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Formal and Informal Institutional Influences on Multinational Enterprise Social Responsibility: Two Empirical Studies

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FORMAL AND INFORMAL INSTITUTIONAL INFLUENCES ON MULTINATIONAL ENTERPRISE SOCIAL RESPONSIBILITY: TWO EMPIRICAL STUDIES

by
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DEDICATION

To Steve, my rock for over twenty-five years, making everything possible.

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ABSTRACT

FORMAL AND INFORMAL INSTITUTIONAL INFLUENCES ON MULTINATIONAL ENTERPRISE SOCIAL RESPONSIBILITY: TWO EMPIRICAL STUDIES

by
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How do environmental institutional influences in a multinational enterprise's (MNE's) total portfolio of locations affect its social responsibility (and *ir*responsibility)? To begin to answer this question, I engaged in two complementary empirical research studies, each exploring a particular subset of the MNE portfolio environment-social responsibility dynamic.

The first study applies the concept of institutional distance from the international business literature to examine how the differences in formal and informal institutional environments across a firm's full portfolio of operating locations can affect its social performance. I hypothesize and find that firms with greater *informal* institutional distance within their locations will have lower overall levels of corporate social performance. I also suggest that greater average *formal* institutional distance within the MNE's portfolio will moderate the social responsibility benefits associated with greater international scope. These hypotheses were tested and found to be supported using secondary data on a sample of 408 firms headquartered throughout Europe, Asia, and North America.

The second study also explores the institutional environment of MNEs and social responsibility, but from a different perspective. This study looks at the influence of institutionalized *corruption* on firms' corporate social *ir*responsibility (CSiR). Consistent with institutional theory, I conceptualize corruption as having both a formal and informal component and hypothesize that operating in portfolios of locations with greater formal and/or informal corruption environments may lead MNEs to have higher levels of social irresponsibility. Furthermore, I explore the relationship between irresponsible behavior and firm performance, finding that higher levels of firm CSiR are related to lower performance. Support for my social irresponsibility hypotheses was confirmed using a sample of 699 MNEs operating throughout the world.

It has been noted that institutions matter to international business. These two studies help us better understand the complex institutional environments of MNEs and *how* specific institutional environments can matter to MNE social responsibility-related outcomes, providing guidance related to country selection for MNE managers concerned about maintaining high corporate social performance and minimizing incidents of social irresponsibility in their firms.

Keywords: *corporate social responsibility (CSR), corporate social performance (CSP), corporate social irresponsibility (CSiR), institutional theory, institutional distance, corruption, multinational enterprise (MNE), portfolio, absorptive capacity*

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CHAPTER 1

RESEARCH SUMMARY

As multinational enterprises (MNEs) diversify internationally they face a variety of regulatory and cultural expectations in the foreign operating environments into which they are expanding (McWilliams, Siegel, & Wright, 2006; Mohan, 2006). This may include specific local expectations related to corporate social responsibility (CSR) (Campbell, 2007). Despite the potential environmental complexity facing MNEs, existing social responsibility research tends to concentrate on domestic issues and contexts (Aguinis & Glavas, 2012). Prior research has not yet helped MNE managers understand how the integration of a particular set of countries into their operational scope might positively or negatively affect their social responsibility-related outcomes.

This represents a potentially significant problem for MNEs that have identified social responsibility as a strategic imperative. This gap in the literature inspired this dissertation to consider addressing the core question: How do environmental institutional influences in a MNE's total portfolio of locations affect its overall social responsibility (and *ir*responsibility)?

To begin to explore portfolio institutional links to social responsibility and irresponsibility, this dissertation incorporates two independent, but complementary, empirical research studies. The studies are *independent* in that each empirical study explores a particular subset of relationships between MNE institutional environments and

social responsibility-related outcomes. Each study also promotes and tests a unique research model and does so using completely separate constructs, variables, sample frames and samples, secondary data collections, and analytical techniques. This overall research design maximizes the value of the multi-paper dissertation format and enables the exploration of a more diverse set of international institutional-social responsibility dynamics.

The two studies are also *complementary* in that they are tied together by three key thematic and conceptual commonalities. First, both studies look at the antecedents of social responsibility in an international context. Only a small percentage of CSR studies have examined firm social responsibility as a dependent variable (Margolis & Walsh, 2003). Similarly, truly international social responsibility and irresponsibility research remains a relative rarity (Arthaud-Day, 2005; Egri & Ralston, 2008; Mohan, 2006). Both of my proposed studies examine specific environmental antecedents to social responsibility-related outcomes for MNEs, and each uses a wide sample of firms headquartered in and/or operating in all parts of the world.

Second, both dissertation studies share a common theoretical foundation, institutional theory. Institutional theory recognizes that firms seek legitimacy within the their target markets (Scott, 2008) and rely on cues from both formal and informal institutions in their environments to understand and respond appropriately (North, 1990). Establishing legitimacy can become even more complex for MNEs who operate in multiple countries with potentially widely diverse institutional expectations (Kostova, Roth, & Dacin, 2008). National institutions can be strong determinants of firm-level social responsibility practices (Ioannou & Serafeim, 2012; Jackson & Apostolakou,

2010). Thus, an institutional lens is used in both studies to examine the impact of a variety of environmental conditions on the social responsibility-related outcomes of MNEs.

Third, both studies draw upon a paradigm used in the international business literature that conceptualizes the MNE as a unique *portfolio* of locations (Chao & Kumar, 2010; Gomez-Mejia, Makri, & Kintana, 2010; Gomez-Mejia & Palich, 1997; Kim & Park, 2002; Nachum & Song, 2011; Zaheer & Hernandez, 2011). In contrast to studies that focus specifically on home country or particular home-host dyads, this portfolio perspective incorporates the *entire* set of subsidiary locations which comprise a MNE's operating portfolio, resulting in a more holistic consideration of the variety of environmental influences potentially affecting firm social responsibility outcomes. I propose that an MNE's overall social responsibility posture and results can be expected to be influenced by the characteristics of its *entire* portfolio of locations, not just its headquarters country.

Paper 1, "The Impact of MNE Portfolio Formal and Informal Institutional Distance on Corporate Social Performance", applies the concept of institutional distance from the international business literature to examine how the institutional environments of a firm's entire set of operating locations can affect its social performance. *Institutional distance* describes the similarities or differences between institutional elements in different countries (Kostova, 1999). Utilizing a portfolio conceptualization, formal and informal institutional distances are calculated based on the average differences between institutional attributes of the firm's home country compared to corresponding attributes of all of the firm's operating subsidiary locations.

I hypothesize and find that firms with greater informal institutional distance within their locations will have lower overall levels of corporate social performance. Informal institutions are driven largely by culture (Peng, Wang, & Jiang, 2008). Because each country represents a unique set of cultural attributes (Hofstede, 1980), the greater the differences between country cultures, the greater the difficulties a firm can expect in learning and meeting the unique local expectations (Kostova, 1999; Xu & Shenkar, 2002) including what constitutes socially responsible behavior.

I also relate institutional distance to another firm characteristic that has been found to have a relationship to social responsibility: international scope. Greater international scope has been linked to higher levels of overall firm social responsibility (Bansal, 2005; Bansal & Hunter, 2003; Déniz-Déniz & Garcia-Falcon, 2002; Kang, 2013; Kennelly & Lewis, 2002; Strike, Gao, & Bansal, 2006). I hypothesize and find that greater average formal institutional distance within the MNE's portfolio will moderate the social responsibility benefits associated with greater international scope and argue that the absorptive capacity developed through greater experience enables firms from high CSR countries to more readily build upon and leverage their prior knowledge in lower-standard environments (Cohen & Levinthal, 1990). To reflect and maintain its hierarchical nature, formal institutional distance is conceptualized asymmetrically, and the sign/direction of formal distance is retained in the measurement model and analysis. The results, tested using multiple hierarchical regressions on a sample of 408 firms headquartered throughout Europe, Asia, and North America, support the hypothesis: greater formal and informal institutional distance between the MNE's portfolio of locations impacts CSP.

Paper 2, “Formal and Informal Corruption Environments and Multinational Enterprise Social Irresponsibility”, also explores the institutional environment of MNEs and social responsibility, but from a different perspective. This study looks at the institutional influences of *corruption* on firms’ corporate social *ir*responsibility (CSiR). CSiR is more than just a lack of CSR (Lange & Washburn, 2012). CSiR reflects a specific action that “negatively affects an identifiable social stakeholder’s legitimate claims” (Strike, et al., 2006).

Consistent with institutional theory (North, 1990), I conceptualize the institution of corruption as having both a formal and informal component. This conceptualization considers not only public sector corruption levels (formal corruption environment), but also the permeation of corruption into the general culture (informal corruption environment). I hypothesize and find that operating in portfolios of locations with greater formal and/or informal corruption environments leads MNEs to have higher levels of social irresponsibility.

Furthermore, I investigate the normative aspects of firm social irresponsibility by exploring the relationship between CSiR and firm performance. Irresponsible behavior may expose a firm to pressures from both private (e.g. non-governmental organization) and public (e.g. regulatory) constituents, requiring actions and resources to address the irresponsible behavior and stakeholder harm. Not only can reacting to irresponsibility be a drain on firm resources, but a pattern of socially irresponsible actions may put the firm’s legitimacy with its stakeholders at risk. Therefore I hypothesize and find that firms with higher CSiR will be outperformed by more socially responsible firms that do not

have to contend with these added risks and costs. My hypotheses are tested and supported using two-stage least squares (2SLS) regression on a sample of 699 MNEs.

With one empirical study examining MNE institutional distance and corporate social performance and a second study exploring the institution of corruption and MNE social *ir*responsibility and related firm performance, the two studies individually contribute to what we know about social responsibility in an international context and together can help us better understand the complex institutional environments of MNEs and social responsibility outcomes. It has been noted that "institutions matter" to business strategy (Peng, Sunny, Pinkham, & Hao, 2009, p. 65). This dissertation's findings help us better understand *how* institutional environments can matter to MNE social responsibility-related strategy. The results provide specific guidance related to country selection and social responsibility strategy for MNE managers concerned about maintaining high CSP and minimizing incidents of CSiR. Selecting countries that minimize formal and informal institutional distance as well as formal and informal corruption environments can reduce the negative impact to firm social responsibility-related outcomes.

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CHAPTER 2 (Paper 1)

THE IMPACT OF MNE PORTFOLIO FORMAL AND INFORMAL INSTITUTIONAL DISTANCE ON CORPORATE SOCIAL PERFORMANCE

Abstract

Does country selection affect the corporate social performance (CSP) of multinational enterprises (MNEs)? In this study I argue that greater diversity within an MNE's operating environment may adversely affect its ability to maintain higher levels of CSP. Using institutional distance as my theoretical lens, I investigate the impact of institutional differences on CSP. Following prior international business studies, I conceptualize the MNE as a unique *portfolio* of locations and use the MNE's entire operating footprint to explore the effects of average portfolio formal and informal institutional distances on CSP. I hypothesize and find that firms with greater average *informal* institutional distance within their portfolios have lower overall levels of CSP. Findings also confirm that due to absorptive capacity and the asymmetric nature of formal institutional distance, greater average *formal* institutional distance within the MNE portfolio moderates the CSP benefits of international scope.

Keywords: *corporate social responsibility (CSR), corporate social performance (CSP), institutional theory, institutional distance, multinational enterprise (MNE), portfolio, absorptive capacity*

INTRODUCTION

Social responsibility recognizes that a firm's stakeholder expectations extend beyond purely economic obligations to include certain social and environmental responsibilities (Campbell, 2007). *Corporate social performance* (CSP) represents an aggregated view of the degree to which a firm has employed socially responsible principles, processes, policies, and programs and achieved associated observable social outcomes (Wood, 1991). The availability and transparency of tangible CSP information helps investors, consumers, communities, and other stakeholders better understand and compare the social performance of firms (Chatterji, Levine, & Toffel, 2009).

CSP assessments can have important consequences for businesses. Chatterji et al. (2009) point out that the largest retirement fund in the U.S.,TIAA-CREF, sold over $50 million in Coca-Cola stock in 2006 after one CSP rating agency downgraded Coca-Cola's social responsibility score. Research investigating the relationship between CSP ratings and stock prices has found that removal from social responsibility stock indices can have a detrimental impact on firm stock price, and strong CSP ratings can minimize these negative effects (Doh, Howton, Howton, & Siegel, 2010). Aided by a growing public interest and visibility, CSP remains a topic of strategic relevance to both practitioners and academics (Carroll & Shabana, 2010).

Existing CSP research tends to concentrate on domestic issues and contexts, as confirmed by a recent systematic review of the management literature (Aguinis & Glavas, 2012). Even within international management journals, more than half of the empirical social responsibility studies are purely domestic in nature (Egri & Ralston, 2008). However, prior research has confirmed that greater international scope can lead to

higher CSP (Bansal, 2005; Bansal & Hunter, 2003; Déniz-Déniz & Garcia-Falcon, 2002; Kang, 2013; Kennelly & Lewis, 2002; Strike, Gao, & Bansal, 2006).

Multinational enterprises (MNEs) may face particular challenges in maintaining high levels of CSP due in part to the diversity of their operating environments (Mohan, 2006). As Campbell points out, CSP "may mean different things in different places to different people and at different times" (2007, p. 950). This variation in attitudes may be exhibited in a wide range of externally-driven pressures related to socially responsible business practices across countries (Matten & Moon, 2008). Host country CSP expectations may conflict with well-established home country norms and standards or require the MNE to develop new capabilities and resources (Arthaud-Day, 2005). Such conflicts/differences may influence MNE host country selection or the impact of host country selection on CSP perceptions.

Despite this potential conflict, much of the prior international CSP research focuses on firms' *home*-country characteristics (Gjolberg, 2009; Ho, Wang, & Vitell, 2012; Ioannou & Serafeim, 2012; Jackson & Apostolakou, 2010; Ringov & Zollo, 2007; Waldman, de Luque, Washburn, & House, 2006). This results in at least two shortcomings relevant to the exploration of CSP in the multi-country context of MNEs.

First, while prior research has looked at home country influences on firm CSP, prior research has not yet investigated how *differences* between MNE's headquarters and subsidiary country choices affect overall CSP. Prior empirical research has failed to consider that key differences between specific countries for MNEs operating in variety of home/host country environments might be an antecedent of social responsibility-themed outcomes. This study is the first to examine directly the role that multiple home and host country environmental differences have on overall CSP for MNEs.

Second, MNEs are a *portfolio* of investments (Nachum & Song, 2011). Each MNE creates its own unique operational portfolio based on its chosen combination of operating countries. Research has not yet looked at how key characteristics of the *total portfolio* of an MNE might influence its CSP. Examinations that are limited to a particular subset of locations can result in an incomplete view of potentially relevant stakeholder influences.

As MNEs diversify internationally they may face a variety of new regulatory and cultural expectations in the foreign operating environments into which they are expanding (McWilliams, Siegel, & Wright, 2006; Mohan, 2006). This may include specific expectations related to social responsibility (Campbell, 2007). To fully examine a firm's overall CSP requires consideration of the cumulative environmental heterogeneity from all of its home and foreign operating locations. Taken as a whole, prior research has not yet helped MNE managers understand how the integration of particular countries into their operational scope might positively or negatively affect their CSP. This represents a potentially significant problem for firms that have identified high CSP as a strategic imperative.

Following prior international business researchers (Dunning & Lundan, 2008; Estrin, Baghdasaryan, & Meyer, 2009; Holmes Jr, Miller, Hitt, & Salmador, 2012; Peng, Sunny, Pinkham, & Hao, 2009; Peng, Wang, & Jiang, 2008), I use an institutional theory perspective developed by North (1990) and theorize that both formal and informal *institutional distance* within the MNE's portfolio of locations can influence the firm's CSP. Institutions represent the "rules of the game in a society" (North, 1990, p. 3). These "rules" encompass formal constraints and regulations as well as informal culturally-influenced behavioral norms and conventions. Each country represents a unique

combination of institutional elements (Kogut, 1991). Institutional distance describes similarities or differences between institutional elements in different countries (Kostova, 1999), and larger institutional distances increase risk and uncertainty, making it more difficult for firms to effectively operate across diverse countries (Xu & Shenkar, 2002).

In addition in this paper I draw upon a paradigm from the international business literature that conceptualizes the MNE as a unique portfolio of locations (Chao & Kumar, 2010; Gomez-Mejia, Makri, & Kintana, 2010; Gomez-Mejia & Palich, 1997; Kim & Park, 2002; Nachum & Song, 2011; Zaheer & Hernandez, 2011). This portfolio perspective incorporates the entire set of subsidiary locations which comprise the MNE's operating portfolio, resulting in a more holistic consideration of the variety of environmental influences potentially affecting firm CSP.

Specifically, I hypothesize that greater *informal* institutional distances in the portfolio of countries in which an MNE is collectively operating negatively influence the firm's CSP. Because informal institutional pressures are driven largely by culture (Peng, et al., 2008), and each country represents a unique set of national cultural attributes (Hofstede, 1980), firms entering new countries are faced with new informal institutional expectations for which their prior experience has not necessarily prepared them. The greater the differences between home and host cultures, the greater the difficulties a firm can expect in learning and meeting the unique local expectations (Kostova, 1999; Xu & Shenkar, 2002) as to what constitutes socially responsible behavior.

I also hypothesize that *formal* institutional distance in the MNE location portfolio, reflecting differences in codified expectations, rules, and standards affects firm CSP. In this regard the formal institutional distance is theorized to be asymmetric. I hypothesize that the positive CSP benefits of international expansion (Bansal, 2005; Bansal & Hunter,

2003; Déniz-Déniz & Garcia-Falcon, 2002; Kang, 2013; Strike, et al., 2006) are moderated by formal institutional distance.

I propose that an MNE expanding into countries with significantly higher formal institutional social responsibility standards than its home country will obtain *less* of an increase in CSP than an MNE expanding into countries with standards that are more similar to (or lower than) its home country standard. This moderating impact occurs because absorptive capacity developed through experience enables firms from high CSP countries to more readily build upon and leverage their prior knowledge in lower-standard environments (Cohen & Levinthal, 1990).

In contrast, firms from lower CSP countries will have more difficulties in building upon their prior experience to fully absorb and apply the learning associated with increased international scope in higher CSP locations. These firms will not realize the full CSP benefits from the organizational learning associated with increased scope. I tested and confirmed my portfolio distance hypotheses on a sample of 408 firms headquartered throughout Europe, Asia, and North America.

My study contributes to a growing understanding of the antecedents of social responsibility in an international context by exploring how *formal* and *informal* institutional differences within an MNE's portfolio of location selections can affect the firm's social responsibility outcomes. I suggest that stakeholders in different countries may expect varying socially responsible practices for firms operating within their borders. Based on this logic I propose that an MNE's overall CSP postures can be expected to be influenced by the differences inherent in its *entire* location portfolio, not just its headquarters country. Thus, I take a holistic view of the MNE and consider the impact of its unique portfolio of investment choices on its CSP results.

THEORY AND HYPOTHESES

Prior international CSP research has recognized a relationship between greater international scope of experience and the social and environmental performance of MNEs (Bansal, 2005; Bansal & Hunter, 2003; Déniz-Déniz & Garcia-Falcon, 2002; Kang, 2013; Kennelly & Lewis, 2002; Strike, et al., 2006). Researchers provide two possible explanations for these results.

One explanation is rooted in organizational learning and the resource-based view of the firm. Organizational learning may be accelerated as firms expand internationally because they are exposed to different ideas from diverse contexts (Chang, 1995; Hitt, Tihanyi, Miller, & Connelly, 2006; Zahra, Ireland, & Hitt, 2000). "Learning is fostered by diversity in experience" (Barkema & Vermeulen, 1998, p. 7). Because each foreign environment in which the firm is operating may reflect different sets of social and cultural expectations (McWilliams, et al., 2006; Mohan, 2006), social responsibility in an international context can foster development of new knowledge and capabilities which the firm can then deploy and leverage (Bansal, 2005; Kennelly & Lewis, 2002). Greater international experience and diversification, therefore, provides enhanced opportunities for organizational learning and adaptation, which in turn can lead to higher levels of firm social performance (Strike, et al., 2006).

A second related explanation for why greater international scope has been found to lead to higher levels of CSP is attributed to influences in the MNE's institutional environment and the firm's associated drive for legitimacy with local stakeholders. Firms with greater international experience may have a heightened general awareness of the relative importance of social and environmental responsibility in local markets, helping to offset their liabilities of foreignness (Bansal, 2005; Bansal & Roth, 2000). The pursuit of

local legitimacy can lead firms to expend the resources and take tangible actions necessary to increase their local social responsibility credibility and visibility (Bansal & Hunter, 2003). More internationally-experienced firms will be better equipped to assess and respond to local expectations, but they will also have to make a greater effort to maintain their local legitimacy across diverse environments (Déniz-Déniz & Garcia-Falcon, 2002).

Other international CSP research has examined how national characteristics of MNE home countries may account for different levels of firm social responsibility investment and results (Ioannou & Serafeim, 2012). For example, an examination of national political-economic systems found that nations characterized as welfare states, with high instances of corporatist arrangements, and those with highly political cultures exhibited higher standards of social responsibility (Gjolberg, 2009). Likewise, Matten and Moon (2008) contend that differences in national business systems can explain differences in firm CSP, encompassing much of the variation between firms headquartered in the United States and Europe. In support of this line of thinking, Jackson and Apostolakou (2010) compared firms headquartered in more coordinated market economies (e.g. continental Europe) and firms from more liberal Anglo Saxon-based market economies (e.g. United Kingdom) and empirically found that the degree of institutionalized coordination amongst home country stakeholders has a negative influence on the firm's level of social responsibility.

Multiple studies have also confirmed a variety of sometimes conflicting relationships between national culture attributes of firm headquarters countries and firm CSP. Utilizing both Hofstede (1980) and GLOBE (House, Javidan, Hanges, & Dorfman, 2002) scales of national culture, Ringov and Zollo (2007) performed an analysis of 457

global firms and found that firms headquartered in countries with high power distance and masculinity had lower CSP. Using a broad set of firms from 49 different countries, Ho, Wang, and Vitell (2012) found linkages between all four core Hofstede (1980) national culture attributes of the headquarters country and firm CSP. Waldman, de Luque, Washburn, and House's (2006) comprehensive survey of 561 firms headquartered in 15 different countries analyzed national culture as it affects individual leaders' values and attitudes and found that managers' home country power distance and individualism measures were again related to a devaluation of social responsibility. On the other hand, Ioannou and Serafeim (2012) found that both power distance and individualism were related to *higher* levels of CSP.

In summary, prior research has confirmed a positive relationship between MNE international scope and social performance and has also established that home country characteristics can be relevant to firm social responsibility attitudes, strategies, and outcomes. Taken as a whole, however, these studies do not consider how *differences* in the institutional environment between countries that comprise the MNE's international scope might influence firm CSP. Additionally, they do not consider CSP from the institutional context of the MNE's entire *portfolio* of locations.

Institutional Distance and Corporate Social Performance

Institutional theory suggests firms rely upon institutional cues in their external environments to identify accepted and expected behavior and to establish legitimacy in their markets (DiMaggio & Powell, 1983; Scott, 1987). These external influences take the form of *formal* rules and *informal* constraints (North, 1990). *Formal* institutions include laws, regulations, and other codified societal constraints. They are explicit in

nature and can be measured and enforced by regulatory bodies. Formal institutions are complemented by *informal* institutions, which provide additional structure and help further reduce uncertainty by filling the gaps where there are no formalized institutional guidelines for expected behavior. Typically not codified (Helmke & Levitsky, 2004), informal institutions are transmitted socially and reflect behavioral norms, cultural standards, and related codes of conduct.

