Old Dominion University

ODU Digital Commons

Theses and Dissertations in Business Administration | College of Business (Strome)

Summer 2021

Two Essays on Corruption, FDI, and Digitalization

Mahdi Forghani Bajestani
Old Dominion University, forqani.mahdi@gmail.com

Follow this and additional works at: https://digitalcommons.odu.edu/businessadministration_etds

 Part of the Business Administration, Management, and Operations Commons, Economics Commons, and the Organizational Behavior and Theory Commons

Recommended Citation

Forghani Bajestani, Mahdi. "Two Essays on Corruption, FDI, and Digitalization" (2021). Doctor of Philosophy (PhD), Dissertation, Management, Old Dominion University, DOI: 10.25777/1cpt-s769
https://digitalcommons.odu.edu/businessadministration_etds/138

This Dissertation is brought to you for free and open access by the College of Business (Strome) at ODU Digital Commons. It has been accepted for inclusion in Theses and Dissertations in Business Administration by an authorized administrator of ODU Digital Commons. For more information, please contact digitalcommons@odu.edu.

TWO ESSAYS ON CORRUPTION, FDI, AND DIGITALIZATION

By

Mahdi Forghani Bajestani
B.S. Electrical Engineering 2010, Shahrood University of Technology
M.B.A. 2014, University of Tabriz

A Dissertation Submitted to the Faculty of Old Dominion University in Partial Fulfillment of the Requirements for the Degree of

DOCTOR OF PHILOSOPHY

MANAGEMENT

OLD DOMINION UNIVERSITY
August 2021

Approved by:

Shaomin Li (Chair)

Mohammad Najand (Member)

Amirmahmood Amini Sedeh (Member)

ABSTRACT

TWO ESSAYS ON CORRUPTION, FDI, AND DIGITALIZATION

Mahdi Forghani Bajestani
Old Dominion University, 2021
Director: Dr. Shaomin Li

Corruption is detrimental to both society and economy and is yet prevalent in many countries. Thus, research in this field is imperative to help alleviate the problem. Drawing on institutional theory and eclectic paradigm, this dissertation seeks to first, delineate the mechanisms through which corruption influences economic decision-making, and second, identify its root causes and tools for controlling it.

This dissertation's central research question is addressed in two essays. Essay 1 builds on insights from research on corruption in international business to advance our understanding of how perception of bribery in foreign markets shapes investment behaviors. The literature is dominated by two views arguing for the adverse effect of corruption in the host and corruption differences between home and host markets on inward FDI. To shift the focus to investors' perspective, we develop a framework with distinctions between low and highly corrupt countries to evaluate their firms' responses to transparent and corrupt environments abroad reflected in their outward foreign investments. Applying a dynamic gravity model to a panel data on bilateral FDI among 36 OECD countries, we find that low-corruption sources of investment are deterred by widespread bribery in foreign markets and tend to commit more resources to clean environments. However, the results suggest that highly corrupt countries invest more heavily in high-corruption target markets, supporting the corruption distance perspective.

Additionally, understanding the causes of corruption is a prerequisite step for tackling it effectively in an international business context. As such, Essay 2 is dedicated to investigating a rather neglected factor in the literature, that is, digitalization across countries. While ICT tools can help prevent bribery by improving public scrutiny, they may also be used to create new corruption opportunities. Accordingly, we argue that the effect of digitalization on corruption is conditioned by different governance environments. While digital tools contribute to the fight against bribery in rule-based economies, they facilitate corruptive practices in relation-based countries. A panel data analysis on 82 countries over a 9-year period from 2012 to 2020 supports our arguments and confirms the context-specific nature of digital transformation and its discrepant implications for different societies.

Copyright, 2021, by Mahdi Forghani Bajestani, All Rights Reserved.

To my supportive parents, Ali and Marzieh, loving wife, Mehrsa, and soon-to-be-born son, Ario.

ACKNOWLEDGEMENT

I would like to thank my dissertation chair, Dr. Shaomin Li, for all his support and advice during my doctoral education. He has been a wonderful mentor whose insights and guidance always helped me push myself to the next level in my academic life. I deeply appreciate his invaluable advice and encouragement not only in my dissertation work, but also in the challenging job search process. I am also grateful to my dissertation committee members, Drs. Mohammad Najand and Amirmahmood Amini Sedeh, for their contributions towards this accomplishment. Undoubtedly, this research owes its quality to all the committee members' careful review, critical feedback, and constructive recommendations. I also want to thank the chair of the Department of Management, Dr. Anil Nair, the area coordinator of Strategic Management Doctoral Program, Dr. William Judge, and the College Doctoral Program Director, Dr. Jing Zhang, who never hesitated to help Ph.D. students succeed. I am very thankful for all the support and resources provided to me by Drs. Ryan Klinger, Andrew Bennett, and Martin Goossen throughout my academic endeavors at Strome College of Business. Also, many thanks to Katrina Davenport whose tireless efforts make it work at the college.

