Indicators.
Home-country legal-origin dummies	Home-country legal system origin in the United Kingdom, France, Germany, or other (four dummy variables). Source: (Acemoglu and Johnson, 2005).
Industry dummies	NACE 2 industry classification codes. Source: Bureau Van Dijk.

Table 7: Results reduced sample

	(1) Corruption	(2) Corruption squared	(3) Corruption distance	(4) Corruption distance squared	(5) Contracting institutions	(6) Property rights institutions	(7) Full model
HC Corruption	0.454***	0.167					-0.319
	(6.43)	(1.37)					(-0.87)
HC Corruption^2		-0.432***					-0.480***
		(-4.89)					(-4.19)
Corruption distance			0.145***	0.477***			0.307***
			(4.77)	(6.03)			(3.45)
Corruption distance^2				-0.0863***			-0.0578**
				(-4.24)			(-2.58)
HC contracting institutions					0.697***		0.366
					(10.79)		(1.05)
HC Property rights						0.561***	-0.00178
						(9.46)	(-0.00)
Ownership share	-0.000950	-0.000797	-0.00168	-0.00158	-0.0000294	-0.000513	-0.000631
	(-0.71)	(-0.60)	(-1.24)	(-1.16)	(-0.02)	(-0.38)	(-0.46)
Subsidiary profitability	0.0199	0.0190	0.0197	0.0179	0.0194	0.0180	0.0157
	(1.59)	(1.55)	(1.57)	(1.46)	(1.48)	(1.43)	(1.28)
Subsidiary age	0.416***	0.385***	0.420***	0.418***	0.376***	0.384***	0.351***
	(9.40)	(8.68)	(9.44)	(9.40)	(8.46)	(8.48)	(7.69)
Subsidiary size	-0.0203	-0.0163	-0.0140	-0.0160	-0.0226	-0.0284*	-0.0242*
	(-1.80)	(-1.45)	(-1.24)	(-1.42)	(-1.94)	(-2.42)	(-2.06)
Subsidiary debt	0.000622	0.000509	0.000899	0.000740	0.000730	0.000425	0.000403
	(1.03)	(0.85)	(1.48)	(1.23)	(1.17)	(0.68)	(0.64)
Subsidiary ownership	0.167**	0.182***	0.181**	0.179**	0.138*	0.150**	0.158**
	(2.99)	(3.32)	(3.22)	(3.21)	(2.49)	(2.67)	(2.83)
Subsidiary management size	-0.210***	-0.257***	-0.195***	-0.199***	-0.185***	-0.215***	-0.233***
	(-4.60)	(-5.53)	(-4.32)	(-4.41)	(-3.90)	(-4.48)	(-4.78)
Parent ownership	0.0380	0.0391	0.0404	0.0426	0.00714	0.0231	0.0271
	(1.76)	(1.79)	(1.84)	(1.96)	(0.31)	(1.01)	(1.17)
Parent avg. local managers	0.977***	0.975***	1.025***	1.006***	0.998***	0.954***	0.965***
	(8.57)	(8.55)	(8.99)	(8.82)	(8.50)	(8.09)	(8.17)
Parent internationalization	0.0495**	0.0458**	0.0558***	0.0516**	0.0542**	0.0487**	0.0497**
	(2.98)	(2.74)	(3.35)	(3.11)	(3.16)	(2.81)	(2.88)
Geographic distance	-0.115***	-0.104***	-0.0524*	-0.0355	-0.0780**	-0.1000***	-0.0533
	(-4.81)	(-4.29)	(-2.08)	(-1.40)	(-3.09)	(-3.96)	(-1.91)
HC tertiary education	0.00808	0.0263**	-0.00951	-0.00622	-0.0139*	0.0215**	0.00175
	(1.00)	(3.11)	(-1.18)	(-0.77)	(-2.38)	(3.14)	(0.16)
HC avg GDP growth	-0.0158	0.0142	-0.0335	-0.0390*	-0.217***	-0.0151	-0.0897
	(-0.94)	(0.78)	(-1.93)	(-2.24)	(-8.53)	(-0.87)	(-0.91)
Home c. legal origin (UK)	1.454***	1.308***	1.352***	1.358***	0.598***	0.743***	0.795***
	(17.06)	(15.47)	(16.43)	(16.73)	(6.17)	(7.72)	(3.51)
Home c. legal origin (GER)	0.943*	1.769**	1.887***	2.059***	1.446***	0.510	3.139***
	(2.51)	(3.06)	(5.10)	(5.18)	(5.56)	(1.66)	(6.09)
Home c. legal origin (FR)	0.447***	0.563***	0.239***	0.280***	0.116	-0.829***	0.354
	(5.65)	(6.75)	(3.34)	(3.87)	(1.76)	(-6.92)	(0.35)
Intercept	-1.615***	-1.982***	-2.173***	-2.531***	-0.604	-1.645***	-1.718**
	(-3.33)	(-4.13)	(-4.23)	(-4.91)	(-1.25)	(-3.36)	(-2.63)
Industry FE	YES	YES	YES	YES	YES	YES	YES
Observations (N)	3314	3314	3314	3314	3114	3094	3094
Log likelihood_constant model	-2212.0	-2212.0	-2212.0	-2212.0	-2050.7	-2031.9	-2031.9
Log likelihood	-1716.3	-1703.2	-1725.1	-1718.0	-1578.1	-1567.3	-1553.4
Pseudo R^2	0.224	0.230	0.220	0.223	0.230	0.229	0.235
X^2	4244.6	4454.2	4303.3	4354.2	3950.9	3872.4	3773.2
Degrees of freedom	36	37	36	37	36	36	41
Wald Test (F-score)		36.19		21.89			