Each country has its own unique institutional environment (Kogut, 1991), and *institutional distance* is used to represent the difference between the institutional profiles of different countries (Kostova, 1999). Home-host country differences may make it more difficult for firms to effectively operate across countries (Xu & Shenkar, 2002). A large institutional distance may represent a challenge for firms to overcome as they seek to establish legitimacy and adapt their domestic practices to a foreign market (Kostova & Zaheer, 1999; Xu & Shenkar, 2002). This becomes even more important and difficult for MNEs who must balance multiple (potentially conflicting) foreign institutional environments and expectations as they seek host country legitimization (Kostova, Roth, & Dacin, 2008).

Institutional distance is often conceptualized as *cultural distance*, a method of representing the cultural similarity or difference between countries that has become a staple in international business research (Shenkar, 2001). A larger cultural distance introduces a degree of incremental complexity and uncertainty, increasing risk (Shane, Venkataraman, & MacMillan, 1995). One of the advantages of institutional distance over purely culturally-based distance is that institutional distance can encompass both regulatory (formal) and cultural (informal) institutional components. Thus, according to

Berry et al., an institutionally-grounded approach to distance is preferable to a purely cultural view of distance because it can incorporate an additional dimension (2010).

Large institutional differences between countries can create a liability of foreignness that must be overcome to optimize performance in new markets (Zaheer, 1995). CSP may be affected by liability of foreignness issues because: (1) what constitutes socially responsible behavior can vary significantly between countries (Campbell, 2007; Mohan, 2006); and (2) CSP is socially constructed and context-dependent (Ringov & Zollo, 2007).

Despite a call for research attention to better understanding the institutional antecedents of corporate social responsibility (Campbell, 2007), I have been able to find only two published articles to date which examine the influence of institutional *distance* on any kind of social responsibility outcome. The first study (Campbell, Eden, & Miller, 2012) explored the contention that greater headquarters-subsidiary distance motivates firms to invest in social responsibility as a means of overcoming their liabilities of foreignness.

Using lending practice ratings of foreign bank subsidiaries in the U.S. (above, below, or on par with U.S. standards) as a proxy for social responsibility, the researchers applied a series of home-host distance measures inspired by Ghemawat's (2001) CAGE framework. The findings indicate that cultural, administrative (regulatory), geographic, and economic distances all have negative impacts on affiliate bank lending, and some negative effects of distance can be offset by positive firm social responsibility reputation.

Although this study helps shed light on the impact of distance on lending practices, it has the limitation of being focused on the dyadic relationships between sets of headquarters-U.S. subsidiary locations only. Thus, my study provides a *much* more

comprehensive treatment of social responsibility and distance. It does so by examining the *entire* MNE portfolio of locations across multiple host countries (rather than specific dyads and a single host country) and by considering the firm's *overall* CSP (rather than a specific practice, such as lending).

A second study examined the standardization of MNE environmental practices to determine whether firms benefit from smaller institutional distances as a way of gaining local social responsibility legitimacy and a resource-based competitive advantage (Aguilera-Caracuel, Aragón-Correa, Hurtado-Torres, & Rugman, 2012). Tests of 210 MNE headquarters-subsidiary dyads spanning five home and host countries indicate that lower environmental institutional distances are positively related to firm environmental practice standardization.

Once again these findings were based only upon specific and artificially limited dyads of headquarters and subsidiaries rather than the entire operating "footprint" of the MNE. Additionally, because the research question involved only five countries and one particular subset of the broad topic of social responsibility (environmental standardization), the findings have limited generalizability when it comes to predicting overall firm CSP results. While Aguilera-Carcuel et al. (2012) and Campbell et al. (2012) do offer some initial insights into potential relationships between institutional distance and MNE environmental responsibility, neither study examines *overall* firm CSP nor do either of these studies consider the social responsibility impacts of the MNE's *entire* location footprint.

Thus, research has not yet applied the concept of institutional distance to the study of MNE social performance. No study to date has considered how institutional distance measured across the entire portfolio of an MNE influences its overall CSP. Yet

understanding the dynamics associated with social responsibility results requires consideration of how home and host country influences may interact to affect firm social responsibility strategies and outcomes (Jamali, 2010). Therefore my research model (as indicated in Figure 2.1) draws a distinction between formal and informal institutional distances that is consistent with institutional theory's framework of formal rules and informal constraints (North, 1990). Below I develop and test a theory of MNE portfolio institutional distance and CSP.

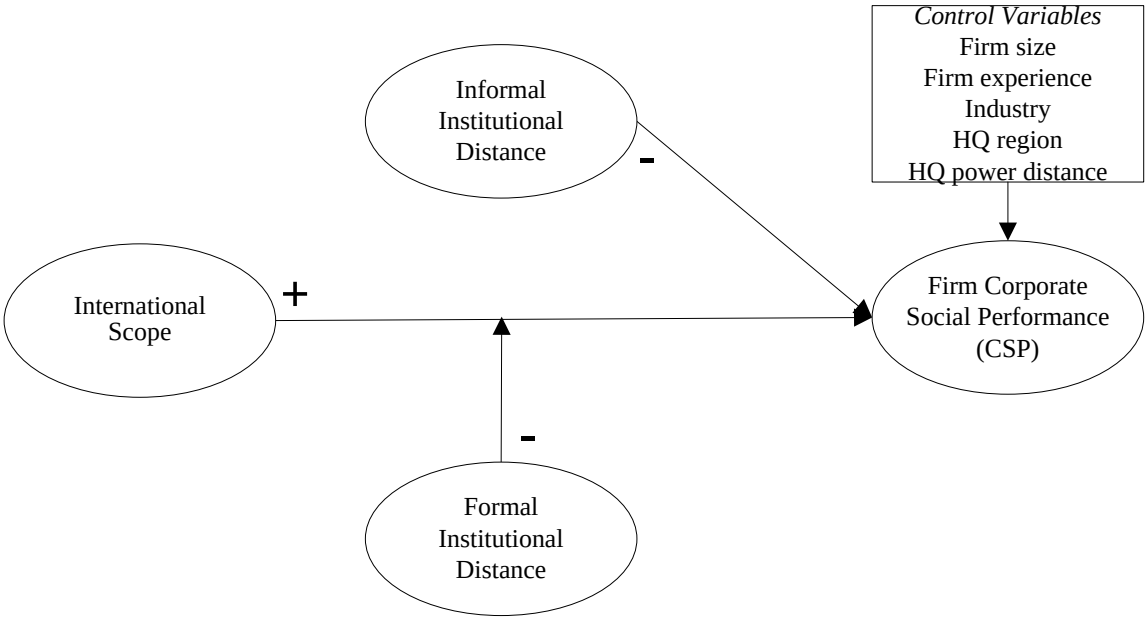

FIGURE 2.1. Conceptual research model

Informal Institutional Distance and CSP

Informal institutions represent "codes of conduct, norms of behavior, and conventions" (North, 1990, p. 36), informal constraints are closely related to culture, and national culture is commonly used as a proxy measure for informal institutions (Dikova, 2009; Peng, et al., 2008; Redding, 2005; Singh, 2007). *Informal institutional distance*,

therefore, reflects the similarity or dissimilarity between countries' cultural environments (Kostova, 1999; Kostova & Zaheer, 1999).

As firms diversify internationally into new host countries, they face new informal institutional environments based on unique country histories, cultures and social norms. Although learning about any new host country cultural environment takes time (Wilkinson, Peng, Brouthers, & Beamish, 2008), the larger the informal institutional distance between a firm's headquarters and subsidiary locations, the greater the difficulties the firm can expect in terms of learning the new subsidiary country culture and its associated standards and behavioral norms (Kostova, 1999; Xu & Shenkar, 2002).

One possible reason why firms accept the additional responsibilities associated with social responsibility is that they are driven by the cultural influences of the countries in which they are operating (Park, Russell, & Lee, 2007; Ringov & Zollo, 2007; Waldman, et al., 2006). Local market informal social norms will reflect certain social responsibility expectations, and exhibiting locally-appropriate socially responsible behavior is becoming increasingly important to the local legitimization of MNEs (Matten & Moon, 2008). Because of this, firms may face CSP consequences (either positive or negative) based on the cultural distinctiveness of their target market compared to their home market (Peters & Vassar, 2009). Firms operating in countries that are highly culturally different from their home country may find themselves at a disadvantage in terms of CSP results.

Additionally, firm CSP may be affected by related informal institutional pressures exerted by external organizations in the foreign operating environments that can drive the MNE's conformance to certain social performance standards and practices (Campbell, 2007). Local and industry social values and norms regarding social

responsibility expectations may be reflected in the actions of non-governmental organizations (NGOs) and other private, independent organizations (Delmas & Toffel, 2004) such as "watch dog" and activist groups.

Industry trade associations in host countries may actively promote social and environmental agendas with their members (Fox, 2004). Corporate managers may be influenced by the messages and mindsets that are promoted in local professional publications and business education (Campbell, 2007). All of these represent potential social responsibility-relevant informal institutional forces that can vary between countries.

The informal institutional differences between countries can be particularly important to MNEs, because they may have to navigate a variety of informal institutional environments via their operations in multiple countries. Thus, MNEs are comprised of a *portfolio* of different country selections (Nachum & Song, 2011), with each subsidiary location representing a corresponding institutional distance from the home country. A portfolio-level informal institutional distance for the firm can be represented by averaging the informal institutional distances between the home country and each of the MNE subsidiary location countries (Chao & Kumar, 2010). In this aggregated form, I expect the average portfolio informal institutional distance to have a negative effect on overall firm CSP; the greater the average difference in cultures, the greater this impact is expected to be for the following reasons.

First, greater informal institutional distance reflects a higher degree of ambiguity for the firm. Informal institutions are not standardized or formalized; they represent tacit social conventions and codes of conduct (North, 1990). Because informal institutions lack codification, when informal institutional distance within the firm's portfolio is

greater, the firm can expect to face more uncertainty in terms of clearly understanding what is expected by each local market. This ambiguity can limit the firm's ability to recognize different unstated informal institutional expectations and priorities, further compromising their ability to reconcile and respond appropriately in terms of social responsibility innovations.

Second, large informal institutional distances may represent greater stakeholder diversity, increasing complexity for the firm. Informal institutions are driven largely by culture. Although two countries may share certain similar national culture attributes, each country ultimately represents a unique combination of cultural attributes (Hofstede, 1980). Thus, a larger informal institutional distance between the MNE's headquarters and portfolio of subsidiary locations equates to a greater degree of potential diversity in terms of how the firm's stakeholders define a socially responsible enterprise. Stakeholder considerations are the "cornerstone" of social responsibility (Barnett, 2007, p. 796). However, the more diverse the set of stakeholders to which the MNE is beholden, the more likely the scenario that one set of firm stakeholder's expectations will conflict with another, resulting in potential trade-off problems that can ultimately hurt the firm's CSP (Barnett, 2007).

Third, because every culture is unique, MNE experience with the social responsibility expectations of one country may not directly transfer to another. Each country has a unique history, culture, and customs, and firm experience with one country's informal institutions typically does not translate into understanding the informal institutions of a second country, even if the countries are geographically adjacent. For this reason, experience in one country does not necessarily automatically translate to ready-experience in another country (O'Grady & Lane, 1996). For example,

although the cultural profile of the U.S. is relatively similar to the profiles of other native English-speaking countries, there are distinct differences in transacting business in Canada, Australia, or the United Kingdom vs. the U.S. Firms must gain specific experience with *each* country in which they operate. Developing these capabilities requires more effort when the cultural distance to be overcome represents a larger gap.

Finally, MNE subsidiaries may find that culturally-driven informal institutional influences of their portfolio of subsidiary markets conflict with internal institutionalized expectations of the parent company. *Institutional duality* recognizes that MNEs are faced with the challenge of both obtaining legitimacy with their external (host country) environments and also maintaining it internally within the firm (and its home country environment) (Kostova & Roth, 2002). While the firm may value enterprise-level operating consistency based on home country standards, the subsidiary may be drawn toward actions which drive local acceptance (Rosenzweig & Singh, 1991). Local host culture social responsibility expectations may be left unfulfilled or contradicted as the subsidiary succumbs to the legitimate practices of the parent company (Jamali & Neville, 2011). The greater the diversity between home and host cultures, the more likely this type of violation may take place.

An example can help illustrate why larger informal institutional distances may negatively affect firm CSP. Consider the case of a hypothetical MNE headquartered in China with subsidiary locations in northern European countries, such as Sweden and Norway. The cultural profile of China, characterized by extremely high power distance, masculinity, and collectivism, is vastly different than Sweden and Norway, both of which are low power distance, highly feminine, and individualistic cultures (Hofstede, 1980).

The average informal institutional distance within this firm's portfolio is therefore expected to be relatively high, resulting in higher degrees of ambiguity and uncertainty. Detecting and fully understanding the tacit requirements in terms of what comprise legitimate levels of social responsibility in the northern European market may be more difficult for the Chinese MNE compared to firms from countries more culturally similar to Sweden and Norway. Furthermore, once recognized, these new requirements will have to be reconciled with the MNE's home-country norms, inevitably requiring further investment in learning and response strategies. These dynamics may strain the limited resources and focus of the MNE and increase the likelihood that the firm's overall CSP may suffer as a result.

In contrast, consider a U.S.-based MNE with subsidiary locations in Australia. Australia has a very similar cultural profile to the U.S., resulting in a relatively lower average portfolio informal institutional distance for this firm. Although the U.S. firm still has to learn Australia's idiosyncratic expectations related to social responsibility, because of the cultural similarities, the differences are not expected to be as dramatic in terms of recognition, reconciliation, and response. There is a high likelihood that many of the firm's current strategies to satisfy the informal institutional expectations of the U.S. market will satisfy the culturally similar Australian subsidiary locations. Because there is less ambiguity and less uncertainty inherent in its mix of countries, the informal institutional distance in this firm's portfolio is not expected to drag down the MNE's overall CSP.

Therefore, multiple factors may lead MNEs with higher average informal institutional distance within their subsidiary portfolios to experience lower overall firm CSP. The tacit nature of informal institutions makes them difficult to recognize and fully

understand in host environments that vary significantly from the home culture. MNEs with wider diversity in informal stakeholder expectations may have to make tough choices when one stakeholder's claim conflicts with another's, and firm CSP may suffer as a result. Overcoming limitations in transferability of prior country experience due to the cultural uniqueness of new country environments taxes a firm's resources, as does resolving potential conflicts associated with external-internal institutional duality. For these reasons, I suggest that the difficulty in recognizing, reconciling, and responding to different informal institutional profiles of culturally diverse operating environments can result in lower CSP for the MNE. Thus, I hypothesize:

> *Hypothesis 1: An MNE with higher average informal institutional distance within its operating portfolio will have lower CSP (than an MNE with lower average informal institutional distance).*

Formal Institutional Distance, International Scope, and CSP

Although previous research has found that greater international scope can lead to higher CSP (Bansal, 2005; Bansal & Hunter, 2003; Déniz-Déniz & Garcia-Falcon, 2002; Kang, 2013; Kennelly & Lewis, 2002; Strike, et al., 2006), I propose that this effect will be moderated by the distance between formal institutions in the MNE's headquarters and portfolio of subsidiaries. *Formal* institutions reflect regulatory expectations and conventions formally embedded within the structures of a society (North, 1990). Formal institutions in a firm's operating environment can influence social responsibility investment decisions and outcomes. Firms may face increased (decreased) regulatory pressures including stakeholder monitoring requirements related to social responsibility compliance (Matten & Moon, 2008), such as in environmental and labor practices, as

they expand abroad. Such regulatory-related formal institutional pressures can have an impact on firm CSP (Campbell, 2007).

Formal institutional distance describes differences in the formal institutional environments between countries. In this study I focus on the national standards of social responsibility in each country as a relevant representation of formal institutional differences. Examining the relative social responsibility standards of different countries highlights a wide variation in formal institutional environments faced by MNEs. Not all countries necessarily value or require the same levels of CSP from the firms operating within their borders (Campbell, 2007). International firms are therefore faced with the challenge of reconciling differing formalized social responsibility standards for each host country market in which they have a presence. Firms must determine when to adapt to local formal CSP expectations, recognizing some host country CSP standards may conflict with or be beyond the home country-driven capabilities of the firm (Arthaud-Day, 2005).

I conceptualize formal institutional distance in this study as being asymmetric. One weakness of prior distance research is that distance is too commonly conceived to be an absolute value or squared difference between two points (Shenkar, 2001; Zaheer, Schomaker, & Nachum, 2012). Institutional distance from Country A to Country B is typically treated as equivalent to the distance from Country B to A. This study moves beyond this non-directional dyadic view and instead considers the *actual* difference between the CSP standards of the MNE's portfolio subsidiary location countries as compared to its home country in such a way as to maintain directionality in the formal distance measurement.

Because some countries have high CSP standards and other countries have relatively lower CSP standards, the resulting portfolio formal institutional distance of a given MNE can be a positive number or a negative number. A MNE headquartered in a country with a lower CSP standard than its subsidiary portfolio countries could face a very large (positive) formal institutional distance. In contrast, a MNE headquartered in a country with higher CSP standards than its average subsidiary portfolio can be expected to have a very small or negative formal institutional distance with which to contend.

When a MNE enters markets with higher CSP formal institutional standards, the firm may need to develop new skills related to social responsibility strategy and implementation. These new skills might include the firm having to learn to manage complex country-specific regulations, maintain multiple governmental relationships, and/or learn to reconcile home- and host-country CSP standard differences (Strike, et al., 2006). Through experience MNEs develop or acquire the needed resources and capabilities to meet the specific formal institutional expectations of their target operating locations (Kostova & Zaheer, 1999). Prior research has therefore confirmed a positive relationship between international scope and firm CSP (Bansal, 2005; Bansal & Hunter, 2003; Déniz-Déniz & Garcia-Falcon, 2002; Kang, 2013; Kennelly & Lewis, 2002; Strike, et al., 2006).

These positive CSP benefits related to international scope may be moderated by the formal institutional distance between the MNE's headquarters and subsidiary portfolio countries. The reason for this is that larger (positive) formal institutional distances represent a gap between the MNE's subsidiary CSP expectations and headquarters CSP knowledge, making it difficult for the firm to understand and internalize a more diverse set of (higher) formal institutional requirements.

When the new knowledge the firm is presented with is highly institutionally different from (represented by a greater formal institutional distance) the firm's headquarters standards, the firm may struggle in understanding, absorbing, and applying the new knowledge. The firm will still get *some* of the CSP benefits associated with increased international scope, but not necessarily the *full* benefit as international scope CSP researchers assume.

Some of the benefit will be lost through the challenges of absorptive capacity. *Absorptive capacity* refers to the "ability of a firm to recognize the value of new, external information, assimilate it, and apply it" (Cohen & Levinthal, 1990, p. 128). It enables firms to learn new things related to things they have already mastered (Lane, Koka, & Pathak, 2006). As firms learn more in a specific domain (e.g. social responsibility) and increase their base of knowledge and become more absorptive related to that domain, they are subsequently better positioned to leverage and continue to build upon that knowledge and domain (Zahra & George, 2002).

Absorptive capacity develops cumulatively, building on prior knowledge. When a firm is presented with new external knowledge that is very different from its base of prior experience (as in the case of a MNE facing new, higher CSP standards in its host countries), this large difference can become a limiting factor in the firm's ability to fully assimilate and exploit the new knowledge (Lane, et al., 2006).

Because of the hierarchical nature of formal institutions, once a firm has successfully obtained a given level of capability that meets social responsibility pressures in one country, the firm is able to apply and leverage this capability in subsequent country expansions. If the firm has met the world's most stringent CSP standard, it can more easily meet less stringent country standards. Formal institutional experience can

transfer from one country to another, if the MNE's experiential scope is at least as stringent as the new country's requirements.

When a firm incorporates countries into its location portfolio that result in a small (or negative) formal institutional distance absorptive capacity will be less of a challenge; the requirements are much more similar to the firm's prior experience and knowledge. Small (or negative) portfolio formal institutional distances are expected to have a negligible effect and will not erode the CSP benefits of increased international scope; such new knowledge can be absorbed and transformed into new knowledge and capability more easily.

In contrast, an MNE with a portfolio of locations that results in a large (positive) portfolio formal institutional distance will receive *less* of a CSP benefit from its international scope than the firm operating in the same number of countries but having a small (or negative) portfolio formal institutional distance. The large (positive) portfolio formal institutional distance reflects external CSP expectations that exceed the MNE's home country standards, representing a lack of knowledge complementarity with the firm's prior experience, affecting the firm's ability to absorb, integrate, and apply the external knowledge associated with the different (higher) social responsibility standards (Pinkse, Kuss, & Hoffmann, 2010). When the MNE's portfolio of locations has an average formal institutional standard that *exceeds* the home country standards, the firm faces additional challenges in applying its previously obtained knowledge to recognizing and responding to unfamiliar (higher) host country expectations.

For instance, Swedish environmental regulations can be extremely stringent, ensuring the lowest environmental impact from manufacturing (e.g. nine out of a possible 10). In contrast, in some areas of Asia there may be only limited environmental

guidelines (e.g. two out of 10) or even no specific requirements at all. The extreme simplified example of a firm headquartered in China with all of its subsidiaries located in Sweden would therefore have an average portfolio formal institutional distance that is a high (large positive) number (9 – 2 = 7).

The opposite hypothetical firm headquartered in Sweden with all subsidiaries in China would have a very small (actually a large negative) portfolio formal institutional distance (2 – 9 = -7). Prior research has confirmed that both of these firms can expect to see some CSP benefits associated with their international scope (Bansal, 2005; Bansal & Hunter, 2003; Déniz-Déniz & Garcia-Falcon, 2002; Kang, 2013; Kennelly & Lewis, 2002; Strike, et al., 2006). The first firm faces a greater hurdle because its portfolio of subsidiary locations have higher average social responsibility standards than the firm's home country standards, as reflected by the larger formal institutional distance. This firm will still see CSP improvements from the organizational learning associated with international expansion. Due to absorptive capacity the first firm will see *fewer* CSP improvements because of the larger formal institutional distance that it must overcome; this firm has more learning to do and more obstacles to overcome. The social responsibility standards of the second firm's home location already far exceed the subsidiary portfolio's average social responsibility expectations; therefore, the second firm will see very little erosion in the CSP benefits it receives from international scope.

Prior research has assumed that as an MNE expands its international scope, the more it will learn from the new country environments, subsequently leading to an increase in firm knowledge and CSP. However, in some instances the learning (and subsequent CSP benefit) may be less than the international scope alone predicts. This is

due to the hierarchical nature of formal institutions and the firm's absorptive capacity for learning.

When a MNE's home country formal institutional standard exceeds the corresponding average standard of its portfolio of locations, the firm is readily able to leverage its absorptive capacity in learning and adapting to new requirements; they are more similar in nature to the firm's prior experience and knowledge. When the MNE's portfolio of locations has an average formal institutional standard that *exceeds* the home country standards, the firm faces additional challenges in applying its previously obtained knowledge to recognizing and responding to unfamiliar (higher) host country expectations. Greater average formal institutional distance inherent within the firm's overall operating portfolio erodes some of the learning benefits associated with increased international scope. Thus, I propose that:

> *Hypothesis 2: The relationship between a MNE's international scope and its CSP is moderated by the average formal institutional distance in the MNE's subsidiary portfolio such that the benefits of increased international scope are reduced when average formal institutional distance is higher.*

METHODOLOGY

Sample

Few empirical social responsibility studies to date have been truly international (Arthaud-Day, 2005; Mohan, 2006). A review of the social responsibility literature found only 13% of the 242 empirical CSR studies published in international business journals 1998-2007 included six or more countries; only 7% used 25 or greater countries (Egri & Ralston, 2008). One of the key objectives underpinning my study's research design is to help fill this void by maximizing global coverage, which translates to a desired sample

spanning at least 25 different countries in multiple regions of the world. Archival data sources are used to ensure the broadest possible country representation.

The CSRHub sustainability rating database serves as the sample frame for this study. As the term "hub" implies**,** CSRHub is widely used by institutional investors because it normalizes and aggregates global information from a wide variety of environmental, social, and governance research firms, governmental agencies, and NGOs to provide consolidated access to more than 125 sources of information in support of socially responsible investment practices for over 5,000 publicly-traded firms headquartered in 65 countries.