I would like to express my sincere appreciation for the professional and emotional support I received from the many people during my doctoral studies including Drs. Ali and Roya Ardalan, ODU graduates Drs. Amirmahmood Amini Sedeh, Mohammad Mahdi Moeini Gharagozloo, Mehdi Sharifi Khobdeh, Aiden Oksoy, and Hooman Abootorabi, my wonderful cohorts Dr. Fatemeh Askarzadeh and John Rajan, and all my friends and professors at Strome College of Business. My most special thanks go to my beloved family; my parents who sacrifice their lives so that I can pursue my dreams, my brother who is always there for me as a true friend, and my selfless better half whose unconditional love and support helps me survive and keeps me motivated to grow.

TABLE OF CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

Figure Page

CHAPTER 1

CORRUPTION AND OUTWARD FDI: A DYNAMIC GRAVITY APPROACH

ABSTRACT

We study how the perception of bribery level in target markets by foreign investors shapes their investment behavior. The literature is dominated by two views arguing that inward FDI is deterred by (1) corruption in the host country, and (2) corruption differences between home and host markets. We shift the focus from recipient countries to investors' perspective and develop a framework with distinctions between low and highly corrupt countries to evaluate their firms' responses to clean and corrupt environments abroad reflected in their outward foreign investments. Applying a dynamic gravity model to a panel data on bilateral FDI among 36 OECD countries, we find that first, low-corruption sources of investment are deterred by widespread bribery in foreign markets and tend to commit more resources to clean environments. Second, and more interestingly, highly corrupt countries invest more in high-corruption target markets, supporting the corruption distance perspective.

Keywords: Bribery, Corruption, Outward FDI, Dynamic Gravity Model, Home Country, Host Country, Distance

1. INTRODUCTION

International business scholars have been increasingly drawn to research on implications of corruption for foreign direct investment (FDI) over the past two decades. While the literature is somewhat unanimous on adverse effects of extensive bribery in the target market, the deterring role of differences in corruption levels between home and host countries has also received empirical support (Brada, Drabek, Mendez, & Perez, 2019; Godinez & Liu, 2015; Habib & Zurawicki, 2002; Wei, 2000). With the majority of studies concentrating on inward FDI, however, the main focus of both streams of research has been on the host market and what attracts or discourages investments in the country. This approach provides little insight into investors' view of corruption overseas and suggests that more corrupt countries receive less FDI and that most of these inward investments are from countries with similar corruption levels. These statements are not necessarily implying that all investors are deterred by widespread bribery abroad or that highly corrupt countries also invest more in environments infused with corruption.

Accordingly, this study attends to outward FDI to shift the emphasis to the investing country and its multinational enterprises' (MNEs') view of bribery in foreign markets. This approach addresses a mostly unanswered question in the literature regarding how different perceptions of corruption in other countries influence MNEs' strategic decisions on resource allocation. To this end, we make a distinction between low- and high-corruption countries and evaluate their MNEs' view of corruption in foreign markets when making investment decisions. The distinction adds to our understanding of the differences across multinationals of different origins in their approach to dealing with opacity or transparency in a foreign country which is reflected in their resource commitments in the target market. Focusing on source countries of FDI is also imperative from a policy-making perspective as it demonstrates the effectiveness of

initiatives to combat corruption across borders. For instance, a recent report by Transparency International reveals that most members of the Organization for Economic Cooperation and Development (OECD) poorly enforce foreign bribery laws despite adopting the OECD Anti-Bribery Convention (Dell, 2020). As such, the purpose of this study is to explore the bilateral investments among OECD countries and shed more light on whether and how corruption affects FDI by critically assessing the way firms perceive and respond to graft in different contexts.

We build on two bodies of research addressing the FDI-hindering effects of prevalent bribery in the destination on the one hand, and home-host dissimilarities in corruption levels on the other, to explore the different internationalization behaviors of MNEs with low and highly corrupt countries of origin. First, the predominantly negative view of corruption asserts that it increases the cost and uncertainty of operating in a business setting and distorts investment incentives (Shleifer & Vishny, 1993; Kaufmann, 1997; Wei, 2000), especially for MNEs facing heightened liabilities of foreignness (Zaheer, 1995). Based on institutional theory, gaining legitimacy is subject to compliance with established rules and norms in a society and is therefore more challenging in highly corrupt countries where neither formal nor informal institutions are clearly defined to conform to (Rodriguez, Uhlenbruck, & Eden, 2005). Thus, we expect foreign firms, whether originating in a transparent or corrupt country, to invest more heavily in low-corruption markets.