Abbreviations: HC = host-country. Fractional response model (glm). Dependent variable: proportion of HCN subsidiary managers. t-statistics in parentheses. † p<0.1 * p<0.05 ** p<0.01 *** p<0.001

Figure 2: Effect plots host-country corruption full model
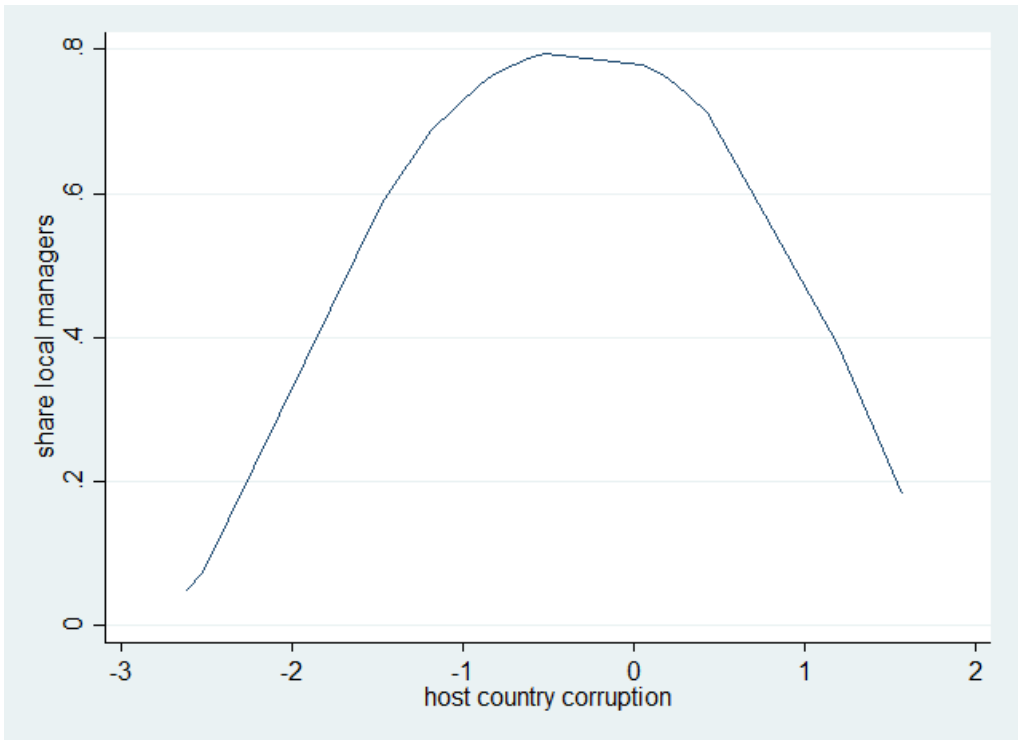
Figure 3: Effect plot corruption distance full model
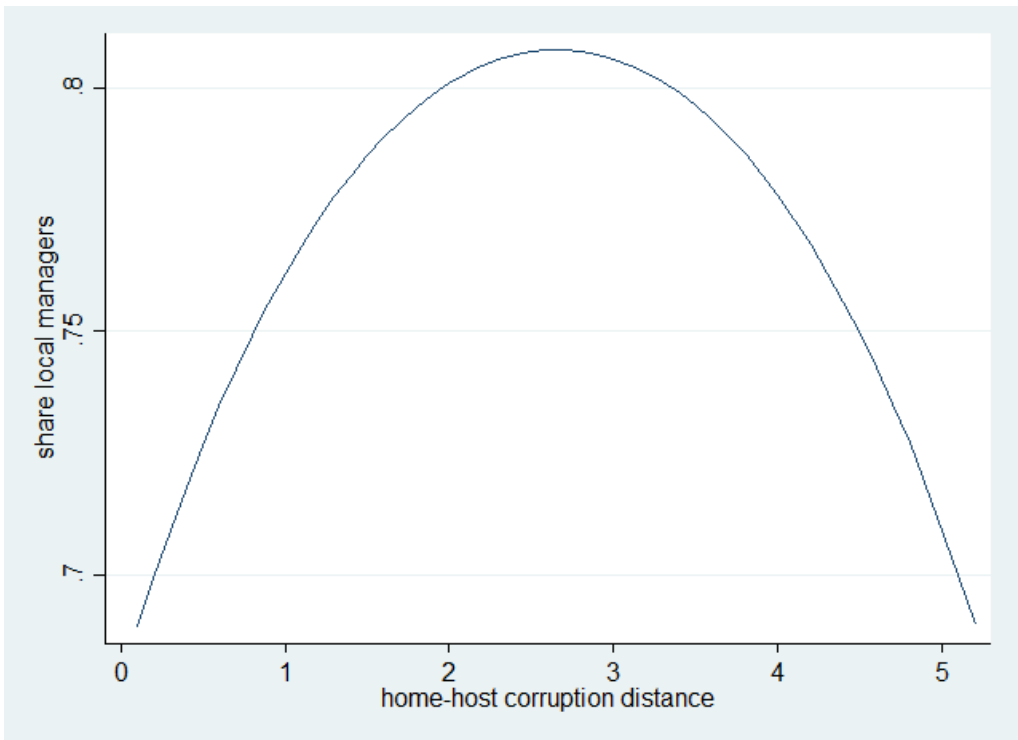
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