I introduce this new dataset that has not previously been used in social responsibility research for two reasons. First, CSRHub is a "born global" social responsibility ratings service. Unlike the more popular Kinder, Lydenberg, Domini Research & Analytics (KLD, now part of MSCI Inc.) or Fortune Magazine's "Most Admired Companies" ratings, for example, the CSRHub sustainability rating database has been comprised of global data from its inception. CSRHub's global coverage includes not only a wide diversity of firm headquarters locations, but it also incorporates relevant data points from any/all countries in which that firm is doing business into its aggregate measurements. In contrast, the KLD social responsibility dataset, the most widely used rating data for social responsibility research purposes, has a distinctly North American heritage (Wood, 2010). Although KLD has made in-roads since 2001 toward expanded global coverage, over 85% of the almost 3,000 firms available in the 2010-11 KLD dataset represent US-headquartered firms.

The second reason for the choice of sample frame is that CSRHub provides open public access to a comprehensive and rigorous set of international firm CSP indices. The

proprietary, subscription-based CSP datasets commonly used in research studies, such as KLD, are only available to those who can afford to pay for them, representing a substantial access barrier. Therefore, CSRHub's open access format allows a wider variety of other researchers to be able to replicate and expand upon my results.

The sample for this study was randomly selected from the more than 5,600 firms available in the CSRHub database. Based on the total number of variables in the research model (20) and a desired observation-variable ratio of 20:1 (Hair, Black, Babin, & Anderson, 2010, p. 176), a desired sample size of approximately 400 firms was targeted for this analysis. To ensure the final sample size threshold would be maintained, I randomly selected 450 firms from CSRHub with the expectation that some observations would have to be dropped from the sample per missing data. Firms which were found to be purely domestic (operating in only one country) or for which complete data was unavailable were eliminated from the sample.

Geographic and industry distribution of the final sample is summarized in Tables 2.1 and 2.2. The sample was comprised of 408 firms headquartered in all three major economic regions: Europe (50%), Asia (30%), and North America (20%). The most prevalent headquarters countries are Japan (24.8%), the United Kingdom (16.2%), and the United States (15.7%), with a total of 27 different headquarters countries represented in the sample. The MNEs in the final sample have operations located in a range from two to 106 different countries, with an average of 126 subsidiaries dispersed across an average of 20 different countries per firm. The final sample includes a total of 52,897 firm-location observations.

Firms from a broad range of both manufacturing and service industries are included in the sample. The largest industry sector represented is *Industrials* (aerospace,

construction and engineering services, machinery, commercial and professional services, and transportation, comprising 22% of the total sample) followed by *Financials* (banks, financial services, insurance, and real estate, 17%) and *Materials* (industrial components and packaging, construction materials, metals and mining, paper and forest products, 16%).

TABLE 2.1. Sample description by headquarters country

Country	*Count*	*Country*	*Count*
Australia	13 (3.2)	Luxembourg	2 (0.5)
Belgium	4 (1.0)	Malaysia	1 (0.2)
Canada	18 (4.4)	Netherlands	9 (2.2)
China	1 (0.2)	Norway	7 (1.7)
Denmark	5 (1.2)	Poland	1 (0.2)
Finland	7 (1.7)	Portugal	5 (1.2)
France	19 (4.7)	Singapore	1 (0.2)
Germany	21 (5.1)	Spain	11 (2.7)
Greece	6 (1.5)	Sweden	20 (4.9)
India	1 (0.2)	Switzerland	12 (2.9)
Ireland	3 (0.7)	Thailand	1 (0.2)
Italy	4 (1.0)	United	66 (16.2)
Japan	101 (24.8)	United States	64 (15.7)
S. Korea	5 (1.2)		

(Percentages of total sample in parentheses)

TABLE 2.2. Sample description by industry sector and headquarters region

Industry Sector	*Asia*	*Europe*	*N. America*	*Total*
Consumer Discretionary	24 (44)	27 (50)	3 (6)	54
Consumer Staples	3 (10)	20 (65)	8 (26)	31
Energy	6 (25)	6 (25)	12 (50)	24
Financials	16 (23)	41 (58)	14 (20)	71
Healthcare	6 (32)	6 (32)	7 (37)	19
Industrials	29 (33)	45 (51)	14 (16)	88
Information Technology	12 (46)	7 (27)	7 (27)	26
Materials	23 (34)	32 (48)	12 (18)	67
Telecommunication Services	1 (11)	7 (78)	1 (1)	9
Utilities	4 (20)	11 (58)	4 (20)	20
Total	**124**	**202**	**82**	**408**

(Percentages of industry in parentheses)

Dependent Variable

There are a variety of approaches to measuring firm-level social responsibility including firm self-reported data, reputational indexes, and social rating agencies (Wood, 2010). Social rating agency data minimizes firm self-reporting bias by aggregating data from public and surveyed sources. In this study ***CSP*** for each firm is measured via the *overall CSR index* obtained from the CSRHub sustainability ratings database. The 2011 CSRHub overall CSR index is an interval scale numeric score (0 to 100) reflecting the overall social responsibility rating for each firm, encompassing four social responsibility dimensions: community relations, governance, employee relations, and environmental performance. The sub-categories associated with each dimension are summarized in Table 2.3. It has been noted, however, that although third-party social responsibility ratings, such as CSRHub, remain among the most widely-used types of CSP measures

and can be preferable to company self-reported data and reports (Wood, 2010), there is a risk that aggregated measures may somewhat mask offsetting data points for a particular firm (Mahon & Wartick, 2012). High "overall" *CSP* should not be construed to mean the firm has necessarily achieved high results in *all* areas of social responsibility (Wood, 2010).

The CSRHub overall CSR index is a multidimensional measure incorporating distinct scores for the four social responsibility dimensions described in Table 2.3. Because the CSRHub dataset has not yet been used in academic research, I performed a factor analysis to assess the reliability of the composite CSRHub overall CSR index measure per thresholds defined by Hair et al. (2010).

TABLE 2.3. CSRHub social responsibility rating dimensions and sub-categories

Dimension	*Sub-categories*
Community	Community development and philanthropy
	Human rights
	Supply chain
	Product
Employees	Compensation and benefits
	Diversity and labor rights
	Training, safety and health
Environment	Energy and climate change
	Environment policy and reporting
	Resource management
Governance	Board of directors
	Leadership ethics
	Transparency and reporting

Varimax rotation confirmed all four social responsibility dimension scores (Community, Employees, Environment, and Governance) loaded on a single factor as expected (eigenvalue = 2.498), explaining 62.46% of the variance and producing a significant Bartlett's test of sphericity ($p < .001$). The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (MSA) exceeded the required .50 threshold (.710), and all communalities met the recommended .50 rule-of-thumb. The Cronbach's alpha for the four items was .797, suggesting an acceptable level of reliability, and the Cronbach's alpha was not improved by the removal of any of the items. All item-to-total correlations exceeded the minimum .50 level, and inter-item correlations exceeded the recommended .30 threshold. Taken as a whole, these factor analysis results (summarized in Table 2.4) provide support for the use of the CSRHub composite overall CSR index score to operationalize the dependent variable, *CSP*, in this study.

TABLE 2.4. Exploratory factor analysis CSRHub Overall CSR Index

Variable	*Factor 1*
Community	.809
Governance	.773
Employees	.810
Environment	.767
Eigenvalue	**2.498**

Portfolio-Level Operationalization

Consistent with recent international business strategy research (Chao & Kumar, 2010; Gomez-Mejia, et al., 2010; Gomez-Mejia & Palich, 1997; Kim & Park, 2002;

Nachum & Song, 2011; Zaheer & Hernandez, 2011), I conceptualize the MNE as a *portfolio* and average the institutional distance measures at a portfolio level. It is relatively rare to find studies which take the MNE's *entire* portfolio of locations into consideration. It is much more common to see research models which focus on either 1) the headquarters locations; or 2) specific dyadic relationships between the headquarters location and one other specific location (such as the home-host dyad in associated with a foreign entry mode decision). This over-reliance on the home country and/or home-host dyad can be limiting, because as the resource-based view of the firm suggests, MNEs represent a *bundle* of resources, capabilities, locations, and knowledge (Barney, 1991; Wernerfelt, 1984). Failure to consider the MNE's full portfolio may result in an incomplete or at worst an incorrect perspective regarding the firm.

To operationalize institutional distances in a way that accounts for the MNE's total operating environment, I adopt a portfolio-level measurement technique established in prior international business literature. Portfolio-level measures are constructed by aggregating and averaging country-level characteristics or distances across all locations that comprise a MNE's subsidiary portfolio. Each resulting portfolio measure represents a weighted average of the country attribute(s) it is measuring, weighted such that multiple locations operating in the same country are each included in the portfolio-level average calculations. This portfolio measurement technique has been used to evaluate a variety of MNE phenomena, including: the target location-to-portfolio fit and country entry/exit decisions (Nachum & Song, 2011); the relationship between the geographic distance within the MNE's location portfolio and firm profitability (Zaheer & Hernandez, 2011); and the moderating influence of institutional distance within the location portfolio on the international diversity-performance relationship. This portfolio measurement approach

allows for the formation of firm-specific measurements based on the MNE's unique portfolio of locations (Nachum & Song, 2011). This provides advantages over purely dyadic distance calculations. "The adoption of a dyadic perspective would not reveal the impact of the benefits and costs of distance aggregated at the level of the firm as a whole because of trade-offs and spillovers that may be involved both within and across portfolios" (Zaheer & Hernandez, 2011, p. 123).

Independent Variables

Portfolio informal institutional distance (PIID): As in Xu and Shenkar (2002), *Informal institutional distance* is measured via cultural distance. I differ from their study by averaging cultural distance at a portfolio level. To accomplish this, the cultural distance between each headquarters-subsidiary dyad is first calculated following the widely adopted formula set forth by Kogut and Singh (1988), using four dimensions taken from Hofstede's (1980) national culture scale: power distance, individualism-collectivism, uncertainty avoidance, and masculinity-femininity. The four attribute-level dyadic cultural distances are then averaged to arrive at an average overall cultural distance for each headquarters-subsidiary pair, again consistent with Kogut and Singh (1988).

Second, following prior international business studies (Chao & Kumar, 2010; Gomez-Mejia, et al., 2010; Gomez-Mejia & Palich, 1997; Kim & Park, 2002; Nachum & Song, 2011; Zaheer & Hernandez, 2011), the distances for all headquarters-subsidiary dyads are then averaged to create an overall portfolio-level measure of informal institutional distance for the MNE. The firm's resulting average portfolio informal institutional distance represents a weighted average of the cultural distance between all

subsidiary countries and the headquarters locations such that multiple subsidiaries operating in the same country are each included in the average calculation for the firm. The overall measurement of each firm's portfolio informal institutional distance (PIID) is reflected in the following formula:

$$PIID_{Firm} = \left[\frac{\sum_{i=1}^{N_{Sub}} \left[\frac{(PDI_{HQ} - PDI_i)^2}{Var_{PDI}} + \frac{(IND_{HQ} - IND_i)^2}{Var_{IND}} + \frac{(UAI_{HQ} - UAI_i)^2}{Var_{UAI}} + \frac{(MAS_{HQ} - MAS_i)^2}{Var_{MAS}} \right]}{4 \cdot N_{Sub}} \right] \quad (2.1)$$

where:

$PIID_{Firm}$ = The firm's average Portfolio Informal Institutional Distance

$_i$ = Suffix indicating the different subsidiaries

N_{Sub} = Number of subsidiaries in the firm's portfolio

PDI_{HQ} = Hofstede Power Distance value for the firm's headquarters (HQ) country

PDI_i = Hofstede Power Distance value for the firm's $_i$th subsidiary's country

Var_{PDI} = Variance across all available countries for Hofstede Power Distance values

IND_{HQ} = Hofstede Individualism-Collectivism value for the firm's HQ's country

IND_i = Hofstede Individualism-Collectivism value for the firm's $_i$th subsidiary's country

Var_{IND} = Variance across available countries for Hofstede Individualism-Collectivism

UAI_{HQ} = Hofstede Uncertainty Avoidance value for the firm's HQ's country

UAI_i = Hofstede Uncertainty Avoidance value for the firm's $_i$th subsidiary's country

Var_{UAI} = Variance across all available countries for Hofstede Uncertainty Avoidance

MAS_{HQ} = Hofstede Masculinity-Femininity value for the firm's HQ's country

MAS_i = Hofstede Masculinity-Femininity value for the firm's $_i$th subsidiary's country

Var_{MAS} = Variance across all available countries for Hofstede Masculinity-Femininity values

Portfolio formal institutional distance (PFID): The *Portfolio formal institutional distance* reflects the differences in regulatory institutional stringency between the firm's subsidiary and headquarters locations. One of the most important and tangible areas of formal institutionalized regulation related to corporate social responsibility is the *environmental* dimension (Kolk & Pinkse, 2008). Environmental performance is considered one of the foundational pillars in the "triple bottom line" of corporate social responsibility (Bansal, 2004) and was one of the earliest areas of firm social responsibility explored by researchers, aided by the availability of tangible measurements (Rugman & Verbeke, 1998; Russo & Fouts, 1997) . Because of the maturity, measurability, and relevance of environmental performance to MNE CSP, in this study I follow Aguilera-Caracuel et al. (2012) and measure the formal institutional distance of each firm based on country-level environmental performance standards.

Consistent with prior environmental institutional distance measurements (Aguilera-Caracuel, et al., 2012), country-level environmental social responsibility standards data is obtained from the World Economic Forum's 2010 Environmental Performance Index (EPI), published by Yale Center for Environmental Law and Policy and the Center for International Earth Science Information Network (Emerson et al., 2010). The EPI has been subjected to thorough validity testing and has been confirmed to provide a reliable country-level comparison of environmental performance reflecting the respective stringency and effectiveness of regulatory policies and institutions in 163 countries (Saisana & Saltelli, 2010). By providing insights into the relative stringency of environmental regulatory institutions in a broad range of countries, the EPI is used as the basis to measure the formal institutional distance of the MNE's portfolio of locations in this study.

To create country-level scores that measure the stringency of environmental policy and physical conditions that MNEs may be subjected to, the EPI aggregates detailed environmental data points from a wide range of different governmental, international organization, NGO, and academic sources. The 10 environmental policy categories are tracked via 25 indicators, summarized in Table 2.5.

TABLE 2.5. EPI environmental performance policy categories and indicators

Policy categories	*Indicators*
Climate change	Greenhouse gas emissions
	Electricity carbon intensity
	Industrial carbon intensity
Air pollution (effects on humans)	Urban particulates
	Indoor air pollution
Air pollution (effects on ecosystems)	Sulfur dioxide emissions
	Nitrogen oxide emissions
	Ozone levels
	Water quality index
Agriculture	Pesticide regulation
	Agricultural water quality
	Agricultural subsidies
Environmental burden of disease	Environmental burden of disease
Water (effects on humans)	Access to drinking water
	Access to sanitation
Water (effects on ecosystems)	Water quality index
	Water stress
	Water scarcity index
Biodiversity & habitat	Biome protection
	Critical habitat protection
	Marine protected areas
Forestry	Growing stock
	Forest cover
Fisheries	Marine trophic index
	Trawling intensity

The EPI is scaled from 0 to 100, where 0 reflects the lowest possible environmental policy stringency and effectiveness and 100 reflects the highest possible standards. Actual 2010 EPI country scores range from a high of 93.5 (Iceland) to a low of 32.1 (Sierra Leone). Table 2.6 summarizes the 2010 EPI scores for the headquarters countries included in this study's sample.

TABLE 2.6. Sample headquarters country 2010 EPI scores

Country	*EPI*	*Country*	*EPI*	*Country*	*EPI*
Australia	65.7	India	48.3	Poland	63.1
Belgium	58.1	Ireland	67.1	Portugal	73.0
Canada	66.4	Italy	73.1	Singapore	69.6
China	49.0	Japan	72.5	Spain	70.6
Denmark	69.2	S. Korea	57.0	Sweden	86.0
Finland	74.7	Luxembourg	67.8	Switzerland	89.1
France	78.2	Malaysia	65.0	Thailand	62.2
Germany	73.2	Netherlands	66.4	United Kingdom	74.2
Greece	60.9	Norway	81.1	United States	63.5

The average formal institutional distance for each firm's portfolio of locations is calculated using the same basic technique as the informal institutional distance measure (PIID), consistent with other portfolio-level operationalizations in the international business literature (Chao & Kumar, 2010; Gomez-Mejia, et al., 2010; Gomez-Mejia & Palich, 1997; Kim & Park, 2002; Nachum & Song, 2011; Zaheer & Hernandez, 2011). First, the formal institutional distance between each headquarters-subsidiary dyad is calculated by subtracting the headquarters country EPI value from the subsidiary country EPI value. Second, all dyadic headquarters-subsidiary formal institutional distances for

the firm are then averaged to create the MNE's average portfolio formal institutional distance (PFID), reflected by the following formula:

$$PFID_{Firm} = \left[\frac{\sum_{i=1}^{N_{Sub}}[EPI_{Sub} - EPI_{HQ}]}{N_{Sub}}\right] \quad (2.2)$$

where:

$PFID_{Firm}$ = The firm's average Portfolio Formal Institutional Distance

$_i$ = Suffix indicating the different subsidiaries

N_{Sub} = Number of subsidiaries in the firm's portfolio

EPI_{Sub} = EPI value for the firm's $_i$th subsidiary's country

EPI_{HQ} = EPI value for the firm's headquarters (HQ) country

Several aspects of this operationalization of portfolio formal institutional distance are notable. Shenkar (2001) and Zaheer et al. (2012) have pointed out faulty assumptions commonly made by international business researchers in the conceptualization and operationalization of distance (including, but not limited to, institutional distance). Two such weaknesses include assuming symmetry between distance components and neglecting to consider directionality within the distance measure. Most distance measures take the absolute value or square of differences such that the distance from Country A to Country B is typically treated as equivalent to the distance from Country B to A (Zaheer, et al., 2012).

Based on the theoretical model presented, this study makes no such assumptions regarding the average portfolio formal institutional distance. Due to the hierarchical nature of formal institutions, my measurement of formal institutional distance considers both sign and direction. A large, positive portfolio formal institutional distance reflects a

firm whose subsidiaries are (on average) operating in locations which have much higher CSP expectations than the firm's headquarter location: e.g. the Chinese firm establishing subsidiaries in northern Europe. Conversely, a smaller or negative portfolio formal institutional distance reflects a firm whose headquarters location has higher CSP expectations than the countries in which its subsidiary locations are operating: e.g. a U.S.-based firm expanding into Asia. A firm headquartered in a country with low CSP expectations based on a low country EPI is more likely to have a relative high formal institutional distance, depending on the specific locations reflected in its portfolio of locations.

International scope: In this study *International scope* reflects the dispersion of firm operations across multiple national markets. Consistent with prior international social responsibility research (Bansal, 2005; Bansal & Hunter, 2003; Brammer, Pavelin, & Porter, 2006; Déniz-Déniz & Garcia-Falcon, 2002; Strike, et al., 2006), I measure each MNE's international scope as the number of unique countries in which the firm operates, reflecting both headquarters as well as subsidiary locations.

International scope is recognized as one of several different dimensions that comprise a firm's overall international experience (Chetty, Eriksson, & Lindbergh, 2006) and is closely related to other elements of international experience such as *duration* of time since the firm began international activity (Brouthers, O'Donnell, & Hadjimarcou, 2005) and *international intensity*, typically measured as a ratio of foreign to domestic sales (Hultman, Katsikeas, & Robson, 2011). Some CSR studies have also measured the firm's international presence by the percentage or number of foreign subsidiaries (Kennelly & Lewis, 2002; Strike, et al., 2006).

However, this study is specifically interested in the firm's exposure to foreign markets as a result of the geographic scope of its international experience. Other international experience measures (such as FSTS, international duration, or foreign subsidiaries) are more focused on the depth or intensity of MNE international experience (Chetty, et al., 2006; Strike, et al., 2006), as opposed to the geographic dispersion. For this reason, this study focuses on international scope as measured by number of countries.

It should be noted that international scope is also sometimes measured at a regional level, reflecting the number of unique geographic regions (as opposed to countries) in which the firm operates (Chetty, et al., 2006; Kennelly & Lewis, 2002). The country-level variable was selected for this study because it provides more information and is more commonly used in both the social responsibility and general international business literature. To calculate each firm's international scope, all subsidiary locations and the headquarters location associated with each MNE were obtained from Standard and Poor's Capital IQ (S&P Capital IQ) database. The international scope represents the log of the count of the number of distinct countries in which the MNE has at least one location.

Control Variables

A number of control variables found to predict CSP in previous social responsibility research were used. Unless otherwise noted, all control variables were obtained from the S&P Capital IQ database.

Following prior studies which identified a relationship between the size of a firm and CSP (Johnson & Greening, 1999; Strike, et al., 2006; Udayasankar, 2008), *Firm size*

is measured as the log of the number of employees. Following Barnea and Rubin (2010), ***Firm experience*** is measured as the log of age of the firm since its founding, in years. ***Industry*** dummies were coded to distinguish industry sectors provided by S&P Capital IQ: consumer discretionary, consumer staples, energy, financials, healthcare, industrials, information technology, materials, telecommunication services and utilities.

Social responsibility patterns can vary significantly between different geographic regions (McWilliams, et al., 2006). Additionally, the sample selection in this study resulted in a relatively large presence in three specific countries, with Japan, United Kingdom, and United States accounting for over 60% of the sample. Therefore I controlled for firm headquarters ***Region*** in this study. Dummy indicators were created for the three regions in the sample: Asian, European, and the North American. Because Europe was the most prevalent region in the sample, the dummy variable for Europe was omitted in the regression analyses.

The ***Home country power distance*** reflects the degree to which the headquarters country national culture is generally accepting of authority and power distribution inequality within the society. Prior studies examining the relationship of national culture attributes to CSP have consistently found power distance to be a significant predictor of corporate social responsibility outcomes at the country, firm, and managerial levels of analysis (Ioannou & Serafeim, 2012; Park, et al., 2007; Ringov & Zollo, 2007; Waldman, et al., 2006). The Hofstede national culture power distance value (Hofstede, 1980) for each firm's headquarters country is used to measure the home country power distance control variable for each firm. Table 2.7 lists all variable definitions and data sources.

TABLE 2.7. Variables, measures, and sources of data

	Variable	*Measure*	*Source*
Variables of interest	Corporate social performance (CSP)	Metric interval variable measuring the degree of firm social responsibility, from 0 (low) to 100 (high)	CSRHub 2011
	Portfolio informal institutional distance (PIID)	Indicator of the weighted average of the cultural distance between the MNE's subsidiary countries and its headquarters country.	Hofstede (1980)
	Portfolio formal institutional distance (PFID)	Indicator of the difference between the headquarters country social responsibility standards and the average subsidiary country social responsibility standards.	World Economic Forum 2010 Environmental Performance Index
	International scope	Indicator of dispersion of firm international presence across multiple national markets, measured by the natural log of the number of distinct countries in which the firm has a headquarters &/or subsidiary location	S&P Capital IQ
Control variables	Firm size	Natural log of number of employees	S&P Capital IQ
	Firm experience	Natural log of the age of the firm (years since founding)	S&P Capital IQ
	Industry	Dummy indicators for 10 industry sectors	S&P Capital IQ
	Home region	Dummy indicators for Asia, Europe, and North America	S&P Capital IQ
	Home country power distance	Indicator of the firm's headquarters location country power distance level	Hofstede (1980)

RESULTS

Because (1) the dependent variable is measured via a single, metric interval scale variable and (2) the research model includes moderation, hypotheses were tested using hierarchical moderated regression (Cohen, Cohen, West, & Aiken, 2003). One-tailed tests were used for all regression variables because the hypotheses are directional. Sample skewness and kurtosis levels were confirmed to be within recommended thresholds (Hair, et al., 2010). Table 2.8 summarizes the descriptive statistics of the study's sample.