However, the second stream of literature suggests that foreign investment is not determined by the level of corruption in the destination per se, but rather by the relative differences between home and host countries in this respect (Habib & Zurawicki, 2002). This line of argument is mainly based on the Ownership-Location-Internalization (OLI) framework, also known as the eclectic paradigm, and the notion of psychic distance. It posits that while MNEs of low corrupt countries

tend to be deterred by extensive bribery abroad due to their unfamiliarity with managing corruptive practices, those originating in highly corrupt environments are more likely to invest in countries similar to their home where they have gained experience engaging in bribery to do business (Cuervo-Cazurra, 2006; Godinez & Liu, 2015).

Drawing on these two perspectives, we develop a framework to examine how MNEs of low and highly corrupt countries differ in their perception of corruption in foreign markets which in turn determines the intensity of their resource commitments to those markets. Since the investment activities of MNEs and the size of their foreign affiliates in the host country are ultimately reflected in stocks of FDI (Stephan & Pfaffmann, 2001), we focus on outward FDI stock to explain the different responses of multinationals to the level of corruption in a foreign country. To do so, we employ a dynamic gravity model to probe the MNEs' investing patterns in various configurations of bilateral FDI stock between home and host countries based on their level of corruption. Although gravity models are widely used in international business research to explain bilateral trade and FDI, the dynamic nature of FDI has been largely ignored in previous studies (Kahouli & Maktouf, 2015). This is surprising as the investments made in a country by another in a given point in time provide the basis for subsequent investments between the two countries. Therefore, we also address a glaring gap in the literature on FDI and gravity equations by incorporating dynamic specifications and considering the delay effects on current FDI stock.

2. THEORETICAL DEVELOPMENT

2.1. Corruption and FDI

The far-reaching nature of unethical behavior and its adverse impact on socio-cultural and economic environments has made the corruption phenomenon a focal point of interest for scholars

from various disciplines. Although corruptive practices have been described in several ways, the most comprehensive and widely-accepted definition of corruption, offered by Transparency International, is the abuse of entrusted power for private gain. As Cuervo-Cazurra (2016) points out, this definition encompasses various aspects of corruption; the power entrusted to an individual by others, the abuse of that power by the individual beyond his or her authority, and the private gain that only benefits the individual at the expense of others whom he or she is supposed to serve. Thus, it can be used to refer to corruption not only in government, which is typically the one investigated in the literature, but also in organizations of all type (Cuervo-Cazurra, 2016).

In the field of international business, corruption has been studied primarily in the emerging and transition economies since it is most rampant in these less developed countries (Petrou & Thanos, 2014). Lack of transparency in a business setting exacerbates the liabilities of operating in a foreign market through increased transaction costs, uncertainty, and risk of expropriation and, therefore, corruption has been argued to deter FDI into such economies (Judge, McNatt, & Xu, 2011). Notwithstanding, several studies also point to the triviality of corruption in the target country for foreign investors (Henisz, 2000; Hines, 1995), or even its FDI-attracting nature (Barassi & Zhou, 2012; Egger & Winner, 2005). These findings are justified by the contention that bribery may act as an essential evil greasing the wheels of commerce and circumventing red tape in rigid bureaucracies characterized by institutional voids and market inefficiencies (Huntington, 1968; Leff, 1964). But the “sand in the wheels” view of corruption counters this argument and maintains that corrupt government officials may create additional regulations to seek more rents and their greed will prevent the “grease” effect to be realized (Tanzi, 1998).

Motivated by the lack of consensus on the actual consequences of corruption, a growing body of research has attended to the relative differences between countries and suggests that

corruption is not an absolute impediment to FDI. These scholars believe that MNEs' investment decisions are not only affected by the extensiveness of bribery in the destination, but also by how it compares to their home market, that is, by the extent to which there is a corruption distance between the two countries (Habib & Zurawicki, 2002; Wu, 2006). In other words, the greater the difference between the contexts of two countries in terms of corruptive practices employed, the less likely a firm from one country will invest in the other. However, both lines of research have primarily focused on the host market investigating inward FDI as a function of its corruption level or corruption distance to the source country. This approach ignores investors' attitude toward bribery abroad since the fact that highly corrupt countries receive less investment does not necessarily mean that all source countries are deterred by corruption in foreign markets. Similarly, recipient countries' diminishing attractiveness for FDI from markets with larger gaps in corruption levels does not universally indicate that investing countries are discouraged to commit resources when such distance grows. To provide new insights into and a clearer picture of both absolute and relative effects of corruption on FDI from investors' perspective, we differentiate between low and highly corrupt countries and draw on institutional theory and OLI framework to evaluate their firms' view of bribery in foreign markets and how it plays out in their resource commitments to those markets.

2.2. Low-Corruption Source Countries

From the perspective of MNEs originating in a "clean" business environment, investing in countries fraught with bribery can be daunting. The increased transaction costs associated with kickback payments coupled with the uncertainty of operating in a highly corrupt setting repels many of these investors. The firms not only incur the additional costs of paying government

officials to get things done, but must also devote time and attention to dealing with authorities whose rent seeking behavior leads to waste of resources. This in turn impairs the firms' efficiency since their valuable resources could be allocated to more profitable purposes elsewhere (Kaufmann, 1997). The more acute problem for these foreign firms, however, stems from the difficulty in assessing the actual costs of doing business in high-corruption states due to infused uncertainties in the relationships with the government (Petrou & Thanos, 2014; Wei, 1997). Besides imperfect contracting and information asymmetries that may lead to opportunism by the host agents and officials (Doh, Rodriguez, Uhlenbruck, Collins, & Eden, 2003; Javorcik & Wei, 2009), managers of MNEs from transparent countries face additional uncertainty resulting from their lack of knowledge on who to bribe and whether they will encounter more requests from other government officials after they paid one. Also, this payment is no guarantee they will receive what they have been promised because the implicit agreement is not enforceable in courts (Cuervo-Cazurra, 2006, 2016).

To have a better insight into a corrupt system mechanisms and its consequences for investors, institutional theory provides a particularly relevant framework since corruption is an outcome of a country's institutional quality reflected in formal laws and regulations as well as informal norms and values (Svensson, 2005). Firms legitimize their actions in a society by conforming to the expectations of abiding by laws and following rules and social norms, or through pursuing institutional isomorphism and imitating successful peers (DiMaggio & Powell, 1983). In a highly corrupt country, however, the unstable institutional structure limits the availability of information on legitimization requirements and results in transactions characterized by lack of transparency and predictability (Uhlenbruck, Rodriguez, Doh, & Eden, 2006). The information asymmetry, either produced deliberately by authorities withholding vital information or emerging

from weak institutional arrangements, hinders firms' ability to evaluate the contractual agreements and their enforceability (Petrou & Thanos, 2014). An immediate implication for foreign firms is therefore the increased uncertainty surrounding the nature, size, and number of corrupt exchanges necessary to attain a government approval. Additionally, the ambiguities inherent in the context of business activities make both formal and informal institutions more complex and susceptible to varied interpretations (Rodriguez et al., 2005). This implies that even a deep understanding of the host market regulations, norms, and values by MNEs does not necessarily earn them legitimacy or immunity to excessive bribe extraction by government officials as the process of compliance with "rules of the game" may be determined differently.

The poor quality of institutions in a state rampant with corruption undermines the soundness of important market mechanisms (e.g., private property rights protection) and prevents their fair exercise (Li, 2019). This creates the opportunity for local governments and their closely connected organizations to take advantage of businesses and seize their assets for unjustified reasons (Karhunen & Ledyaeva, 2012). Confronted with expropriation hazards and risks of losing their capital, foreign firms will be doubtful about their return on investments and further discouraged to commit resources to these markets. Highly corrupt business settings also pose different dilemmas on entities seeking legitimacy. Although illegal, bribery may be an accepted norm and practice in these environments creating confusion regarding what is considered legitimate. Managers of firms facing bribe requests must decide to conform whether to cognitive and normative pressures and pay the government officials, or to regulative pressures and avoid such behaviors because they are illegal (Cuervo-Cazurra, 2016; Spencer & Gomez, 2011).

MNEs from more transparent home countries are especially at a disadvantage in this situation as they face the additional challenge of dealing with conflicting pressures from multiple

institutional contexts which reduces their ability to conform and gain legitimacy. On the one hand, in business environments where bribery is widely diffused and accepted, foreign firms are also expected to acquiesce to the institutional pressures and engage in corruptive behaviors since their social validity largely depends on following these rules and norms (Oliver, 1991). Refraining from paying kickbacks in these countries not only may deprive the firm of vital resources such as licenses and procurement, but is also likely to provoke the government to set biased standards to make the firm's activities appear unacceptable and damage its image in the eyes of the public and local interest groups thereby intensifying its liability of foreignness. On the other hand, yielding to bribery pressures in highly corrupt settings with the purpose of acquiring external legitimacy threatens the internal legitimacy of MNEs with cleaner origins. Compliance with the host country corruption contradicts the rules and regulations at home, with possible penalties imposed, as well as the moral principles at the headquarters. Thus, a subsidiary adopting local norms that are at odds with those of the parent organization and its other subunits is in fact ignoring the intrafirm institutional pressures and risks losing internal legitimacy. The conflicting pressures and the resulting dilemmas lead these MNEs to limit their investments in high-corruption markets or, in the extreme, even prefer non-equity entry modes to FDI (Rodriguez et al., 2005).