TABLE 2.8. Descriptive statistics

Variables	*Mean*	*SD*	*Min*	*Max*	*Skewness*	*Kurtosis*
Firm CSP	55.48	6.556	33	71	-.423	.273
International Scope	20.46	17.107	2	106	-.208 †	-.602 †
Portfolio Formal Institutional Distance	-3.47	5.578	-27.37	11.72	-.969	2.068
Portfolio Informal Institutional Distance	5.87	2.437	.0246	12.42	-.120	-.161
Firm Size	48,360	71,045	1,328	472,000	.107 †	-.494 †
Firm Experience	93.4	61.641	3	539	-1.178 †	1.457 †
HQ Power Distance	44.42	11.906	18	104	.762	.716

n = 408.
† *Statistics represent variable post logarithmic transformation.*

Prior to running the regression equations, bivariate correlations were examined (Table 2.9). None of the significant correlations between the independent variables exceeded the recommended 0.70 co-linearity threshold (Hair, et al., 2010).

TABLE 2.9. Correlations of variables

Variables	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
01. Firm CSP	-											
02. International Scope †	.372**	-										
03. PIID (Informal Distance)	.048	.477**	-									
04. PFID (Formal Distance)	-.020	-.100*	-.173**	-								
05. Firm Size †	.452**	.631**	.249**	-.051	-							
06. Firm Experience †	.018	.108*	.094	.003	.091	-						
07. HQ Region – Asia	-.242**	-.231**	.318**	-.029	-.115*	-.030	-					
08. HQ Region – Europe	.175**	.135**	-.212**	-.322**	.041	.009	-.654**	-				
09. HQ Region – N America	.060	.097	-.102*	.436**	.081	.023	-.331**	-.497**	-			
10. HQ Power Distance	-.179**	-.051	-.023	.097	.047	-.115*	.499**	-.302**	-.196**	-		
Industries: 11. Financials	-.009	.011	-.168**	.043	.013	.152**	-.078	.076	-.004	.007	-	
12. Materials	-.070	-.124*	.005	-.066	-.207**	-.020	.038	-.016	-.024	-.047	-.203**	-
13. Energy	-.001	-.062	-.090	.121*	-.120*	-.057	-.029	-.123*	.187**	.025	-.115*	-.111*
14. Consumer Discretionary	.024	-.005	.047	-.022	.059	.009	.119*	.004	-.142**	.016	-.179**	-.173**
15. Consumer Staples	.006	.053	.087	.082	.060	.029	-.129**	.086	.041	-108*	-.132**	-.127*
16. Telecommunications	.063	.094	.021	-.038	.154**	-.154**	-.063	.085	-.034	-.011	-.069	-.067
17. Industrials	-.056	.081	.123*	-.103*	.118*	.049	.029	.017	-.055	-.009	-.241**	-.232**
18. Information Technology	.032	.023	.086	-.010	.004	-.080	.089	-.118*	.044	.040	-.120*	-.116*
19. Healthcare	-.025	.097*	.035	.029	-.005	.011	.006	-.079	.092	.026	-.101*	-.098*
20. Utilities	.149**	-.139**	-.181**	.048	-.035	-.129**	-.045	.037	.005	.106*	-101*	-.098*

*$p < 0.01$, **$p < 0.05$, $n = 408$ (two-tailed tests). † *Statistics represent variable post logarithmic transformation*.

TABLE 2.9. Correlations of variables (*continued*)

Variables	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*
13. Energy	-							
14. Cons. Discretionary	-.098*	-						
15. Consumer Staples	-.072	-.112*	-					
16. Telecommunications	-.038	-.059	-.043	-				
17. Industrials	-.131**	-.205**	-.150**	-.079	-			
18. Info Technology	-.065	-.102*	-.075	-.039	-.137**	-		
19. Healthcare	-.055	-.086	-.063	-.033	-.116*	-.058	-	
20. Utilities	-.055	-.086	-.063	-.033	-.116*	-.058	-.049	-

*$p < 0.01$, **$p < 0.05$, $n = 408$ (two-tailed tests).

In order to test Hypothesis 2 (examining the moderating effects of the MNE's *Portfolio formal institutional distance* on the relationship between *International scope* and *CSP*) an interaction variable was created. The interaction variable was calculated by multiplying *International scope* (number of discrete countries in which the firm is operating) and *Portfolio formal institutional distance* (the difference between the headquarters country social responsibility standard and the firm subsidiary portfolio's average country social responsibility standard). To minimize multicollinearity, variables used to create the interaction term were centered prior to the calculation and subsequent regressions (Cohen, et al., 2003).

Table 2.10 shows the hierarchical regression results of the three models used to test the hypothesized relationships between the portfolio institutional distance variables and firm CSP levels. Variance inflation factor scores (VIFs) reported in the results of all three regression models were inspected and compared to the conservative low-end threshold of 3.0 (Hair, et al., 2010, p. 204). With the exception of the *Industry* dummy

TABLE 2.10. Hierarchical regression results

Variables	*Model 1*		*Model 2*		*Model 3*	
Intercept	33.75	(3.51)	41.10	(4.22)	40.94	(4.20)
Firm Size	6.03***	(.56)	4.89***	(.67)	4.86***	(.69)
Firm Experience	-.27	(.79)	-.34	(.78)	-.31	(.78)
HQ Region – Asia	-1.73**	(.75)	-.57	(.91)	-.51	(.90)
HQ Region – N. America	-1.20*	(.75)	-1.54*	(.85)	-1.34*	(.85)
HQ Power Distance	-.10***	(.03)	-.12***	(.03)	-.12***	(.03)
Industries:						
Consumer Discretionary	1.21	(2.05)	1.13	(2.03)	1.15	(2.03)
Consumer Staples	-.09	(2.15)	-.03	(2.14)	-.03	(2.13)
Energy	3.06*	(2.26)	2.83	(2.25)	2.63	(2.24)
Financials	.87	(2.04)	.61	(2.02)	.39	(2.02)
Healthcare	.87	(2.31)	.31	(2.30)	.19	(2.29)
Industrials	-.27	(2.00)	-.26	(1.98)	-.27	(1.97)
Information Technology	2.43	(2.20)	2.32	(2.18)	2.60	(2.18)
Materials	1.54	(2.05)	1.53	(2.04)	1.73	(2.03)
Utilities	6.47***	(2.30)	6.78***	(2.28)	6.73***	(2.28)
International Scope	-		3.60***	(1.17)	3.82***	(1.17)
PIID	-		-.26**	(.16)	-.25*	(.16)
PFID	-		.06	(.06)	.09*	(.06)
PFID x International Scope	-		-		-.30**	(.15)
Overall model R-square	.308		.326		.333	
Adjusted R-square	.283		.296		.302	
Change in R-square			.018		.007	
F-value for change in R^2	-		3.401		4.350	
F-value sig for Δ in R^2	-		.018		.038	
Overall F-value	12.488***		11.073***		10.790***	

Dependent variable = *CSP* in all models. $n = 408$ in all models.
*$p < 0.1$ **$p < 0.05$ ***$p < 0.01$ (one-tailed tests).
Unstandardized coefficients with corresponding standard errors in parentheses.

variables, all VIFs were between 1.102 and 2.686, confirming that multicollinearity between the variables of interest was not a problem in the research model. VIFs for industry dummy variables had a higher range, from 3.087 to 8.893, which is still below the recommended high-end threshold of 10.0.

Model 1 contains only the control variables. The overall control model is statistically significant (R^2 = .308, p = .000). Consistent with prior CSP research, *Firm size* (b = 6.03, p = .000) and *Headquarters country power distance* (b = -.10, p = .000) were confirmed to be significant. The *Region* dummy variables for Asia (b = -1.73, p =< 0.05) and North America (b = -.1.20, p < 0.10) were also significant. Two *Industry* sectors were found to be a significant predictor of firm CSP levels in the control model: Energy (b = 3.06, p < 0.10) and Utilities (b = 6.47, p < 0.01). *Firm experience* (measured by the age of the firm) was not found to be significant (b = -27, n.s.).

Model 2 adds the independent variables. The overall model is statistically significant (R^2 = .326, p = .000) and represents a significant change in R^2 over Model 1 (change in R^2 = 0.018, p < 0.05). In examining the individual independent variables, the regression results confirm the findings of prior research that greater international scope is positively related to social performance (b = 3.61, p = .000).

Hypothesis 1 predicted that higher informal institutional distance in the MNE's portfolio (*PIID*) will be related to lower levels of firm *CSP*. *Portfolio informal institutional distance* was found to be negatively related to firm *CSP* (b = -.26, p < 0.05); this supports Hypothesis 1: *The greater the informal institutional distance between an MNE's headquarters location and its portfolio of subsidiaries, the lower the MNE's corresponding CSP.*

Model 3 tests the interaction effect of *Portfolio formal institutional distance* and *International scope* on *CSP* posited by Hypothesis 2. Model 3 is statistically significant (R^2 = .333, p = .000) and represents a significant change in R^2 over the Model 2 main effects (change in R^2 = 0.007, $p < 0.05$). Model 3 regression coefficients show that the interaction of MNE's *International scope* and *Portfolio formal institutional distance* is negative and significant (b = -.30, $p < 0.05$). This provides initial support for the presence of moderation and Hypothesis 2: *The relationship between international scope and MNE CSP is moderated by formal institutional distance such that the benefits of increased international scope are reduced when formal institutional distances within the MNE portfolio are higher*.

To interpret the interaction between *Portfolio formal institutional distance* and *International scope*, I drew an interaction plot using values of one standard deviation above and below the mean of each interaction variable per Aiken & West (1991). I defined firms operating in a number of countries at least one standard deviation above the mean number of countries as having *high* international scope; firms in a number of countries less than one standard deviation below the mean number of countries were defined as having *low* international scope. Likewise, I used one standard deviation above and below the mean portfolio formal institutional distance measure to identify firms with *high* and *low* portfolio formal institutional distance respectively.

Figure 2.2 graphically illustrates the nature of the interaction. With respect to CSP, all firms tend to benefit from increased international scope. Under both low formal institutional distance and high formal institutional distance conditions, greater international scope results in higher firm CSP. However, as evidenced by the steeper

slope of the low formal institutional distance line, firms with higher portfolio formal institutional distance do not receive as great of a CSP benefit from increased international expansion as firms with lower formal institutional distance. Firms with high portfolio formal institutional distance have higher subsidiary country CSP standards than are expected by their home country; this distance negatively affects the expected CSP benefits of increased international scope.

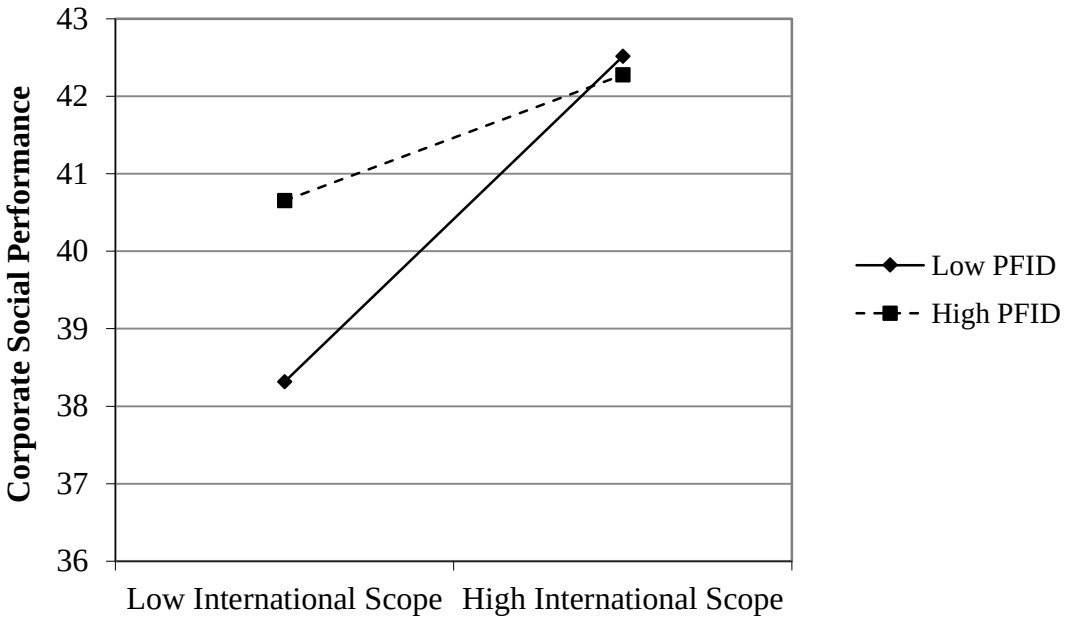

FIGURE 2.2: Interaction of portfolio formal institutional distance (PFID) and international scope on firm CSP

Following the recommended methods for testing the interaction between continuous variables (Aiken & West, 1991; Cohen, et al., 2003), I also conducted a simple slope analysis to test whether the slope of the interaction lines were significantly different from zero under a variety of levels of the moderating variable. The results are summarized in Table 2.11. For firms with low *PFID* (one standard deviation below the

mean), the results of the simple slope test were significantly different from zero (simple slope = 5.513, $t = 3.719$, $p = .000$). The simple slope test for firms with medium levels of *PFID* (equal to the mean) was also significantly different from zero (simple slope = 3.823, $t = 3.258$, $p < 0.01$). However, at high levels of *PFID* (one standard deviation above the mean), the simple slope test was not significant (simple slope = 2.133, $t = 1.563$, n.s.).

These results indicate that while the overall interaction of *International scope* and *PFID* on *CSP* is significant, we have highest confidence that the dependent variable, *CSP*, increases with increased international scope at lower levels of *PFID.* As we move to firms with higher levels of *PFID,* however, CSP may not be affected by a firm's international scope.

TABLE 2.11. Simple slope analysis results †

Conditions	*PFID value*	*Simple slope*	*t*	*P*
Low PFID	-5.57765	5.513	3.719	.000
Medium PFID	0	3.823	3.258	.001
High PFID	5.57765	2.133	1.563	.119

† Interaction of *Portfolio formal institutional distance* (*PFID*) and *International scope* on firm *CSP*.

DISCUSSION

I began this study by considering how formal and informal institutional distances within a MNE's portfolio of locations might influence the firm's overall CSP. Institutional theory recognizes the unique environmental pressures that influence a

firm's drive toward local legitimacy. Large institutional distance represents a large discrepancy between home and host institutional environments. Previous research has focused on how specific *headquarters*-based institutional and cultural factors may affect CSP levels. Here I advance the CSP literature by theorizing and empirically examining how formal and informal institutional distance in the firm's overall *portfolio* of operating locations affects MNE CSP.

I theorized that the informal and formal components of institutional distance can negatively influence firm CSP in two different ways. First, I hypothesized that firm CSP would be negatively affected by greater average informal institutional distance between its headquarters and full set of subsidiary locations, as measured by the firm's portfolio-level aggregate cultural distance. Additionally, I hypothesized that greater formal institutional distance within the firm's operating portfolio reduces the CSP benefits of greater international scope.

I tested my institutional distance hypotheses on a broad sample of 408 firms headquartered in 27 different countries spanning the European, Asian, and North American regions. As expected, I found that firm MNE CSP suffers when the aggregate cultural distance between the headquarters location and portfolio of subsidiary locations is high, reflecting a large portfolio-level informal institutional disparity between the countries in which the firm is operating.

In my second hypothesis I explored the moderating influence of home-host country formal institutional distance and the firm's international scope. I found that firms with greater formal institutional distance, as reflected in the country social responsibility standards differences between headquarters and portfolio of locations, experience fewer

CSP benefits from increased international scope. These findings reflect the challenges firms can expect to face in understanding and responding to local formal CSP expectations that are very different from their headquarters location.

These results suggest that MNEs headquartered in countries with relatively stronger formal institutions that emphasize CSP, such as Sweden, are at an advantage in terms of the CSP benefits associated with international expansion compared to firms headquartered in countries with relatively lower CSP standards, such as China. Because the Swedish firm's home country high CSP standards meet or exceed most subsidiary location standards, its portfolio formal institutional distance will generally be a very small or negative number; that is the Swedish firm is able to apply its high standards of CSP experience to other locations, gaining the CSP benefits associated with greater international scope.

Conversely, CSP standards are generally lower in Asia than in other regions of the globe. When a firm headquartered in China chooses to expand internationally, it can be expected to encounter subsidiary locations with higher CSP expectations than its Chinese home country standards. As a result the Chinese firm will have a greater formal institutional distance to overcome as it expands geographically, leading to lower CSP benefits associated with greater international scope. These results supporting Hypothesis 2 suggest that the typical Chinese firm cannot expect to receive as great a CSP benefit from expanding into additional countries as a typical Swedish firm due to the larger portfolio formal institutional distance. Thus firms from higher CSP countries will on average tend to benefit more from international expansion that firms from lower CSP nations, from a CSP perspective.

Contribution

One unique research contribution of this study is the application of the concept of the MNE operating *portfolio*. The operating portfolio is based on a consideration of the full set of subsidiary operating locations specific to a given MNE and may provide a useful vantage point from which to explore institutional influences on MNEs. The international business literature has used the distance between sets of two specific countries, typically a headquarters/subsidiary combination or a home country/target host country dyad to study numerous phenomena of interest to MNEs. However, this study considers the *entire* set of operating locations particular to a MNE when evaluating the effects of distance on CSP. The portfolio conceptualization recognizes that both the number of countries and corresponding institutional profiles of the specific countries in which a MNE is operating play a role in defining the MNE's unique challenges and opportunities. The MNE portfolio may provide insights that can overcome some of the limitations of applying institutional theory to MNEs and represents a paradigm that may offer unique insights if applied in other international business research areas.

Another research contribution of this study is its asymmetric conceptualization of formal institutional distance. Distance in international business research is most commonly conceived as the absolute value of the difference between two points (Shenkar, 2001; Zaheer, et al., 2012); that is, the institutional distance from Country A to Country B is typically treated as equivalent to the distance from Country B to A.

This study moves beyond this non-directional dyadic view and instead considers the difference between the CSP standards of the MNE's subsidiary location countries as compared to its home country to operationalize the firm's formal institutional distance.

Unlike informal institutional distance, the firm's portfolio formal institutional distance is assumed to be neither symmetrical nor bidirectional.

The theoretical foundation for this operationalization was found in an examination of the inherent differences between formal and informal institutional distances. Informal institutional differences cannot necessarily be overcome with experience; each country has a unique culture. In contrast, formal institutional requirements are both finite and hierarchical; once a firm has met a high, stringent formal institutional level, that experience can be leveraged for subsequent country expansions.

Therefore, a MNE headquartered in a country with a lower CSP standard than its subsidiary portfolio countries could face a very large formal institutional distance. In contrast, a MNE headquartered in a country with higher CSP standards than the MNE's subsidiary portfolio can be expected to have a very small or negative formal institutional distance with which to contend. This research contribution helps address some of the criticisms that have been levied against the typical application of distance in international business research (Shenkar, 2001; Zaheer, et al., 2012). Other international business studies that utilize institutional distance may also want to consider whether the dynamics of formal vs. informal institutional distance may also be different in other research settings.

Managerial Implications

This research contributes to the international business and CSP literature by highlighting how firm CSP may be affected by formal and informal institutional distance within the firm's total operating portfolio. As firms expand internationally into new

country markets, managers may want to consider the implications of the institutional distances created by their country selections. Managers may want to consider the potential CSP effects of expanding into target countries that are institutionally distant from their home environment. This may be especially important for firms headquartered in regions that have low CSP standards, such as emerging market firms, looking to expand to countries with higher CSP standards, such as into more institutionally-developed economic regions. Managers have an opportunity to make decisions which minimize the potential negative effects on CSP.

A firm headquartered in a country that has relatively *higher* standards of social responsibility practices will have developed specific capabilities to achieve compliance with high levels of formal institutional regulation. As the firm expands into countries with relatively lower regulatory CSP expectations, their already-developed capabilities may supersede the requirements of the new country. Therefore, formal institutional distance (regardless of the extent of the firm's other international experience) between the home and host countries may become a non-issue for these firms. Conversely, the formal institutional distance and corresponding international scope can be very relevant for a firm headquartered in a country with relatively *lower* standards of social responsibility practices. This firm may *not* yet have faced the more stringent regulatory expectations that the target host country requires. Such a firm may find the higher standards adversely affect its CSP.

Limitations

This proposed study has several limitations which may offer opportunities for future streams of research building upon this study's findings. Although the research

design includes the holistic consideration of the MNE as a *portfolio*, the scope of the portfolio used in this study is limited to company subsidiary locations. The portfolio operationalization does not consider non-subsidiary alliance partners and the associated resources and potential influences from this broader network of relationships. Recent research has indicated that these networks may be important considerations to capture the full dynamics affecting MNEs (Johanson & Vahlne, 2009; Zaheer & Hernandez, 2011).

It should also be noted that in measuring the institutional distances at a portfolio level, all subsidiaries are weighted equally, consistent with the approach used in other recent portfolio-level studies (Chao & Kumar, 2010; Gomez-Mejia, et al., 2010; Gomez-Mejia & Palich, 1997; Kim & Park, 2002; Nachum & Song, 2011; Zaheer & Hernandez, 2011). Future research may be able to incorporate theory that could further delineate and weight subsidiaries based upon other factors, such as the percent of revenue or number of employees associated with each subsidiary.

There are also opportunities for future research associated with the specific choices of nation-level institutional measurements. Additional measures of formal and informal institutions relevant to the domain of CSP could also be incorporated into the research model. The country-level attributes used to calculate the institutional distances do not account for possible within-country variance (Egri & Ralston, 2008), so it is possible that as more within-country institutional measures become available, this research could be expanded to incorporate them.

Furthermore, this study is cross-sectional. A longitudinal research design could be used to explore whether the CSP effects of institutional distance diminish over time, as

has been found to be the case of cultural distance effects on subsidiary control mechanisms (Wilkinson, et al., 2008), for example.

The Environmental Performance Index used to measure the formal institutional distance within the firm's portfolio of locations in this study is based on only one of the foundational pillars of social responsibility, the environment. As reliable country-level indicators for broad ranges of countries that encompass more of the dimensions of CSP (such as social and employee-related) become available, these dimensions could be incorporated into the formal distance measurement.

One of the general limitations prevalent in much social responsibility research is the lack of standardization of CSP rating methodologies in use (Márquez & Fombrun, 2005; Turker, 2009; Wood, 2010). Future studies could replicate this study's findings using alternative CSP rating data sources or disaggregated rating subsets. Future research could examine the influence of formal and informal institutional distance on one or more dimensions of corporate social responsibility, such as firm environmental performance, labor relations, or governance practices. Future research could also incorporate performance outcomes to determine if either of the CSP-related institutional distance measures have a relationship with firm financial performance.

Conclusion

This study's findings indicate that institutional distance matters to firm CSP. Operating in countries which are very different culturally or which have higher CSP expectations as compared to the firm home country location may compromise the firm's overall CSP results. If the firm's goal is to have a strong CSP, managers should select

countries which have similar formal and informal institutional profiles to their home country to minimize the negative influence of institutional distance on firm CSP.

The findings suggest that institutional distance may be particularly relevant (and disadvantageous) for firms headquartered in countries with relatively lower CSP standards, such as emerging market firms. Firms from countries with higher formal institutional standards can more readily transfer their experience to countries with lower standards. However firms from countries with lower formal institutional standards cannot necessarily transfer their experience to countries with higher standards. Hence, when institutional distance is greater, firms from countries with higher formal institutional standards with greater international experience will be less negatively affected than those with less international experience.

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CHAPTER 3 (Paper 2)

FORMAL AND INFORMAL CORRUPTION ENVIRONMENTS AND MULTINATIONAL ENTERPRISE SOCIAL IRRESPONSIBILITY

Abstract

In this study I examine the underexplored antecedents and consequences of multinational enterprise (MNE) corporate social irresponsibility (CSiR) by theorizing and empirically examining how levels of corruption in a MNE's external environment affect the firm's level of CSiR and subsequent performance. Using an institutional theory framework developed by North (1990), corruption is conceptualized as having both formal and informal dimensions. Applying a *portfolio* approach used in prior international business studies to view an MNE's environment as the sum of all of its geographic locations, I hypothesize and find that higher levels of formal and/or informal corruption environments are related to higher levels of MNE CSiR. I also explore the normative aspects of social irresponsibility and find that firms with higher CSiR will be outperformed by less socially irresponsible firms. The results support the notion that there are institutionally-driven ties between formal and informal corruption, social irresponsibility, and firm performance.

Keywords: *corporate social responsibility (CSR), corporate social irresponsibility (CSiR), institutional theory, multinational enterprise (MNE), portfolio, corruption, two-stage least squares regression (2SLS)*

INTRODUCTION

While research concerning corporate social responsibility (CSR) continues to grow (Aguinis & Glavas, 2012), there has been relatively little scholarly interest in examining corporate social *irresponsibility* (CSiR). CSR is associated with doing 'good deeds'; conversely CSiR reflects a firm's 'bad deeds' (Muller & Kräussl, 2011). CSiR can result from a firm strategy, decision, and/or action that "negatively affects an identifiable social stakeholder's legitimate claims (in the long run)" (Strike, Gao, & Bansal, 2006, p. 852). More negative actions on the part of the firm can result in higher levels of social irresponsibility. Thus, CSiR is more than simply a firm's failure to act in a responsible manner (Lange & Washburn, 2012).

It may be tempting to regard CSR and CSiR as opposite ends of the same continuum, but CSiR is a concept distinct from CSR (Lange & Washburn, 2012; Mattingly & Berman, 2006; Wood, 2010). Simply interpreting CSiR as a low level of overall firm CSR is not sufficient (McGuire, Dow, & Argheyd, 2003; Muller & Kräussl, 2011). This is because firms can potentially exhibit both CSR and CSiR behavior simultaneously (Strike, et al., 2006). A firm might have a strong record in one area of social responsibility but act irresponsibly in another area. For example, per the 2010 Kinder, Lydenberg, Domini Research & Analytics social responsibility ratings, Starbucks exhibited high levels of CSR in the categories of environmental sustainability and community relations. At the same time, concerns regarding labor practices within Starbucks' supply chain resulted in high employee relations-related irresponsibility levels (MSCI, 2010). Firms may even invest in more 'good' to compensate for their past or current irresponsibility practices (Kotchen & Moon, 2011) or to act as a type of insurance

against future irresponsibility (Godfrey, Merrill, & Hansen, 2009; Minor & Morgan, 2011).

In addition, a given action may be seen as socially responsible from one stakeholder perspective but irresponsible from another (Wood, 2010). When Shell Oil was removed from the Dow Jones Sustainability Index in 2010 because of environmental and human rights irresponsibility in its Nigerian operations, exiting the country was considered to be the socially responsible decision to eliminate these violations (Datamonitor, 2011). The Nigerian exit option was also viewed as potentially *irresponsible* due to concerns that Shell's presence would only be replaced with even *less* environmentally and human rights-sensitive state-owned Chinese oil companies. CSR and CSiR have unique dynamics and therefore deserve disparate consideration.

Compared to CSR, there has been scant focus on the antecedents and consequences of CSiR behavior (Greenwood, 2007; Lange & Washburn, 2012). Aside from the isolated insights that greater international diversification can lead to higher CSiR (Strike, et al., 2006) and certain executive compensation structures can be associated with higher levels of firm CSiR (McGuire, et al., 2003), what we know about social irresponsibility is extremely limited. This is surprising, since "perceptions of social irresponsibility are likely to generate stronger observer reactions and ultimately loom much larger for the firm than perceptions of social responsibility" (Lange & Washburn, 2012, p. 301). The reverberations associated with incidents of and reputations for CSiR can have a greater (negative) influence on the value of the firm than any positive increases associated with CSR (Doh, Howton, Howton, & Siegel, 2010; Frooman, 1997; Muller & Kräussl, 2011).

The lack of prior research attention to CSiR offers opportunities to explore the potential CSiR implications of a variety of institutional environmental factors external to the firm. One institutional environmental influence that has not yet been considered within the context of overall firm CSiR is *corruption*. Like social irresponsibility, corruption is a non-market force that has ethical implications for the firm and can have a potential negative impact on organizations (Rodriguez, Siegel, Hillman, & Eden, 2006). Because different countries exhibit different levels of public and private corruption (Cuervo-Cazurra, 2006), a consideration of corruption's relationship to CSiR may be particularly relevant to multinational enterprises (MNEs), which are subject to a wide variety of different external influences stemming from their diverse, multiple, country-spanning operating environments (Kostova, Roth, & Dacin, 2008).

International business research has confirmed that firms headquartered in countries characterized by lower corruption have higher levels of social responsibility (Ioannou & Serafeim, 2012). Additionally, previous research within the economics literature has found negative relationships between corruption and the stringency of country-level environmental policy and country environmental performance (Damania, Fredriksson, & List, 2003; Doig & Mclvor, 1999; Lopez & Mitra, 2000; Morse, 2006; Welsch, 2004). These studies provide *prima facie* support for the notion that corruption may be linked to some aspects of CSiR.

In this paper I use an institutional theory lens to examine the impact of both formal and informal aspects of corruption on corporate social irresponsibility in an international context. Institutional theory recognizes that firms strive to align themselves within their external institutional environment (Kostova, et al., 2008). This institutional environment is comprised of both formal institutions, which include codified regulations

and laws, and informal institutions, which encompass the more tacit cultural and behavioral norms (North, 1990).

I conceptualize the MNE as a *portfolio* of international locations and take into account corruption characteristics of *all* locations in which the MNE has an operating presence. Building on institutional theory, I develop theory that suggests a firm's operating environment is comprised of both a *formal corruption environment* (FCE) and an *informal corruption environmental* (ICE) component. The FCE reflects the level of corruption within the country's public sector, encompassing corruption inherent in formal governmental, political, and administrative institutions. The ICE captures the general public's views on and experiences with corruption in their everyday lives, reflecting the more general national penetration of corruption in the country's culture. I hypothesize that due to formal and informal institutional influences, higher FCE and/or ICE in the portfolio of countries in which a MNE is operating will be related to higher levels of firm CSiR.

Further, I investigate the normative aspects of social irresponsibility by investigating the question of whether CSiR is related to MNE performance. Prior research has established a variety of relationships between CSR and firm financial performance (Margolis, Elfenbein, & Walsh, 2009; Margolis & Walsh, 2003; Orlitzky, Schmidt, & Rynes, 2003; Peloza, 2009), but we do not yet know if CSiR is related to firm performance. I develop theory that suggests CSiR is related to performance for a number of reasons. CSiR may draw attention from both private (e.g. non-governmental organization) and public (e.g. regulatory) constituents, pressuring the firm to expend resources to rectify its irresponsible behavior and address resulting stakeholder harm, reducing performance. Additionally, not only can reacting to CSiR be a drain on firm

resources, but a pattern of socially irresponsible actions may put the firm's legitimacy with its stakeholders at risk, reducing firm sales. For these reasons I hypothesize that firms with higher CSiR will be outperformed by firms that do not have to contend with these added costs and risks.

Hence, I contribute to the international business and social responsibility literatures in several ways. First, this study is unique in that it is the first to explore the impact of a MNE's overall social irresponsibility on its performance. Understanding the harmful results of corrupt and irresponsible behavior is an open issue in the social responsibility literature (Putrevu, McGuire, Siegel, & Smith, 2012). This study's results provide new strategic insights into the importance and relevance of the *consequences* of CSiR to MNEs by linking CSiR and firm performance.

I also examine *antecedents* of CSiR by testing the impacts of corruption levels evident the firm's institutional environment. In doing so, my conceptualization of corruption as having both a formal and informal component is a novel contribution. Research typically limits the focus to formal (public sector) corruption. This study expands beyond formal corruption by highlighting the incremental influence of the under-emphasized general permeation of corruption in a society with the inclusion of the informal corruption environment. Finally, by regarding the entire location footprint of the MNE as a holistic unit, I am the first to examine social irresponsibility in a way that incorporates the corruption influences of the MNE's *entire portfolio* of operating locations.

THEORY AND HYPOTHESES

Institution-Based View

I build on institutional theory in this study to explain how and why an external environmental force, such as corruption, affects firm behavior, specifically CSiR behavior. Institutional theory recognizes that firms seek legitimacy within their target markets (Scott, 2008). That is, they want their actions to be perceived as being "desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (Suchman, 1995, p. 574).

Firms rely on institutional cues to provide both explicit and implicit direction regarding what constitutes legitimacy. These cues can come from both formal and informal institutions, essentially defining the "rules of the game" for individuals and businesses (North, 1990, p. 3). North's model specifies that formal institutions include governing structures such as political, judicial, and economic rules, regulations, and other formalized behavioral guidelines. Informal institutions permeate an individual's full range of daily interactions. Interactions between family members, coworkers, and strangers are subject to certain informal constraints in the forms of expected behavioral norms, codes of conduct, and cultural norms and conventions.

Despite their tacit and relatively ambiguous nature, informal institutions can be particularly important behavioral influences (North, 1990). This is because of a fundamental difference between formal and informal institutions. The clarity and strength of formal institutions varies between countries. Firms will be subject to greater formal institutional pressures in environments where those formal institutions are strong and well-developed. For example, emerging economies tend to have more underdeveloped formal institutional environments (Peng, Wang, & Jiang, 2008).

In contrast, *all* locations exert *some form* of informal institutional influence on their inhabitants. One country's overall informal institutional environment is not necessarily "stronger" or "weaker" than another; it is simply *different*. For example, China and Sweden have very different cultural norms, but one would not characterize either country as having "more" or "less" culture than the other. Where formal institutional structures are weak, informal constraints tend to play an even larger role in influencing firm behavior (Peng & Heath, 1996).

Formal and informal institutional norms are more than mere "background conditions" or contextual factors; they can be key drivers of strategic decisions (Peng, Sunny, Pinkham, & Hao, 2009). Institutional pressures provide direction that can help firms reduce uncertainty (Scott, 2008). The ability to understand and respond to the expectations of the institutional environment can drive a firm's success (or failure) (Henisz & Swaminathan, 2008; Peng & Pleggenkuhle Miles, 2009). Achieving institutional legitimacy can enhance the prospects for the firm's very survival (Kostova, et al., 2008).

Establishing legitimacy within formal and informal institutional environments can become even more complex for MNEs who by definition operate in multiple countries with potentially diverse institutional expectations (Kostova, et al., 2008). Legitimacy may take different forms in different countries, conditions, and contexts. This dynamic can be particularly salient for MNEs doing business in emerging economies, where institutional environments may be in a state of transition (Peng, et al., 2009).

Institutional theory is a particularly appropriate lens through which to view firm behavior with regards to social responsibility-related outcomes because social responsibility cues commonly emerge from the formal and informal institutions within

which the firm interacts (Campbell, 2007). MNEs may use such social responsibility cues to meet specific legitimacy expectations of their local stakeholders (Matten & Moon, 2008). MNEs may tailor social responsibility investments and priorities to align with the institutional environment in a given host country market (Chiu & Sharfman, 2011; Yang & Rivers, 2009).

Institutionalized Corruption

In this study I focus on one particular dimension of the MNE's institutional environment: *corruption*. Much of the corruption research to date has emphasized public sector corruption, consistent with a definition of corruption as "the use of public office for private gain" (Gray & Kaufmann, 1998). In this study I conceptualize corruption more broadly, expanding the consideration of corruption beyond the public sector and conceiving it as "the misuse of *entrusted* [emphasis added] power for private gain" (Transparency International, 2010). Consistent with institutional theory, this broader definition recognizes that corruption can be promoted via both formal (public sector) and informal (culturally-reinforcing) mechanisms.

Including an informal corruption component is an important distinction compared to typical corruption studies which focus primarily or solely on formal corruption in the public sector. The intent is to expand our conceptualization of corruption and its impacts. Without minimizing the significant global economic impact of corrupt commercial interactions involving public officials (Transparency International, 2010), the ubiquity of corruption into the general society can also be a factor affecting MNEs. The informal component of corruption captures this penetration of corruption into citizens' everyday lives. Though not as codified or clearly structured as formal institutions, the informal

aspect of institutional pressures are still critical influences of what constitutes legitimacy (North, 1990). For this reason, I develop theory to explain how both the formal and informal aspects of corruption can influence CSiR.

Corruption and Social Responsibility

Corruption and social responsibility are related phenomena (Rodriguez, et al., 2006). Both concepts represent unique non-market aspects of societies and recognize that firms are subject to formal and informal institutional influences found in their operating environments. Both corruption and social responsibility pressures may influence how firms interact with and respond to the expectations of governments, communities, and other local stakeholders. Though rarely studied together (Rodriguez, et al., 2006), prior research has begun to explore relationships between corruption and social responsibility upon which this study builds.

Prior literature demonstrates the existence of relationships between corruption and certain aspects of social responsibility. For instance, firms headquartered in countries where their managers are expected to experience higher levels of corruption in their interactions with public officials have been shown to have correspondingly lower levels of positive social performance (Ioannou & Serafeim, 2012). Researchers have also found a negative relationship between corruption levels and environmental policy and performance (Damania, et al., 2003; Doig & Mclvor, 1999; Lopez & Mitra, 2000; Morse, 2006; Welsch, 2004).

There is also some evidence that operating in environments that are perceived to have higher levels of corruption may lead firms to invest less in social responsibility. Using a sample of MNEs with subsidiary locations operating in China, Luo (2006) found

that firms' philanthropic contributions decrease in higher corruption environments. Firms are less likely to contribute socially when they perceive that their investments have a higher likelihood of being embezzled or misapplied by corrupt public officials.

These few studies provide initial support for the notion that there are ties between corruption and social responsibility. But these studies have several shortcomings. First, whereas these studies explore CSR outcomes (environmental performance, philanthropy), they do not specifically examine corruption as a possible antecedent of socially *ir*responsible behavior, as I do here. Furthermore, these studies focus on formalized corruption within the *public* sector, whereas I conceptualize corruption as a multi-dimensional construct with both formal (public) and informal (private) components. Finally, these studies do not take into account how the corrupt influences of a MNE's *entire* portfolio of locations might impact the firm, focusing instead on individual country effects. In this study I contribute to this emerging area of research by theoretically and empirically exploring the relationships between MNE portfolio formal and informal corruption environments and firm social irresponsibility and performance as shown in Figure 3.1, advancing the international business and social responsibility literatures.

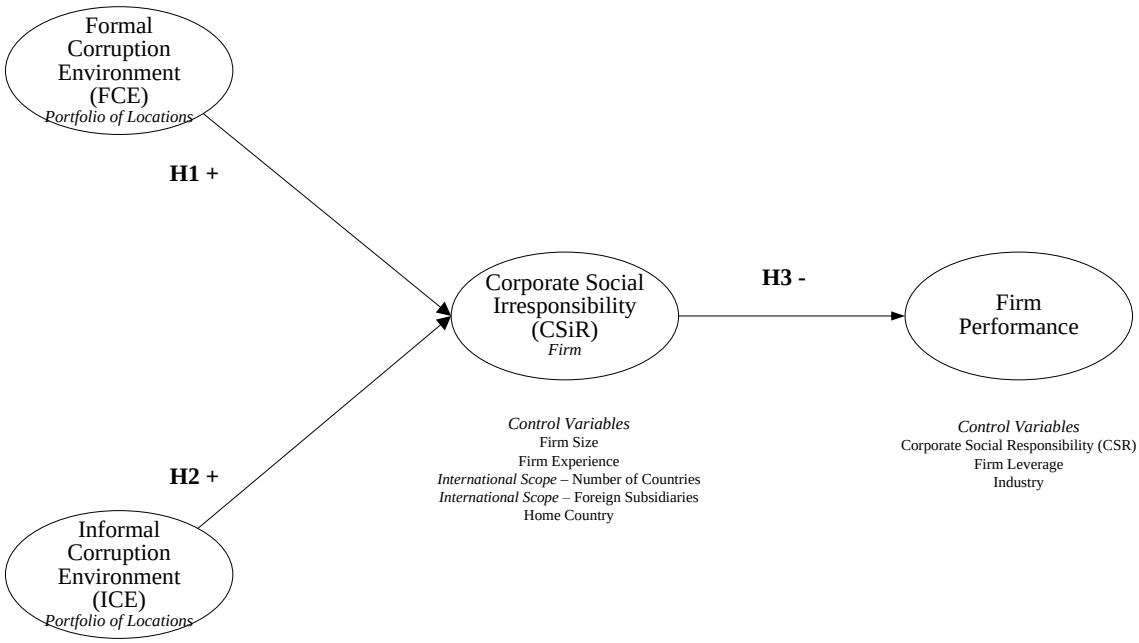

FIGURE 3.1. Conceptual research model

Formal Corruption Environments and Firm Social Irresponsibility

Corruption inherent in a nation's public sector is found in governmental, political, and other administrative institutions. This governmental aspect of corruption is commonly treated synonymously with the *overall* level of corruption in corruption research (Uhlenbruck, Rodriguez, Doh, & Eden, 2006). In this study, consistent with institutional theory's distinction between formal and informal institutions (North, 1990), I recognize public sector corruption as the *formal corruption environment* (FCE).

Corrupt practices in these institutions can be considered "formalized" in that they reside directly within formal institutional structures established and sanctioned by the State. The payment of bribes to public officials, money predominantly sourced by corporations, is the most prevalent example of formalized corruption. It is estimated that over $1 trillion is paid in bribes annually worldwide (Hills, Fiske, & Mahmud, 2009).

Firms interact with public officials and formal institutional processes in a variety of ways in establishing and managing their local operations. An institutional framework put forth by Rodriguez, Uhlenbruck, and Eden (2005) suggests in doing so firms can expect to be confronted with a higher degree of corrupt officials in some countries than others. They coin the term corruption *pervasiveness* as a reflection of the firm's "expectation of the proportion of interactions with the state that will entail corrupt transactions" (Rodriguez, et al., 2005, p. 385).

Institutional theory posits that cues from formal institutions influence a firm's behavior, and a firm's activities reflect the formalized norms of its operating environment (North, 1990). If formal institutional cues include corrupt or unethical practices, they are likely to have an impact on a firm's actions in its search for institutional legitimacy. A more pervasive FCE increases the likelihood that the firm will encounter corruption within their public sector interactions, resulting in more opportunities for the firm to act in a corrupt manner (Argandoña, 2007), likewise leading to greater firm participation in corruption (Uhlenbruck, et al., 2006).

This dynamic is even more complex for MNEs, firms that operate in multiple countries representing a potentially wide variety of institutional environments (Kostova & Roth, 2002). Different countries may have different levels of formalized corruption within their public sector institutions (Rodriguez, et al., 2005). For instance, corruption levels have been found to be higher in emerging economies because of weaknesses in institutional infrastructures (Hellman, Jones, Kaufmann, & Schankerman, 2000; Kaufmann, 2004; Li, 2009; Venard & Hanafi, 2008). Corrupt practices may also be imitated by and copied between countries (Argandoña, 2007). Thus, each country within a MNE's set of subsidiary locations may present the firm with a unique FCE within

which the firm acts. From an institutional perspective, firm behavior may therefore be influenced by the FCE of the *collective* set of locations within which they have chosen to operate, their operating *portfolio* (Nachum & Song, 2011).

Corruption and social irresponsibility are closely related in that they both represent non-market forces that impact the actions of MNEs; "the non-market environment offers both opportunities and risks for MNEs" (Rodriguez, et al., 2006, p. 734). I argue that firms that establish and maintain operational legitimacy in portfolios of locations characterized by high FCEs may be more likely to act irresponsibly. There are several reasons for this.

First, high FCEs may allow or even encourage MNE managers to side-step socially responsible behavior, resulting in CSiR. In environments where formal corruption flourishes due to lack of controls, MNEs "may become motivated to lower ethical standards, ranging from environmental negligence and abusive labor practice to corrupt human resource management" (Tan, 2009, p. 174). Take, for example, the case of a MNE who bribes local environmental officials to overlook an environmental violation, rather than investing in a CSR-enhancing control that could have prevented the pollution issue in the first place. By leaning on corrupt practices in place of socially responsible ones, the MNE may effectively increase its risk of producing irresponsible outcomes.

Second, when corruption is deeply embedded in a given society, MNE managers may want to avoid damaging the firm's reputation by associating too closely with known corrupt public officials. Luo (2006) suggests that this may result in the use of more arms-length relationship management techniques in highly corrupt environments. These arms-length strategies may hamper the firm's ability to clearly understand and respond appropriately to stakeholders' specific social responsibility expectations and priorities (Matten & Moon,

2008). This lack of stakeholder engagement can lead the firm to make decisions contrary to local moral norms (Greenwood, 2007), thus increasing the risks and costs of CSiR for the firm.

Third, economic and competitive pressures associated with corrupt business practices may also result in socially irresponsible behavior. Operating in corrupt environments adds direct and indirect transaction costs that the firm must contend with (Rose-Ackerman, 1975; Uhlenbruck, et al., 2006). For example, "companies that are burdened with 'under-the-table payments' will try to contain their costs by cutting corners" (Nwabuzor, 2005, p. 129). The costs associated with operating in highly corrupt environments are more uncertain (Cuervo-Cazurra, 2006). This cost uncertainty contributes to the lower levels of foreign direct investment in countries high in corruption (Habib & Zurawicki, 2001, 2002).

If a MNE's competitors utilize corrupt business practices, the MNE may be influenced to likewise participate in CSiR behavior to maintain its industry competitiveness (Pinto, Leana, & Pil, 2008). This represents a form of organizational isomorphism, driving homogeneity of firm behavior, including corruption and associated irresponsibility (Venard & Hanafi, 2008). Extreme economic and competitive pressures that threaten the firm's survival may further increase the likelihood that the firm will pursue irresponsible actions to remain viable (Campbell, 2007).

Finally, MNEs with a history and culture that accepts and expects regular corrupt interactions with public officials may find unethical behavior has become instantiated within the organization. Firms that operate in environments with strong formal institutional pressures to participate in corruption through bribery, for example, may find corrupt practices have become rationalized and deeply embedded within the organization

(Anand, Ashforth, & Joshi, 2004). These MNEs may find themselves susceptible to lowering their home country standards to meet *other* local societal norms and pressures, some of which may represent unethical and socially irresponsible behavior in the eyes of stakeholders. Institutionalized corruption "can become an integral part of day-to-day activities to such an extent that individuals may be unable to see the inappropriateness of their behaviors" (Ashforth & Anand, 2003, p. 4).

This discussion highlights a multitude of reasons why pervasive corruption in a MNE's public sector interactions may increase the firm's likelihood of acting in a socially irresponsible way. Formal corruption may influence MNEs to lower firm standards that could prevent CSiR. Also, in distancing themselves from corrupt public officials, MNE managers may overlook or misunderstand local stakeholder social responsibility expectations, increasing the risk of committing acts of CSiR. Furthermore, because of the additional costs of corruption combined with the pressures of having competitors using corrupt methods may further lead MNEs down the path toward irresponsibility. And when the corrupt practices dominate the firm's dealings with public officials on a consistent basis, the corruption may become embedded in the organizational culture, generally desensitizing the organization to the ethical implications of corrupt public sector behavior. For these reasons, firms operating in high FCEs may find themselves initiating or tolerating more actions that are socially irresponsible. Thus, I hypothesize:

> *Hypothesis 1: MNEs operating in location portfolios containing higher formal corruption environments on average have higher levels of CSiR.*

Informal Corruption Environments and Firm Social Irresponsibility

Like other aspects of the institutional environment, corruption also has an informal component. Informal corruption extends beyond the corrupt practices within the formal, state-driven institutions of the countries with which corporations may interact. Corruption may also be found in varying extents within the everyday experiences of the average individual citizen of a society (Riaño, Heinrich, & Hodess, 2010). Some environments have a stronger overall culture of corruption that permeates the everyday life of its members. I refer to the socio-cultural nature of corruption as the *informal corruption environment* (ICE).

Sociology recognizes that the essence of corruption is found in its social and cultural foundations (Luo, 2005). "Social structures inhibit, enable, and stimulate people to commit corruption, and may even force people into corruption" (Nieuwenboer & Kaptein, 2008, p. 134). A history of broadly-based corrupt practices may result in a higher overall penetration of corruption within the country's collective experience. This corruption may span beyond interactions within formal governmental bodies and be found in private sector businesses, educational systems, the media, religious groups, non-governmental agencies, as well as personal exchanges.

In countries with a higher ICE, corruption may become expected not only in the formal interactions with public officials and governmental processes, but also in the society's informal interactions as well. This is important to MNEs because firms' local interactions are not limited to only formal institutional actors such as governmental agents. Firms also interact with the general public within the countries in which they operate, such as in their dealings with local employees, customers, suppliers, etc.

More informal pressure to act corruptly in everyday life can permeate the firm's general interactions and may act as a strong institutional cue within the firm's ICE. Informal corruption can become institutionalized to the point where it becomes routine (Ashforth & Anand, 2003). If employees have grown acclimated to general living conditions characterized by high, widespread informal corruption in their everyday lives, they may become socialized into the corruption to the point where they do not necessarily object to participating in it in business contexts (Anand, et al., 2004).

For example, a MNE may open a factory in a country in which child labor is not necessarily seen as socially irresponsible in terms of the local cultural norms. Although child labor may not be seen as irresponsible in-country, outside it would be considered a CSiR violation. Because of the local pervasiveness of child labor, the new factory managers may be tempted to utilize this locally-accepted practice, unless the MNE proactively restricts its use.

In summary, the general level of informal corruption permeating the MNE's operating environment can impact the firm's employees, customers, and stakeholders, de-sensitizing them to the negative implications of corrupt practices and influencing the firm's likelihood to participate in CSiR. Firms in locations with low ICE may find themselves at an advantage over firms in high ICE environments. Employees and customers of low ICE firms may not be as conditioned to expect and participate in widespread instances of corrupt transactions, thus reducing the likelihood they will initiate or participate in corrupt and irresponsible behavior in a business context. On the other hand, firms in high ICE locations are operating with human resources that have been acclimated to expect corruption everywhere. Because it permeates their daily lives in a variety of ways, when it appears in business dealings it is neither a surprise nor a

hindrance, increasing their likelihood to participate in corrupt and irresponsible behavior. Thus, I hypothesize:

> *Hypothesis 2: MNEs operating in location portfolios containing higher informal corruption environments on average have higher levels of CSiR.*

Corporate Social Irresponsibility and Firm Performance

The prior hypotheses predict positive relationships between the formal and informal corruption environments of the MNE's operating portfolio and the firm's corresponding level of CSiR. But why should firms care about social irresponsibility? For example, do firms with higher or lower levels of CSiR perform better than other firms? This study explores this normative question. I posit that higher levels of social irresponsibility can negatively influence a MNE's performance.

There is some evidence in the CSR literature that higher levels of firm corporate social performance (CSP) may be positively related to better corporate financial performance (CFP). In a review of the academic and practitioner CSP-CFP literature, Peloza (2009) confirmed that 63% of the studies had found a positive relationship between CSP and CFP. These results are consistent with other meta-analyses, which also found that higher levels of firm social responsibility were related to better financial performance (Margolis, et al., 2009; Margolis & Walsh, 2003; Orlitzky, et al., 2003; Waddock & Graves, 1997).

Only a small number of studies have specifically examined the performance implications of social *ir*responsibility. These studies tend to focus on event analyses of irresponsibility incidents and firm value. For example, in their meta-analysis of the CSP-CFP literature, Margolis et al. (2009) identified 28 prior studies which measured the

stock market impacts associated with the public announcement of specific social irresponsibility incidents, what they termed '*revealed misdeeds'*, such as regulatory violations, fines, lawsuits, arrests, involuntary recalls, etc. Their findings confirmed that news of irresponsibility has a negative effect on firm value.

Similar findings were confirmed previously by Frooman (1997) in his meta-analysis of irresponsibility event studies. Reports of socially irresponsible events or illicit corporate behavior resulted in decreases in shareholder wealth. Frooman points out that while his analysis cannot necessarily confirm *why* this dynamic occurs (is a penalty being imposed on ethical or more economic grounds?), it does reveal that the market reacts negatively to CSiR.

Additionally, there is evidence that the negative impacts of irresponsibility can be stronger than any positive impacts of responsible behavior. Doh et al. (2010) found some initial empirical support for this notion when examining the stock price impacts associated with firm additions and removals from social responsibility stock indexes. Removal acts as a signal of corporate irresponsibility and is associated with a greater (negative) effect on shareholder wealth than any corresponding effects related to being added to an index. Thus, past CSiR studies tend to find that "doing bad, if discovered, has a more pronounced effect on financial performance than doing good" (Margolis, et al., 2009, p. 23).

In addition to the signaling or disclosure arguments, I suggest there may be other reasons that firms high in CSiR will perform poorly. First, social irresponsibility can add risks and costs that may negatively affect the firm's performance. Acting irresponsibly in conflict with stakeholders' CSR expectations, such as violating particular environmental or human rights standards, may expose the firm to risks and costs associated with civil

lawsuits and criminal litigation (deMaCarty, 2009). A well-publicized track record of irresponsibility may prevent the firm from obtaining capital at consistent rates (McGuire, Sundgren, & Schneeweis, 1988). Or firms may face large-scale consumer boycotts due to CSiR which negatively affect the firm's brand reputation and sales (Becker-Olsen, Cudmore, & Hill, 2006).

Much of the activity driving these additional costs is often spurred by private political pressure exerted by non-governmental organizations (NGOs), the rise of which is "one of the most significant developments in international affairs over the past 20 years" (Doh & Guay, 2006, p. 51). Consumer watchdog organizations may utilize a "name-and-shame" strategy to publicize incidents of corporate irresponsibility (Becker-Olsen, et al., 2006), a NGO tactic that was used to effectively to advance the anti-sweatshop movement in the 1990's (Bartley & Child, 2010). This risk may be particularly pertinent to larger firms, whose higher profile makes them a more likely target of NGO action (Godfrey, et al., 2009). Once the firm's perceived CSiR has been exposed in this fashion, the firm may need to address the harm that has been caused to their stakeholders (Campbell, 2007), increasing their costs and subsequently reducing performance.

Second, irresponsible behavior may also open the firm up to increased likelihood of governmental regulatory intervention to which the firm will have to respond (Orlitzky & Benjamin, 2001). Just as the *private* political pressure exerted by NGOs highlight corporate irresponsibility, governments may likewise exert *public* political pressure to force the corporation to address irresponsible behavior (Reid & Toffel, 2009). This may involve fines or other regulatory actions. For example, "if a firm fails to meet promises to government officials in regard to actions that affect the environment (dumping, etc.),

government agencies may find it necessary to pass more stringent regulations…to force the firm to act in a socially responsible manner" (McGuire, et al., 1988, p. 856).

Regulatory or legislative risks may also be embedded in other NGO actions. For example, citing shareholder resolutions at Hartford Financial Services Group and CVS Caremark Corporation, Reid and Toffel (2009) point out that it is not uncommon for shareholder resolutions to include implicit or explicit regulatory threats as a means to motivate corporate compliance with activist causes. Irresponsible firms may be left to face the additional expense of implementing costly changes to correct their irresponsible practices or potentially paying government-imposed fines and penalties associated with non-compliance.

Third, after a high-profile irresponsible event or after earning a reputation for irresponsibility (such as having the irresponsible behavior called out by a third-party social responsibility rating agency or index), stakeholders may lose trust in the firm. A lack of trust can degrade stakeholders' commitment to the firm, damaging sales (Berman, Wicks, Kotha, & Jones, 1999) .

Not only does firm performance suffer from this decrease in sales, but the firm may also need to expend additional resources and incur additional costs to enhance the firm's social responsibility image and reputation and to address and prevent recurrence of the irresponsible behavior (Arjoon, 2005). For example, firms may utilize resources to make new investments in corporate governance in the "hope that corporate governance will restore trust in business" (Rossouw, 2005, p. 37).

A case in point can be seen when Shell Oil radically changed its approach to corporate governance following a very public and negative Greenpeace campaign against announcing a plan to dump its Brent Spar offshore oil rig into the North Sea in 1995, an

action that was deemed as environmentally irresponsible by the activists (Backer, 2007). But these reactive measures to re-establish a socially responsible reputation with stakeholders are not without incremental cost to the firm.

Finally, irresponsible behavior can affect the firm's legitimacy with key stakeholders. Social responsibility can be used strategically to achieve legitimacy, effectively becoming a foundation of the firm's social license to operate (Chiu & Sharfman, 2011). Violations of social responsibility legitimacy threaten this license to operate or even potentially the firm's long-term survival (Bansal & Roth, 2000).

The legitimacy argument can also be extended to an internal stakeholder group, the firm's employees. "Organizations' socially responsible or irresponsible acts are of serious consequence to employees" (Aguilera, Rupp, Williams, & Ganapathi, 2007, p. 843). Destroying goodwill and legitimacy through CSiR can lead to difficulties in attracting and retaining the best employees, leading to a cycle of service degradation which can ultimately impact performance (deMaCarty, 2009). These dynamics all reinforce the importance of establishing and maintaining legitimacy with external and internal stakeholders and highlight the potential performance consequences of losing legitimacy through social irresponsibility.

In summary, I propose that just as firms are rewarded for their CSR, they may be penalized for CSiR. Not only can irresponsible behavior add risks and costs associated with dealing with NGO anti-irresponsibility activism, but firms may also face costly exposure to regulatory threats and governmental actions related to their CSiR. Reacting to incidents and patterns of CSiR can drain precious firm resources that could be invested elsewhere. Finally, a pattern of irresponsibility can put the firm's "license to operate" at risk and may damage the firms' legitimacy in the eyes of its key stakeholders, reducing

the firm's financial viability. For the above reasons firms with higher CSiR do not perform as well as firms that do not have to contend with social irresponsibility:

> *Hypothesis 3: MNEs with higher levels of social irresponsibility on average have lower performance than MNEs with lower levels of social irresponsibility.*

METHODOLOGY

Sample Selection

Secondary data were used to test the hypotheses in a multinational context. The sample frame for this study was the Kinder, Lydenberg, Domini Research & Analytics (KLD, now part of MSCI Inc.) social responsibility rating data. KLD publishes a series of binary strength and weakness indicators in a variety of CSR categories and is considered a *defacto* standard for social responsibility research (Hart & Sharfman, 2012; Mattingly & Berman, 2006; Wood, 2010). Because KLD reports both firm social responsibility strengths and weaknesses (*concerns*) separately (as opposed to only providing a "net" continuous variable rating reflecting "overall" firm social responsibility), it has been used in prior studies to investigate social irresponsibility (Doh, et al., 2010; Mattingly & Berman, 2006; Muller & Kräussl, 2011; Strike, et al., 2006).

An initial sample of 700 firms was randomly selected from the 2011 KLD social responsibility ratings dataset. The target sample size of 700 was calculated based on the total number of individual items that are modeled in the analysis and the recommended desirable (high-end) observation to variable ratio of 20:1 (Hair, Black, Babin, & Anderson, 2010, p. 176). Only one firm in the initial sample had to be dropped per lack of available subsidiary data, and the final sample size of 699 firms was retained for the

analysis. The final sample was comprised of a total of 72,635 firm-location observations.

Dependent Variable

Following other social responsibility studies, both operating performance and firm value were used to measure the dependent variable in this study, firm performance (Margolis & Walsh, 2003). Operating performance was measured via two commonly-used performance measures. The first performance measure was ***Return on assets (ROA)***, the ratio of net income to total assets. This accounting-based indicator has been found to most closely correlate with social performance in prior social responsibility research (Orlitzky, et al., 2003). Performance was also measured via ***Tobin's q***, a forward-looking market-based indicator of firm value that incorporates firm equity, as well as preferred stock and debt and reflects the intangible value investors assign to a company (Guenster, Bauer, Derwall, & Koedijk, 2011). Market-based approaches are the most commonly used method of measuring financial performance in social responsibility research (Peloza, 2009).

Endogenous Variable

CSiR is both a dependent and independent (endogenous) variable in this research model. Prior empirical research has tended to use one of two different methods to measure firm social irresponsibility: 1) occurrences of negative social responsibility-related actions or events; or 2) third-party ratings of firm irresponsibility levels. The first method is typically used in event analyses that are focused on examining a performance

impact in the aftermath of a specific CSiR-related incident (Chatterji & Toffel, 2010; Frooman, 1997).

However, in this study I am interested in a firm's *overall pattern* of socially irresponsible behavior, as opposed to analyzing the occurrence or impact of particular irresponsibility events. For this reason, I selected the second CSiR measurement method mentioned above, aggregating irresponsibility rating data available in the KLD dataset. The KLD data is widely used in general social responsibility research, and its construct validity as a measure has been confirmed (Mattingly & Berman, 2006; Sharfman, 1996). KLD is also the primary data source of choice in the majority of studies that specifically examine social *ir*responsibility (Doh, et al., 2010; Mattingly & Berman, 2006; McGuire, et al., 2003; Muller & Kräussl, 2011; Strike, et al., 2006).

One reason for the popular use of KLD to measure CSiR is because KLD publishes discrete ratings of both firms' "good" CSR (*'strengths'*) and "bad" CSiR (*'concerns'*) in a variety of social responsibility categories, including environment, community, human rights, employee relations, diversity, and product. KLD's separate consideration of strengths and concerns enables researchers to focus on one or both of these social responsibility dimensions, depending on the research model.

Therefore, each firm's CSiR in this study was calculated via the identical technique and data source used in prior studies (Chatterji & Toffel, 2010; Doh, et al., 2010; Mattingly & Berman, 2006; McGuire, et al., 2003; Muller & Kräussl, 2011; Strike, et al., 2006). To calculate each firm's overall *CSiR* score I summed binary *concerns* indicators in the KLD dataset for each firm. The specific irresponsibility items included in this study are summarized in Table 3.1. This summation of *concerns*

resulted in a single interval measure of social irresponsibility for each firm, where zero represents no CSiR, and higher numbers indicate higher levels of CSiR.

TABLE 3.1. KLD social irresponsibility weakness items representing firm CSiR

Category	*Weakness*	*Category*	*Weakness*
Environment	Regulatory problems	Employee relations	Union relations
	Substantial emissions		Health & safety concerns
	Climate change		Supply chain controversies
	Negative product impact		Labor-management relations
	Land use & biodiversity	Diversity	Workforce diversity issues
	Non-carbon emissions		Representation
	Other env'l concern		Board of directors diversity
Community	Community impact	Product	Product safety
Human rights	Burma concern		Marketing/contracting issue
	Sudan concern		Antitrust
	Other concern		Other product concern

Independent Variables

The formal and informal corruption environment independent variables were measured at the *portfolio* level, adapting a portfolio measurement technique used in prior international business studies (Chao & Kumar, 2010; Gomez-Mejia, Makri, & Kintana, 2010; Gomez-Mejia & Palich, 1997; Kim & Park, 2002; Nachum & Song, 2011; Zaheer & Hernandez, 2011). Portfolio-level measurements were calculated by averaging country attributes for each MNE headquarters and subsidiary location. This resulted in a weighted average value for each firm, weighted by the number of locations the MNE has in each

country. This same technique was used to calculate both the MNE portfolio formal corruption environment and informal corruption environment values.

Portfolio informal corruption environment (ICE): The *ICE* reflects the degree of general permeation of corruption into a society's culture and everyday life. The *ICE* reflects the everyday citizen's general impressions and experiences at an individual, not necessarily government-corporate, level. Thus, the *ICE* is measured using general public views of corruption, as opposed to international business people and country expert opinions.

This informal, socio-cultural dimension of corruption is rarely included as a distinct corruption measure. One reason for this is that a lack of cross-national measures that reflect this deeper cultural penetration of corruption beyond public sector interactions has hampered empirical investigations in this area (You & Khagram, 2005). Despite the relative scarcity of studies incorporating informal corruption measures, one method of measuring informal corruption levels can be found in the Transparency International Global Corruption Barometer (GCB) dataset[1]. Based on interviews with more than 91,500 people in 86 countries, the GCB reflects the general public's perception of the permeation of corruption across a variety of institutions in their country (Riaño, et al., 2010).

[1] The World Values Survey (WVS) was also considered as an alternative measure of informal corruption in this study. The WVS contains items that capture the degree to which the general public feels a variety of potentially unethical behaviors are justifiable, such as cheating on taxes, not paying a bus or train fare, and accepting a bribe, that could also be considered indicators of informal corruption pervasiveness. Two reasons led to the selection of the GCB over WVS. First, GCB's coverage of countries relevant to this study was superior to WVS'. WVS was missing data for the specific items of interest in several countries including Denmark, Ireland, and Austria. Additionally, the WVS is conducted in waves that survey different countries at different points in time over a 25+ year time period. Because all of other data elements in this study represent a particular point in time (2009-11), the GCB was considered more comparable to the measurement model and was selected over the WVS.

As summarized in Table 3.2, the GCB uses a 5-point Likert-style scale where 1 means not at all corrupt and 5 means extremely corrupt to measure the extent to which citizens perceive corruption affects eleven different institutional elements in their country.

TABLE 3.2 Perceptual informal corruption items on Global Corruption Barometer

To what extent do you perceive the following categories in this country to be affected by corruption on a scale from 1 to 5 (1 meaning not at all corrupt and 5 meaning extremely corrupt):
Political parties
Parliament/legislature
Police
Business/private sector
Public officials/civil servants
Judiciary
NGOs (non-governmental organizations)
Media
Religious bodies
Military
Education system

Although the questions on the GCB are primarily based on public sector (*formal*) institutions, the measures themselves can be considered to reflect the *informal* dimension of corruption because the respondents who are answering the question represent the general population and average citizens. In contrast to other measures that focus on corruption practices in the formal sector, the GCB is not designed to reflect expert opinions on government-corporate corruption levels, but rather the average citizen's

general exposure to corruption. This directly supports *ICE's* focus on the general cultural permeation of corruption into the general public's everyday experience.

The Cronbach's alpha for the eleven GCB corruption perception items was .873 indicating an acceptable level of reliability. The eleven items for each country were averaged to calculate average national informal corruption levels. Each MNE's overall portfolio *ICE* was then calculated by averaging the national informal corruption level of each of the firm's headquarters and subsidiary locations.

Portfolio formal corruption environment (FCE): *FCE* reflects corrupt behavior and expectations that firm managers may be confronted with related to commercial transactions with a country's public sector officials, such as in procuring government services associated with establishing and maintaining local operations and resources. Each MNE's overall portfolio *FCE* was calculated by averaging the national formal corruption level of each firm headquarters and subsidiary location.

Corruption in the public sector is measured in a variety of different ways in international business studies. There are almost two dozen different data sources measuring cross-national levels of institutionalized formal corruption (Kaufmann, Kraay, & Mastruzzi, 2006). To help researchers and practitioners sort through this maze of choices, Kaufmann et al. (2006) suggest several ways to effectively measure corruption. One method of measuring corruption is via *perceptions* of relevant stakeholders. "Since corruption usually leaves no paper trail, perceptions of corruption based on individuals' actual experiences are sometimes the best, and the only, information we have" (Kaufmann, et al., 2006, p. 2). A second method of measuring corruption is via assessing the quality of *institutions* that control corruption. This study combines elements of both

of these approaches, perceptual and institutional, to create a single robust measure of each country's formal corruption levels that was used to calculate each firm's portfolio *FCE*. The selection of the specific perceptual and institutional elements to support this multi-dimensional measure of formal corruption is explained below.

The *perceptual* aspect of my formal corruption measure was determined via Transparency International's 2010 Corruption Perception Index (CPI). The CPI aggregates expert and business opinion survey results to reflect the level of administrative and political corruption in 178 different countries. CPI scores are assigned based on a 10-point interval scale where 0 indicates a highly corrupt government and a 10 indicates low levels of public sector corruption.

The CPI is selected over other cross-national corruption perceptions such as the Freedom House political rights index, Political Risk Service's International Country Risk Guide index of corruption, or the Black Market Activity Index, because of the CPI's more pervasive use in the international business literature. The CPI has been recognized as being used most extensively to measure formal corruption in cross-national research (Brouthers, Gao, & McNicol, 2008; Habib & Zurawicki, 2001; Voyer & Beamish, 2004; Weitzel & Berns, 2006; You & Khagram, 2005). It has been found to be a robust measure of corruption (Husted, 1999) with confirmed construct validity (Voyer & Beamish, 2004; Wilhelm, 2002), making it an appropriate selection for the perceptive dimension of formal corruption in this international business study.

Transparency International codes its raw CPI data in such a way that a *lower* CPI score actually reflects a *higher* level of corruption. To aid in interpretation and remain consistent with prior corruption studies (Davis & Ruhe, 2003; Kwok & Tadesse, 2006; Robertson & Watson, 2004), country CPI scores were reverse coded and rescaled by

multiplying each country's score by -1 (to reverse code) and adding +10 to each (to create a positive range) before being incorporated into my formal corruption measure. This produces a more consistent transformed CPI scale where 10 indicates *high* administrative and political corruption and 0 indicates *low* levels of administrative and political corruption.

Following Kaufmann (2006), the second aspect of my formal corruption variable incorporates measurements of key *institutional influences* that are directly related to the control of corruption. These items "do not measure actual corruption, but can provide useful indications of the possibility of corruption" (Kaufmann, et al., 2006, p. 2). Countries that implement and enforce more stringent anti-corruption regulatory controls can limit the incentives and opportunities for corrupt behavior, curtailing the levels of formal sector corruption.

I incorporated the influence of formal corruption-constraining institutions via the 2010 World Bank Worldwide Governance Indicators (WGI), which are available for over 200 countries and subsequently widely applied in international business research (Cuervo-Cazurra, 2006). These indicators represent the aggregation of hundreds of governance data variables from 31 different data sources (Kaufmann, Kraay, & Mastruzzi, 2009, 2010). Cuervo-Cazurra (2006) points out that because the WGI data aggregation is accomplished via a precision-weighted, unobserved components model, the noise of single indicators is reduced, further enhancing the indicators' value as composite measures of institutional governance.

Three WGI indicators that specifically focus on governance practices most relevant to corruption were used as part of the formal corruption measurement in this study. First, the WGI *control of corruption* (CC) indicator speaks directly to the issue of

public sector corruption and reflects incentives or disincentives for corrupt practices to flourish in the country. Second, the WGI *government effectiveness* (GE) indicator reflects the independence of public services from political pressures as well as the credibility of the government's commitment to stated policies, what has been called its "unbribe-ability,"(Langbein & Knack, 2008, p. 5). Finally, WGI's *regulatory quality* (RQ) indicator assesses whether barriers in public-private transactions have been erected that enable corrupt practices to occur or whether the regulatory environment fosters healthy private sector growth.

Each of the WGI indicators range from -2.5 to +2.5, where -2.5 indicates weak governance and +2.5 indicates a strong control. This results in the situation where *higher* raw WGI values reflect *stronger* country institutional controls, which in turn reflect an environment where *less* corruption would be expected. To maintain consistency and eliminate potential confusion, a reverse code/rescale transformation similar to that applied to the CPI was applied to the WGI values. WGI indicators were transformed by multiplying each by -1 (to reverse code) and adding 2.5 to each (to rescale into a non-negative range) before being incorporated into the formal corruption measure. The resulting transformed scale ranges from 0 to 5, where 0 indicates an environment with fewer opportunities for formal corruption because of the high governance controls, and 5 indicates a high likelihood of formal corruption because of the lack of controls.

The single perceptual corruption item (CPI) and the three institutional corruption items (WGI CC, GE, and RQ) were used to calculate an overall level of formal corruption for each country. Because these elements are conceptually very close to each other (Langbein & Knack, 2008), there was high correlation expected and confirmed

amongst the four formal corruption components. Therefore, I used factor analysis to create and confirm the validity of a single formal corruption level factor for each country.

Exploratory factor analysis (EFA) was used to create the *FCE* formal corruption factor. To show that *FCE* is measuring a phenomenon that is distinct from the *ICE* informal corruption variable, I incorporated the four formal corruption environment variables as well as the informal corruption perception variable into a single EFA. Variables were standardized prior to factor analysis. The results of the EFA are summarized in Table 3.3.

The EFA results yielded the expected two factor solution where the four formal corruption items loaded on one factor, and the informal corruption variable loaded on its own factor. Varimax rotation confirmed all four *FCE* items (CPI, WGI GE, WGI RQ, and WGI CC) loaded on a single factor as expected, and the *ICE* item (GCB) loaded on a second factor. The EFA produced an eigenvalue = 3.953 explaining 98.87% of the variance and a significant Bartlett's test of sphericity ($p < .001$). The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (MSA) exceeded the required .50 threshold (.659), and all communalities met the recommended .50 rule-of-thumb. The Cronbach's alpha for the four *FCE* items was .993, suggesting an acceptable level of reliability, and the Cronbach's alpha was not improved by the removal of any of the items. All item-to-total correlations exceeded the minimum .50 level, and inter-item correlations exceeded the recommended .30 threshold. Thus, the EFA results support the use of the *FCE* factor to represent portfolio formal corruption environment in the regression analyses.

TABLE 3.3. Exploratory factor analysis formal corruption environment (*FCE*)

Variable	*Factor 1*	*Factor 2*
CPI – Corruption Perception Index (*formal*)	**.994**	-.045
WGI GE – Government effectiveness (*formal*)	**.983**	-.128
WGI RQ – Regulatory quality (*formal*)	**.977**	-.161
WGI CC – Control of corruption (*formal*)	**.995**	.024
GCB – Global Corruption Barometer (*informal*)	-.074	**.997**

Control Variables

Prior studies have found firm size to be a strong predictor of social responsibility and irresponsibility (Johnson & Greening, 1999; Strike, et al., 2006; Udayasankar, 2008). Therefore, this study controlled for ***Firm size***, measured via the log of the number of employees. Following Barnea and Rubin (2010), ***Firm experience*** was measured by the number of years since the firm's founding.

Prior social responsibility research has also found that degree of international diversification may influence MNE CSiR (Strike, et al., 2006). Therefore, I included two variables to control for the scope of the firm's international activities from the prior CSiR research. First, I controlled for the count of the distinct ***Number of countries*** within which the firm is operating (headquarters or subsidiary locations). The firm's international scope was also measured by counting the number of ***Foreign subsidiaries*** within the MNE's operations. Additionally, because social responsibility standards vary between different countries (Maignan & Ralston, 2002), a firm's home country CSR standards may influence whether or not the firm participates in irresponsible behavior. Therefore, I included a dummy variable in my CSiR analysis to control for differences in

firm headquarters country. Because 85% of the sample frame firms are headquartered in the U.S., I coded the dummy variable ***Home country*** as a 0 if the firm is U.S.-based and a 1 if the firm is headquartered in any other country.

Because there are indications in the social responsibility literature that the strength of firm corporate social responsibility (CSR) is related to firm corporate financial performance (Margolis, et al., 2009; Margolis & Walsh, 2003; Orlitzky, et al., 2003; Peloza, 2009), I also controlled for firm ***CSR*** in my evaluation of the CSiR-performance relationship. Consistent with prior social responsibility studies (Chatterji & Toffel, 2010; Doh, et al., 2010; Mattingly & Berman, 2006; McGuire, et al., 2003; Muller & Kräussl, 2011; Strike, et al., 2006), firm *CSR* values were calculated by summing 30 binary *strengths* indicators in the 2011 KLD dataset indicated in Table 3.4 for each firm. This summation results in a single interval measure of *CSR* for each firm, represented by a range of possible values from 0 to 30, where a higher number indicates higher levels of firm social responsibility.

Prior comparative analysis in an international setting has indicated that industry norms may affect firm social responsibility strategies (Aguilera, Williams, Conley, & Rupp, 2006). Therefore, following Klapper and Love (2004) I controlled for industry in my analysis of firm performance. Utilizing Standard & Poor's (S&P) Capital IQ's industry sectors, ***Industry*** dummy variables were coded for the following sectors: consumer discretionary, consumer staples, energy, financials, healthcare, industrials, information technology, materials, telecommunication services, and utilities.

TABLE 3.4. KLD social responsibility strength items representing firm CSR

Category	*Strength*	*Category*	*Strength*
Environment	Beneficial products	Employee relations	Union relations
	Pollution prevention		Cash profit sharing
	Recycling		Employee involvement
	Clean energy		Health and safety
	Management systems		Supply chain policies/pgms
	Other env'l strengths		Other benefits & programs
Community	Charitable giving	Diversity	Representation
	Innovative giving		Board of Directors
	Community engagement		Work/life benefits
	Other comm strengths		Women & minority
Human rights	Indigenous relations		Gay & lesbian policies
	Human rights initiatives		Employs underrepresented
Product	Product quality		Other diversity strengths
	Benefits to disadvantaged	Governance	Reporting quality
	Access to capital		Public policy

Additionally, following other CSP-CFP research (Jo & Harjoto, 2011) firm ***Leverage***, a ratio of firm debt to equity, was also included as a control in my performance analysis. Data for all control variables with the exception of the *CSR* variable were obtained from the S&P Capital IQ database. All variable definitions and data sources are summarized in Table 3.5.

TABLE 3.5. Variables, measures, and sources of data

	Variable	*Measure*	*Source*
Variables of interest	CSiR	Continuous variable measuring the degree of firm irresponsibility, from 0 (low) to 22 (high)	2011 KLD CSiR weakness indicators
	ROA (%)	Accounting-based measure of operating performance; ratio of income to assets	S&P Capital IQ
	Tobin's *q*	Market-based measure of firm value; market-to-book ratio incorporating equity, preferred stock, and debt	S&P Capital IQ
	Informal Corruption Environment ICE)	Measure of the permeation of corruption in the everyday lives of the general public in the countries that comprise the MNE portfolio	2010 TI Global Corruption Barometer
Variables that comprise FCE factor	Control of corruption (CC)	Indicator of extent to which public power exercised for private gain is controlled in the countries that comprise the MNE portfolio, from 0 (strong corruption control) to 5 (weak corruption controls)	World Bank World Governance Indicators 2010 (rescaled)
	Regulatory quality (RQ)	Indicator of extent to which governments implement sound policies to support private development in the countries that comprise the MNE portfolio, from 0 (strong regulatory quality) to 5 (weak regulatory quality)	World Bank World Governance Indicators 2010 (rescaled)
	Government effectiveness (GE)	Indicator of quality of public services and policies and credibility of government commitment to such policies in the countries that comprise the MNE portfolio, from 0 (highly effective) to 5 (low effectiveness)	World Bank World Governance Indicators 2010 (rescaled)
	Administrative and political corruption (CPI)	Indicator of level of public sector corruption in the countries that comprise the MNE portfolio, from 1 (very little government corruption) to 10 (very corrupt government)	TI Corruption Perception Index 2010 (rescaled)
Control variables	Firm size	Natural log of number of employees	S&P Capital IQ
	Firm experience	Age of firm, years since founding	S&P Capital IQ
	Number countries	Indicator of international scope measured by number of distinct countries in which the firm has a headquarters &/or subsidiary location(s)	S&P Capital IQ
	Foreign subsidiaries	Indicator of international scope measured by number of foreign subsidiaries	S&P Capital IQ
	Home country	Dummy indicator where 0 indicates U.S.-based firm and 1 indicates HQ in any other country	S&P Capital IQ
	CSR	Continuous variable measuring degree of firm social responsibility, from 0 (low) to 30 (high)	2011 KLD CSR strength indicators
	Leverage	Ratio of total debt to total equity	S&P Capital IQ
	Industry	Dummy indicators for 7 industry sectors	S&P Capital IQ

RESULTS

Because CSiR is an endogenous variable in this research model, the hypotheses were tested using ***two-stage least squares*** (2SLS) regression. The reasoning for utilizing this method as opposed to the more commonly applied ordinary least square (OLS) regression is as follows. One of the underlying assumptions behind OLS regression is independence of the error terms (Hair, et al., 2010, p. 185). Models with independent variables that are *endogenous,* that is variables that are influenced by other variables in the model, can produce inconsistent and misleading results (Antonakis, Bendahan, Jacquart, & Lalive, in press). OLS results under conditions of endogeneity can be susceptible to bad estimates, biased coefficients, and potentially inaccurate interpretations (Hoetker & Mellewigt, 2009). Missing variables and/or measurement errors in the dependent variable might result in endogeneity problems and error term correlation (Shaver, 2005).

Therefore, to minimize the impact of endogeneity on my regression results, I utilized the 2SLS method in this study. The benefit of 2SLS is that it addresses the *possibility* of error correlation, but it "does not preclude the possibility that the errors will be found not to correlate" (Shaver, 2005, p. 341). Therefore, it represents a cautionary and proactive method of testing the hypotheses as a system under conditions of probable endogeneity.

The 2SLS technique was conducted via a system of two regression equations. A set of Stage 1 equations were used to test Hypotheses 1 and 2, regressing firm *CSiR* against the MNE portfolio formal (*FCE*) and informal corruption environments (*ICE*), respectively. *Predicted CSiR* values were saved from the Stage 1 regression and used as the independent variable in Stage 2. Using the *Predicted CSiR* values addresses the

endogeneity concern because *Predicted CSiR* values are correlated with the original *CSiR* values, but are not correlated with the error terms. The Stage 2 equation of the 2SLS analysis was used to test Hypothesis 3, regressing firm financial performance (*ROA* and *Tobin's q*, separately) against the firm's *Predicted CSiR* values from Stage 1.

To confirm the methodological selection of 2SLS for this study, I conducted a Durbin-Wu-Hausman endogeneity test. Durbin-Wu-Hausman tests whether the Stage 2 regression using the (instrumental) *Predicted CSiR* values saved from Stage 1 and the Stage 2 regression using the (OLS) actual *CSiR* values results in a statistically significant difference between the coefficients for the actual *CSiR* and *Predicted CSiR* variables. Under conditions of endogeneity, the OLS-based estimates will be biased (based on a correlation between the error terms and the predicted dependent variable that violates the assumptions for OLS), resulting in a significant difference in the regression results using 2SLS and OLS methods. In this scenario, proceeding with the 2SLS method utilizing the instrumental (*Predicted CSiR*) values is preferred. If endogeneity is not indicated, the OLS- and instrumental-based results will not differ significantly.

Because this study uses two different measures of firm performance, *ROA* and *Tobin's q*, the Durbin-Wu-Hausman test must be conducted for each dependent variable. The results of the Durbin-Wu-Hausman test in this study did not indicate a statistically significant difference between 2SLS and OLS coefficients using *ROA* as the dependent variable ($t = 1.30$). However, the results did find a statistically significant difference between 2SLS (using the instrumental variable) and OLS for the dependent variable *Tobin's q* ($t = 2.34$, $p < 0.05$). Based on the overall test results, the null hypothesis that *CSiR* is exogenous was rejected. Because the *Tobin's q* test indicated endogeneity and the ROA test was inconclusive (producing similar results under both OLS and 2SLS), the use

of the 2SLS technique utilizing the instrumental *Predicted CSiR* values was confirmed for use in this study.

The directional hypotheses in this study support the use of one-tailed tests for all regressions (Cohen & Cohen, 1983). Table 3.6 summarizes the descriptive statistics and correlations of variables in the study sample. An inspection of the bivariate correlations confirmed that none of the significant correlations between independent variables exceeded the 0.70 co-linearity guidelines (Hair, et al., 2010, pp. 204-205). However, several significant correlations with control variables approached, though did not exceed, the recommended threshold: *Number of countries* and *Foreign subsidiaries* (r = .658); *Number of countries* and *Portfolio ICE* (r = -.628); and *CSR* and *Firm size* (r = .595). The two measures of the dependent variable in this study, *ROA* and *Tobin's q*, were also relatively highly correlated (r =.568).

Because of the instances of some relatively high bivariate correlations, variance inflation factor scores (VIFs) from the regression equations were inspected to test for possible multicollinearity. With all VIFs reported in the Stage 1 regression tests ranging from 1.108 to 3.273, well within recommended levels (Hair, et al., 2010, pp. 204-205), there was no indication that multicollinearity is a problem in the Stage 1 model.

Table 3.7 summarizes the regression for Stage 1, containing the results of the four models used to test the hypothesized relationships between formal and informal corruption environment and firm social irresponsibility (Hypothesis 1 and 2 respectively). Model 1 contains only the Stage 1 control variables. The overall control model is statistically significant (R^2 = .256, p = .000). As expected per prior research, controls for *Firm size* (B = 1.70, p = .000), *Firm age* (B = .01, p < .01), and number of *Foreign subsidiaries* (B = .004, p < .01) were all confirmed to be significant positive predictors of

TABLE 3.6. Description and correlations of variables

Variables	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
Mean	2.76	3.27	0.00	2.46	7.01	36,767	67.17	18.56	53.92	.09	3.89	.415
Standard deviation	2.314	0.109	1.000	2.417	5.218	96,539	46.921	17.425	84.250	.285	4.555	.858
1. Firm CSiR	-											
2. Portfolio ICE	.068	-										
3. Portfolio FCE	.059	-.074	-									
4. Tobin's *q*	-.084*	-.119**	.010	-								
5. ROA	-.019	-.111**	.085*	.568**	-							
6. Firm Size †	.483**	.043	.018	-.011	.032	-						
7. Firm Experience	.256**	.006	-.024	-.095*	-.094*	.292**	-					
8. Number of Countries †	.188**	-.628**	.126**	.036	.012	.356**	.239**	-				
9. Foreign Subsidiaries	.297**	-.352**	.088*	-.038	-.031	.448**	.256**	.658**	-			
10. Home Country	-.096*	-.168**	.269**	.069	.027	-.202**	-.158**	-.132**	.019	-		
11. Firm CSR	.460**	-.071	.001	.005	.060	.595**	.318**	.392**	.392**	-.183**	-	
12. Leverage	.004	.067	-.007	.520**	-.014	.045	.062	-.002	.004	-.052	-.005	-
13. Industry–Consumer Disc	.008	.092*	-.050	.093*	.132**	.157**	-.060	-.154**	-.109**	-.020	.003	.038
14. Industry–Cons Staples	.123**	.019	.137**	.039	.072	.104**	.153**	.041	-.007	-.031	.187**	.033
15. Industry–Energy	.169**	.090*	.004	-.059	-.012	-.081*	.009	-.045	-.007	.002	-.036	-.026
16. Industry–Financials	-.007	.172**	-.042	-.077*	-.170**	.032	.238**	-.048	.045	.107**	.079*	-.036
17. Industry–Healthcare	-.128**	-.049	-.051	.002	.072	-.005	-.065	.053	.045	-.029	.034	-.021
18. Industry–Industrials	.014	-.028	-.036	.000	-.062	.082*	.111**	.037	.136**	-.008	-.112**	.090*
19. Industry–Info Tech	-.221**	-.240**	.062	.041	-.032	-.188**	-.325**	.111**	-.057	.048	-.093*	-.121**
20. Industry–Materials	.103**	-.082*	.031	-.053	.011	-.099**	.081*	.064	.010	-.056	-.007	.013
21. Industry–Telco	.034	.062	-.053	-.048	-.030	.016	-.059	.013	-.022	.014	.020	.010
22. Industry–Utilities	.084*	.172**	-.028	-.085*	-.101**	-.047	.025	-.125**	-.063	-.049	.047	.027

*$p < 0.01$, **$p < 0.05$ (two-tailed tests)

† Statistics represent variable post logarithmic transformation

TABLE 3.6. Description and correlations of variables (*continued*)

Variables	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*
Mean	.19	.07	.06	.08	.09	.19	.20	.08	.01	.02
Standard deviation	.389	.263	.243	.276	.289	.391	.398	.274	.106	.154
13. Industry–Consumer Disc	-									
14. Industry–Cons Staples	-.136**	-								
15. Industry–Energy	-.124**	-.073	-							
16. Industry–Financials	-.144**	-.085*	-.078*	-						
17. Industry–Healthcare	-.152**	-.090*	-.082*	-.095*	-					
18. Industry–Industrials	-.230**	-.136**	-.124**	-.144**	-.152**	-				
19. Industry–Info Tech	-.237**	-.141**	-.129**	-.149**	-.157**	-.238**	-			
20. Industry–Materials	-.142**	-.084*	-.077*	-.090*	-.095*	-.143**	-.148**	-		
21. Industry–Telco	-.051	-.031	-.028	-.032	-.034	-.052	-.053	-.032	-	
22. Industry–Utilities	-.075*	-.045	-.041	-.047	-.050	-.076*	-.078*	-.047	-.017	-

*$p < 0.01$, **$p < 0.05$ (two-tailed tests)

CSiR. The *Number of countries* was also significant (B = -.38, $p < .05$); however, the resulting negative coefficient was opposite direction of what has been predicted in prior CSiR research, where greater international scope was found to be positively related to CSiR (Strike, et al., 2006). The dummy variable controlling for *Home country* was not found to be significant (B = -.05, n.s.)

TABLE 3.7. Regression results for Stage 1 (Hypotheses 1 and 2)

Variables	*Model 1 Controls*	*Model 2 FCE*	*Model 3 ICE*	*Model 4 Model 2 + ICE*
Intercept	-4.49 (.65)	-4.38 (.66)	-11.52 (3.38)	-10.84 (3.41)
Firm Size	1.70*** (.16)	1.69*** (.16)	1.60*** (.16)	1.60*** (.16)
Firm Experience (Age)	.01*** (.002)	.01*** (.002)	.01*** (.002)	.01*** (.002)
Number of Countries	-.38** (.23)	-.44** (.23)	.03 (.30)	-.06 (.30)
Number Foreign Subsidiaries	.004*** (.001)	.004*** (.001)	.003*** (.001)	.004*** (.001)
Home Country Dummy	-.05 (.28)	-.19 (.29)	.13 (.29)	-.02 (.31)
Portfolio FCE	-	.14** (.08)	-	.12* (.08)
Portfolio ICE	-	-	2.15** (1.01)	1.97** (1.02)
R-square	.256	.259	.261	.263
Adjusted R-square	.251	.253	.255	.256
Change in R-square	-	.003	.005	.004
F-value for change in R^2	-	2.984	4.488	3.732
F-value sig. for change in R^2	-	.085	.034	.054
Overall F-value	47.746**	40.400***	40.737***	35.298***

Dependent variable = *CSiR* in all models.
*$p < 0.1$ **$p < 0.05$ ***$p < 0.01$ (one-tailed tests). $n = 699$ in all models.
Unstandardized coefficients with corresponding standard errors in parentheses.

Model 2 adds the independent variable *FCE* to Model 1. The overall Model 2 is statistically significant (R^2 = .259, p = .000) and represents a statistically significant change in R^2 over Model 1 (change in R^2 = 0.003, $p < 0.1$). Hypothesis 1 predicted that higher formal corruption environment levels in the MNE's location portfolio (*FCE*) will be related to higher levels of firm irresponsibility. *FCE* was found to be positively related to firm *CSiR* (B = .14, $p < 0.05$). This result supports Hypothesis 1: *MNEs operating in location portfolios containing higher formal corruption environments on average have higher levels of CSiR.*

Hypothesis 2 predicted that higher MNE portfolio informal corruption environments would also be related to higher levels of firm irresponsibility. Model 3 adds the independent variable *ICE* to the Model 1 controls. The overall model was significant (R^2 = .261, p = .000) with a significant change in R^2 (change in R^2 = 0.005, $p < 0.05$). *ICE* was confirmed to be positively related to firm *CSiR* (B = 2.15, $p < 0.05$) in Model 3. This supports Hypothesis 2: *MNEs operating in location portfolios containing higher informal corruption environments on average have higher levels of CSiR.*

In Model 4 the effects of formal and informal corruption environments tested in Stage 1 were regressed together to confirm the incremental additive explanatory power of the informal element over the formal corruption environment alone. Model 4 adds *ICE* as an independent variable to Model 2, producing a significant overall model (R^2 = .263, p = .000) with a statistically significant change in R^2 (change in R^2 = 0.004, $p < 0.1$). *ICE* was again confirmed to be significant (B = 1.97, $p < 0.05$). The Stage 1 regression results of Model 4, therefore, support the notion that the informal dimension of corruption has

incremental explanatory power beyond the formal corruption environment in predicting the social irresponsibility of MNEs.

Predicted CSiR values from Model 4 were retained for use in the second stage of the 2SLS regression. The *Predicted CSiR* values represent the expected MNE social irresponsibility levels given the levels of formal and informal corruption in the firm's portfolio of locations.

Table 3.8 provides the results of second stage of the instrumental 2SLS regression[2], which tests Hypothesis 3. The Stage 2 equations were tested separately using two different measures of firm performance as the dependent variable. Models 5 and 6 used *ROA* as the performance measure; Models 7 and 8 used *Tobin's q* for performance. Of the 699 firms in the sample, 51 did not report sufficient financial information to calculate performance measures, resulting in a sample $n = 648$ firms for the Stage 2 regression tests. With the exception of several *Industry* controls, Stage 2 VIF scores for my variables of interest ranged from 1.024 – 3.206, well within acceptable multicollinearity levels (Hair, et al., 2010, pp. 204-205).

Model 5 (using *ROA* as the dependent variable) contains only the Stage 2 control variables. The Stage 1 control variables (e.g. *Firm size*) are not re-introduced here as controls against firm performance because they are already embedded within the *Predicted CSiR* values saved in Stage 1 and used as the independent variable in Stage 2, and the same variable cannot be entered twice into a regression equation. The overall

[2] It has been noted that running 2SLS equations as separate regressions may result in invalid standard errors (Wooldridge, 2009, p. 522). For this reason it is recommended that 2SLS regressions be run using the functions built into statistical packages such as SPSS, the tool utilized in this study. To address this potential issue, I also ran my regression model using the built-in SPSS 2SLS regression function. The results of this analysis produced results similar to those reported above, finding a significant negative relationship between *CSiR* and *Tobin's q* (B = -.160, std. error = .065, $p < .01$) as predicted in Hypothesis 3. *CSiR* and *ROA* was not significant using the built-in 2SLS function (B = .016, std. error = .141, n.s.).

TABLE 3.8. Regression results for Stage 2 (Hypothesis 3)

Variables	*Model 5*	*Model 6*	*Model 7*	*Model 8*
Intercept	5.32	6.22	.58	1.20
	(1.94)	(1.99)	(.78)	(.79)
Firm CSR	.05	.11**	.01	.05**
	(.05)	(.06)	(.02)	(.02)
Firm Leverage	-.12	-.11	1.50***	1.51***
	(.24)	(.24)	(.09)	(.09)
Industry – Consumer Disc	2.97*	3.13*	1.60**	1.71**
	(1.97)	(1.97)	(.79)	(.78)
Industry – Consumer Staples	2.71*	2.79*	1.41**	1.46**
	(2.05)	(2.05)	(.82)	(.81)
Industry – Energy	1.33	1.34	.83	.83
	(2.08)	(2.08)	(.83)	(.82)
Industry – Financials	-2.27	-2.16	.64	.71
	(2.12)	(2.11)	(.85)	(.84)
Industry – Healthcare	2.67*	2.65*	1.34**	1.33**
	(2.03)	(2.02)	(.81)	(.80)
Industry – Industrials	.97	1.20	1.02*	1.18*
	(1.98)	(1.98)	(.79)	(.78)
Industry – Info Technology	1.23	1.07	1.76**	1.64**
	(1.98)	(1.97)	(.79)	(.78)
Industry – Materials	1.75	1.68	.76	.72
	(2.04)	(2.04)	(.82)	(.81)
Industry – Utilities	-1.81	-1.89	-.27	-.33
	(2.30)	(2.30)	(.92)	(.91)
Predicted Firm CSiR	-	-.44**	-	-.31***
		(.22)		(.09)
R-square	.068	.074	.307	.319
Adjusted R-square	.052	.056	.295	.306
Change in R^2	-	.006	-	.013
F-value for change in R^2	-	3.843	-	11.719
F-value sig. for change in R^2	-	.050	-	.001
Overall F-value	4.213***	4.200***	25.562***	24.803***

Dependent variable = *ROA* in Models 5 & 6; *Tobin's q* in Models 7 & 8.
*$p < 0.1$ **$p < 0.05$ ***$p < 0.01$ (one-tailed tests). $n = 648$ in all models.
Unstandardized coefficients with corresponding standard errors in parentheses.

Model 5 was statistically significant, but produced a relatively low R^2 (R^2 = .068, p = .000). Neither *CSR* nor *Leverage* was found to be a significant predictor of *ROA*. Three of the *Industry* controls were found to be significant: consumer discretionary (B = 2.97, p < 0.1), consumer staples (B = 2.71, p < 0.1), and healthcare (B = 2.67, p < 0.1).

Model 6 added the independent variable to Model 5, regressing the first of my performance measure dependent variables, *ROA,* against the independent variable *Predicted CSiR* retained from Stage 1 (Model 4). Using the *Predicted CSiR* values as the independent variable provides an analysis of the performance impact of social irresponsibility given the firm's locations' levels of formal and informal corruption. Model 6 produced a significant overall model (R^2 = .074, p = .000) with a statistically significant change in R^2 (change in R^2 = 0.006, p = 0.05). *Predicted CSiR* was negatively related to *ROA* (B = -.44, p = 0.05), providing initial support for Hypothesis 3.

Models 7 and 8 repeated the Hypothesis 3 tests using the second performance measure, *Tobin's q*, in a similar fashion to Models 5 and 6. Model 7 again contains only the control variables. The overall model was significant (R^2 = .307, p = .000). Although *CSR* was again not significant, in this model *Leverage* was strongly significant (B = 1.50, p = .000). Under Model 7, five of the *Industry* dummies were significant: consumer discretionary goods (B = 1.60, p < 0.05), consumer staples (B = 1.41, p < 0.05), healthcare (B = 1.34, p < 0.05), industrials (B = 1.02, p < 0.1), and information technology (B = 1.76, p < 0.05).

Model 8 adds the independent variable saved from Stage 1, *Predicted CSiR*, to the Stage 2 equation. Model 8 produced a significant overall model (R^2 = .319, p = .000) with a statistically significant change in R^2 (change in R^2 = 0.013, p < 0.01). *Predicted*

CSiR was confirmed to be a significant negative predictor of *Tobin's q* (B = -.31, $p < 0.01$). The significant performance analysis results in the Model 8 *Tobin's q* test (and to a lesser extent, the Model 6 *ROA* test) provide support for Hypothesis 3: *MNEs with higher levels of social irresponsibility on average have lower performance than MNEs with lower levels of social irresponsibility*.

DISCUSSION

In this study I began by considering whether MNEs that are operating in high corruption environments are more likely to be socially irresponsible. Recognizing that corruption is a relevant element of MNE's institutional environments, institutional theory posits that firms are subject to pressures exerted upon them from their institutional environments in an effort to gain local legitimacy.

I theorized that firms operating in portfolios of locations characterized by pervasive formal corruption in the public sector will increase the firm's likelihood of committing socially irresponsible actions. The negative influence of corruption may not only encourage firms to side-step socially responsible behavior, but the additional costs and risks associated with corrupt businesses may result in lack of CSR investments and lead to higher CSiR. Corrupt business practices may become formally instantiated within the organization.

I further hypothesized that in addition to the negative impacts associated with formal corruption environments, MNEs may also face more CSiR because of the influence of *informal* corruption in their operating environments. Informal corruption represents the general permeation of corrupt behavior beyond just public sector

corruption to incorporate all aspects of a society, reflecting the corruption experienced by average individual citizens in their everyday experiences. Environments higher in informal corruption may exert pressure to act corruptly in everyday life (not just corporate-public sector interactions) and thus may result in more tolerance and higher occurrence of socially irresponsible decisions and outcomes.

I tested my hypotheses on a sample of 699 MNEs using each firm's entire subsidiary location portfolio. As expected, my tests confirmed the link between corruption environments and irresponsibility. Firms operating in environments that have higher average overall levels of formal and/or informal levels of corruption in their operating environments can be expected to have correspondingly higher levels of CSiR.

Additionally I suggested that firms with higher CSiR levels will also have lower performance. Socially irresponsible behavior may create additional risk and costs associated with dealing with NGO anti-irresponsibility activism and/or regulatory threats and other government actions due to CSiR exposure. Additionally, firms may have to expend resources to react to specific incidents and patterns of CSiR or risk losing trust and legitimacy with their local markets. As hypothesized, tests using multiple measures of performance on a sample of 648 MNEs confirmed that higher CSiR is related to lower overall firm performance. Although both the ROA- and Tobin's *q*-based models produced significant results as hypothesized, CSiR was found to be a better predictor of performance when measured via Tobin's *q* as opposed to via ROA. This finding makes sense given that Tobin's *q* is considered a longer-term performance measure, whereas ROA is a shorter-term measure (Short, Ketchen Jr, Palmer, & Hult, 2007), and social

responsibility investments and impacts generally have long-term orientations (Wang & Bansal, 2012).

Contribution

This study's findings make several unique contributions to the international business and social responsibility literature. First, this study is research-opening in that it finds initial support for the suggestion that just as firms are rewarded for their positive CSR, their performance may likewise be penalized for high levels CSiR. A large percentage of the CSR research examines the CSR-performance relationship, but this study's findings indicate that the CSiR-performance relationship may be equally deserving of research attention.

Second, based on North's institutional model (1990), this study is the first to conceptualize institutionalized corruption as having both a formal and informal dimension. The regressions were executed hierarchically to emphasize that both the formal and informal corruption dimensions contribute independently to social irresponsibility. The typical focus in corruption-related research is on corruption in the public sector, formal corruption. This study's empirical results suggest that in addition to the formal corruption environment, firms may also face separate additive impacts from their informal corruption environment. Adding the informal dimension provides a research contribution because with it we can better explain CSiR. The traditional method (of conceptualizing formal corruption only) does not do as good of a job of explaining as when we add in the informal dimension and may be an overly simplistic way of looking at corruption. Therefore, future corruption researchers may wish to incorporate both the formal and informal dimensions of corruption in future studies.

Finally, this is also the first social irresponsibility study to conceptualize the MNE as a *portfolio* of locations, holistically considering the corruption impacts from the firm's entire set of operating locations on their social irresponsibility. Future research examining the influence of external elements such as formal and informal institutions on social irresponsibility and/or responsibility may want to consider utilizing the portfolio conceptualization in their studies.

Managerial Implications

The empirical support for my hypotheses leads to two managerial recommendations. First, MNEs may be able to reduce their CSiR exposure by balancing corruption considerations in their country selection decisions. My findings help us understand how a specific aspect of the institutional environment – corruption - across a firm's entire portfolio of locations may have an impact on the firm's social irresponsibility outcomes. Firms operating in portfolios of locations with lower formal and/or informal corruption levels may be at an advantage in terms of CSiR. These results provide guidance in country selection and social responsibility strategy for MNE managers concerned about minimizing incidents of social irresponsibility.

Second I take an initial step in proposing and empirically confirming the notion that MNEs with higher levels of CSiR may be outperformed by firms with lower levels of social irresponsibility. There is a rich research stream underway examining the relationships between positive social performance and firm financial performance, but the social irresponsibility-performance link is unexplored. My results suggest that there is a performance cost associated with maintaining high levels of CSiR that MNE managers

may want to consider when setting social responsibility strategies and making country selection decisions.

Limitations

This study has several limitations. Although the KLD dataset is overwhelmingly accepted in CSR and CSiR research (Wood, 2010), it has some limitations in terms of international coverage which I have attempted to account for in the research design. The KLD rating data is comprised of firms which are still overwhelmingly U.S.-based. To address this limitation and maintain an international focus, this study considers the corruption impact of the MNE's *entire portfolio* of locations, not just the headquarters country. In the future there may be better ways to measure CSiR which may further address or eliminate this limitation and enable testing of the model using a broader global sample. Whereas there are other available options for measuring CSR, other social responsibility ratings do not provide a set of measures that examine irresponsibility separately. This makes measuring CSiR offers more of a research challenge for the future, particularly in an international context. Improved CSiR measures may also help improve the R-squares of irresponsibility-related research models.

The portfolio operationalization technique used in this study also has some limitations in that each subsidiary is weighted equally in the calculation of portfolio-level variables. Certain subsidiaries may be more strategically important or more relevant to a MNE's social responsibility-related outcomes than others. Future researchers may be able to identify theoretically-based methods of weighting subsidiaries differently that can be supported by available data sources.

Additionally, this study utilizes nation-level attributes of formal and informal corruption to explore the environmental effects of corruption on MNE social irresponsibility and subsequent performance. Country-level attributes do not necessarily capture any within-country variance that may exist. It is possible that the specific geographic locations of the MNE's presence in a particular region within a given country might exhibit significantly different levels of formal and/or informal corruption which could affect the results. Future measurements may provide for more institutional granularity, enabling within-country analysis of different levels of institutionalized corruption.

Finally, this study is cross-sectional, measuring phenomena at a particular point in time. Future research may want to explore the relationships between corruption, CSiR, and performance via a longitudinal design. However, because institutional elements do not tend to radically change year-over-year, future studies would need to be conducted either over very long periods of time or alternatively could focus on particular subsets of the world that are experiencing more rapid institutional changes (e.g. emerging markets).

Conclusion

By conceptualizing and testing corruption as a multi-dimensional construct, this study highlights the influence exerted on MNE by the formal and informal corruption levels of its entire portfolio of subsidiary locations. Corruption environments can affect firms' social irresponsibility outcomes. MNEs that operating in locations that have higher average levels of formal and/or informal corruption environments are more likely to have correspondingly higher levels of CSiR. Furthermore, this study's results suggest that higher CSiR is linked to lower firm performance. If minimizing levels of CSiR is a

strategic priority for the firm, managers should consider national formal and informal corruption profiles in their country selection decisions to minimize the impact of corruption environments on their social irresponsibility.

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APPENDIX A

OVERVIEW OF THE DISSERTATION FINDINGS

TABLE A.1. Dissertation findings and associated managerial and research implications

Main findings	*Managerial implications*	*Research implications*
Greater *informal institutional distance* between the MNE's headquarters and subsidiary locations negatively influences firm CSP.	To reduce the decline in firm CSP, MNE managers should select countries whose cultural profiles are more similar to the headquarters culture. Experience associated with learning about one culture does not negate the need to learn about every new culture.	The CSP dynamics associated with cultural distance need to be further investigated using other measures of informal institutional distance.
Formal institutional distance reduces the CSP benefits of greater international scope.	Entering more countries expands firm learning and leads to higher CSP. However, if new countries have significantly higher CSP standards than the firm's current locations, overall firm CSP may not increase as much because prior firm experience is not as applicable in the new higher-standard countries. MNEs from lower social responsibility regions (e.g. emerging markets) are at a particular disadvantage in this regard because a large percentage of potential markets have higher CSP standards.	Consider the asymmetric nature of formal institutional distance; maintain sign and direction to reflect the hierarchy of stringency in country-level formal regulatory institutions.
Formal and informal institutional distances produce different dynamics relative to social responsibility.	MNE managers should balance consideration of both the cultural and regulatory aspects of their new country selections.	Symmetry of formal and informal institutional dynamics should not necessarily be assumed. Future international business research into possible different dynamics of formal and informal differences needs to be investigated.

TABLE A.1. Dissertation findings and associated managerial and research implications (*continued*)

Main findings	*Managerial implications*	*Research implications*
Higher levels of both *formal* and *informal corruption environments* in a MNE's operating locations are related to higher levels of firm CSiR.	To avoid higher firm CSiR, MNE managers should select countries characterized by lower formal and informal corruption environments.	Future research should consider the impact of the corruption profiles of the firm's operating locations on other social responsibility-related outcomes.
Informal corruption has a separate and incremental impact over formal corruption on CSiR.	MNE outcomes are affected by both the level of formal public sector corruption and the general permeation of corruption within the society.	International business researchers should consider informal corruption as a distinct dimension of institutionalized corruption in future studies.
Higher levels of CSiR are related to lower firm performance.	To improve firm performance, MNE managers should reduce or eliminate socially irresponsible behavior.	A foundation is set for additional research into the irresponsibility-performance relationship.
The institutional profiles of a MNE's entire *portfolio* of operating locations have an impact on the firm's CSP and CSiR.	The headquarters country influences are not the only location consideration for MNEs. Each subsidiary location country choice also may have a potential impact on the firm's social responsibility and irresponsibility outcomes.	The operating portfolio is based on a consideration of the full set of subsidiary operating locations specific to a given MNE and may provide a useful vantage point from which to explore other institutional dynamics relative to MNEs.

APPENDIX B

SECONDARY DATA COLLECTION METHODOLOGY

SECONDARY DATA COLLECTION METHODOLOGY

The purpose of this section is to describe the procedures used for secondary data collection and preparation in the two empirical dissertation studies. Although Paper 1 and Paper 2 utilized completely separate sample frames, samples, and independent and dependent variables, the same basic process that blended firm, subsidiary, and country data via portfolio-level operationalization was utilized for both papers. The general mechanics of this data collection process are described within this appendix.

In addition to SPSS, the tools utilized for data manipulation in the dissertation studies included Excel, Oracle, and TOAD. Data sourced from public and subscription database sources were downloaded locally as Excel spreadsheets. The Excel spreadsheets were uploaded into an Oracle 11g relational database (here forth referred to as the "Research Database"). Extracts from the Research Database were used to create the final samples which were imported into SPSS for analysis. The widely used TOAD database tool was used for all database uploads, queries, and extracts. Figure B.1 provides an overview of the tables, relevant data elements, and data relationships in the resulting logical data model created for the empirical studies.

The first step in creating the study samples was to establish the initial firm samples based on availability of social responsibility/irresponsibility data. The sample frames for both studies were third party social responsibility ratings datasets. Paper 1 Utilized the CSRHub dataset; Paper 2 utilized the Kinder, Lydenberg, Domini (KLD) ratings. CSRHub provides publicly available data which was downloaded in spreadsheet form from the CSRHub website (www.csrhub.com). The KLD dataset is propriety and was not available via any existing Kennesaw State database subscriptions. For this

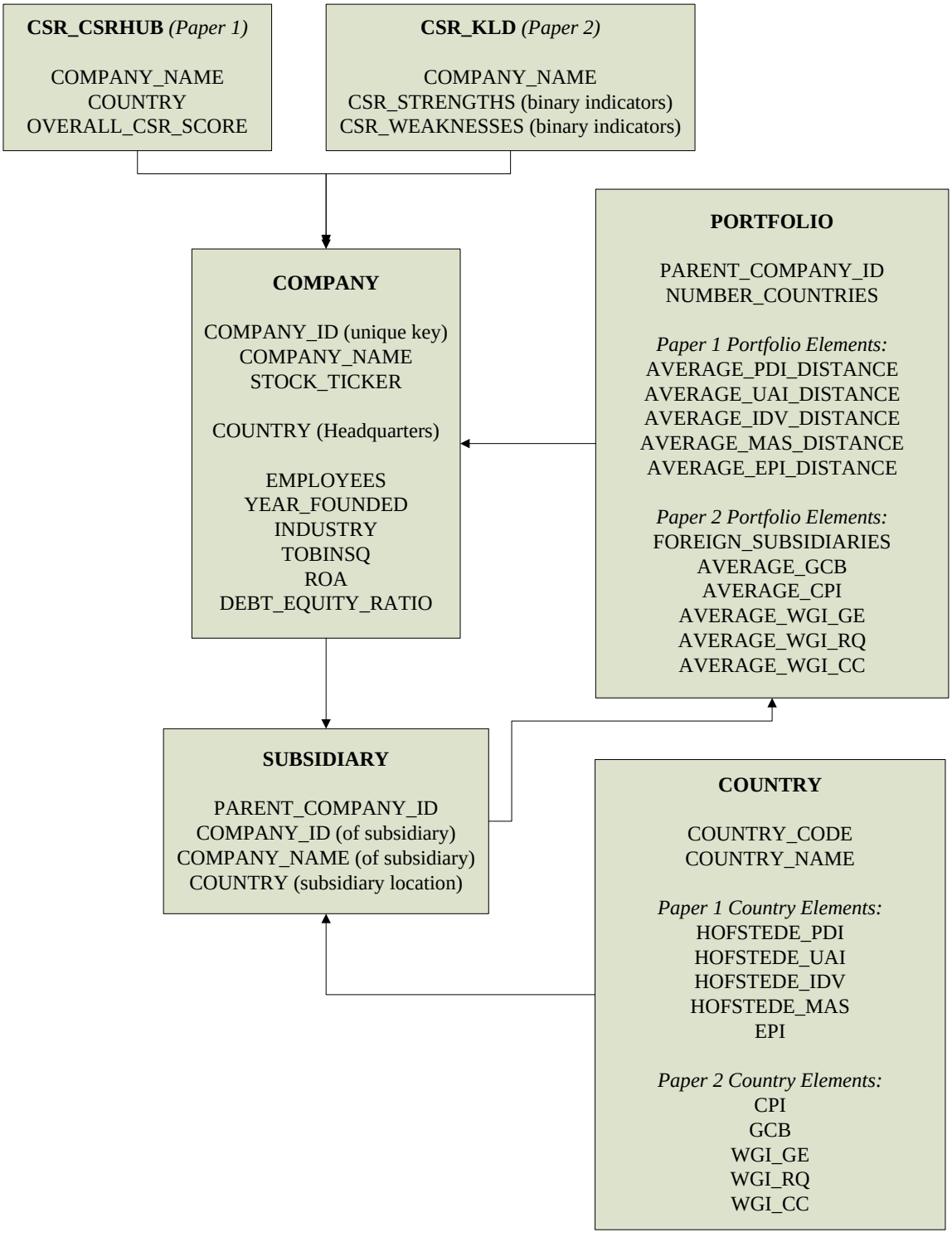

FIGURE B.1. Logical data model

reason, the KLD data was purchased in spreadsheet form personally by the author from the dataset's current owner, MSCI, Inc. (www.msci.com). The CSR datasets each contained company name, headquarters country (for CSRHub), and a variety of different social responsibility ratings (in different categories and sub-categories in the case of KLD).

SPSS was used to identify random selections of firms from each CSR spreadsheet (n = 450 from CSRHub for Paper 1; n = 700 from KLD for Paper 2, for a total of 1,150 firms). The selected firms and their associated CSR-related scores were used to populate two new tables in the Research Database (***CSR_CSRHUB*** and ***CSR_KLD***).

The next step in the data collection process was to match each sample firm selected from the CSR datasets with its corresponding firm demographic data. The source of firm demographic data was the Standard & Poor's Capital IQ database (accessed via Kennesaw State subscription).Company name and headquarters country (when available) were used to identify each of the 1,150 sample firms in Capital IQ. Extracts from Capital IQ and name-matching queries were created to semi-automate the matching process. However, because specific company naming conventions rarely match exactly between two different data sources (e.g. one source may use "Apple" whereas another uses "Apple, Inc."), each of the 1,150 distinct company names had to be manually confirmed and updated individually.

Entries in the Research Database were made for each CSR-Capital IQ firm match. First, an entry in the ***COMPANY*** table was created containing basic firm information: company name, headquarters country, number of employees, year founded, and industry. Because Capital IQ company names include parenthetical stock tickers (e.g. Apple is

actually called "Apple [NYSE:APP]" in Capital IQ), an algorithm was created to systematically strip off the stock tickers into their own data element in the ***COMPANY*** table. The corresponding company number found in Capital IQ for each matched firm was added to the corresponding ***CSR*** table to enable cross-referencing.

Because Paper 2's research model includes firm performance-related variables, several additional firm-level data elements were also extracted from Capital IQ and stored with the Research Database ***COMPANY*** data for all Paper 2 firms: return on assets (ROA); Tobin's *q*; total debt and total equity (used to calculated leverage).

Both dissertation studies are based on the availability of portfolio-level measures for each firm. Portfolio measures take specific measurements at the subsidiary level (based on the country location of each subsidiary), and then all of the subsidiary values for the firm are averaged together to create portfolio-level variables for each firm.

To accomplish this, first each sample firm's entire set of subsidiary locations were extracted from Capital IQ and loaded into the ***SUBSIDIARY*** table in the Research Database. Capital IQ provides an extract capability that outputs all of a firm's subsidiaries in Excel spreadsheet form. This subsidiary spreadsheet was individually extracted for each of the 1,150 sample firms. A special upload utility was written to take the subsidiary number, company name, and country from each of Capital IQ spreadsheet. This data was used to populate a new ***SUBSIDIARY*** table in the Research Database.

The next step involved preparing the country variables upon which the portfolio-level variables would be based. The required country-level data elements were retrieved from public sources as described in detail in the Methodology sections of each dissertation paper and summarized in Table B.1 below. The country data was used to

populate a ***COUNTRY_MASTER*** table in the Research Database. To enable matching country information from different sources, country names were normalized to United Nations country naming standards.

TABLE B.1. Country-level data elements and sources used to create portfolio measures

Paper	*Country-level element*	*Source*
Paper 1	Hofstede cultural attributes (PDI, IDV, UAI, MAS)	www.geert-hofstede.com
	Environmental Performance Index (EPI)	http:\\epi.yale.edu
Paper 2	Global Corruption Barometer (GCB)	www.transparency.org/research/gcb
	Corruption Perception Index (CPI)	http:\\cpi.transparency.org
	World Governance Indicators (WGI CC, GE, RQ)	info.worldbank.org/governance/wgi

Once the social responsibility rating, firm, subsidiary, and country master data tables were all prepared in the Research Database, the corresponding portfolio-level measurements for each Paper 1 and Paper 2 firm were calculated combining data from all four sources. Based on institutional distance theory, the portfolio-level measurements for Paper 1 involved calculating the *difference* between attributes of each firm subsidiary country and the firm headquarters country. Each Paper 1's subsidiary-HQ differences were then averaged to obtain firm-level average portfolio distances. The Paper 2 portfolio-level measurements were conceptualized to represent the firm's *overall* portfolio environment and were therefore calculated as the average of all locations,

including both subsidiary and headquarters in a single average per firm. Once calculated, each of the portfolio-level measures were stored in a ***PORTFOLIO*** table.

Special scripts were also written to calculate several other measures required for the dissertation studies, such as the *Number of countries* (number of distinct countries in which the firm has a headquarters and/or subsidiary location, used in both Paper 1 and 2) and *Number of foreign subsidiaries* (calculated based on count of subsidiary records for each firm that were located in a country different than the headquarters country, used in Paper 2). These fields were also stored in the ***PORTFOLIO*** table entry for each firm.

Once all of the portfolio-level variables were calculated, the corresponding samples for the Paper 1 and Paper 2 firms could be exported from the Research Database as Excel spreadsheets that were then imported into SPSS for data analysis. Table B.2 summarizes the large number of total number of records created and manipulated in the Research Database that were required to prepare the samples for the dissertation studies.

TABLE B.2. Total count of records created in preparation of dissertation samples

Table name	*Total record count*
CSR_CSRHUB	5,662
CSR_KLD	2,965
COMPANY	1,150
SUBSIDIARY	125,532
COUNTRY_MASTER	231
PORTFOLIO	1,150