On the contrary, firms from less corrupt countries are more attracted to business environments that, similar to their home nation, are characterized by transparency in the legal system with universally applied and interpreted rules that are enforced by an impartial and efficient state. These formal institutional arrangements form a rule-based governance mechanism that is further supported by well-established social norms and high-quality information infrastructures that ensure availability of reliable public information (Li & Filer, 2007; Li, Park, & Li, 2003). In these countries, foreign investors are subject to the same requirements and expectations to do

business as insiders are, which encourages them to commit more resources to such markets (Li & Samsell, 2009). In addition, the clarity and fairness of rules and norms make it easier for MNEs of low-corruption origins to obtain external legitimacy in these contexts as the process of conforming to the institutional environment is known to them and isomorphic forces are in accord with those of their home country and do not impose conflicting pressures on them.

Similar arguments can be made based on the eclectic paradigm to explain investments from low corrupt sources. The theoretical framework postulates that firms' international activities are determined by "ownership", "location", and "internalization" (OLI) advantages (Dunning, 1980; 1998). According to this perspective, MNEs invest in countries with economic and institutional settings that enable them to capitalize on their competitive advantages developed in their home country. As such, for FDI to occur, the firm must possess ownership and internalization advantages derived from its resources and opportunities for reducing transaction costs, and the foreign market must offer location advantages. In other words, the attractiveness of a location for foreign investors is a function of factors specific to the destination, those associated with the FDI source including the institutional context conducive to the development of specific resources and capabilities, and relative factors such as geographic distance that affects transportation costs.

More recently, the cultural and administrative differences between home and host countries have been emphasized as major causes of transaction costs in cross-border investments (Ghemawat, 2001). The uncertainty arising from unfamiliarity with the target market environment and the risks of discrimination increase the costs of doing business through liability of foreignness, a notion also highlighted by institutional theorists (Eden & Miller, 2004). The difference in corruption levels between countries, as a form of administrative distance, is also considered an important barrier to foreign investment. Habib and Zurawicki (2002), the pioneers of this stream

of research, argue that dissimilarity in the extent of corruptive practices in the home and host countries increases the uncertainty of operating in the target market and hinders learning about its business context. The argument is based on the concept of "psychic distance" which refers to factors making it difficult to understand a foreign environment (Johanson & Vahlne, 1977). They maintain that corruption differences significantly impede FDI between the two states since lack of knowledge and experience has a profound impact on the decision to enter a foreign market.

This suggests that MNEs from cleaner countries face additional challenges and are placed at a comparative disadvantage in highly corrupt contexts due to their inability to deal with bribery and, as a result, limit their operations there (Godinez & Liu, 2015; Wu, 2006). The underlying logic is that they have developed firm-specific advantages such as proprietary assets and brand image that are of little to no value in corrupt business settings. In other words, their resources and capabilities cannot be exploited to their full potential in countries where property rights are weakly protected and the real advantage is achieved through personal relationships with government agencies (Brada et al., 2019).

In contrast, these firms prefer to concentrate their foreign investments on countries more akin to their home market with respect to transparency in the way business is carried out. Based on the eclectic paradigm, MNEs develop competencies and governance mechanisms that reflect the institutional arrangements of their country of origin and suit its economic conditions. Accordingly, they tend to seek similar environments to their home country in foreign markets that offer them opportunities to complement their core competitive advantages (Dunning, 1998). This is also in line with the internationalization process of the firm indicating that firms prioritize psychically closer markets for their foreign expansion as this closeness facilitates the learning process and alleviates the uncertainties of operating in a foreign country (Johanson & Vahlne,

1977). Therefore, firms from less corrupt countries are inclined to invest in foreign markets with low levels of corruption where they are more familiar with the business environment. They are also better able to utilize their skills and capabilities developed at home to achieve advantages through fair competition rather than participating in bribery agreements with government officials. Overall, arguments made based on both institutional theory and OLI framework lead us to conclude that MNEs originating in more transparent business settings are more likely to invest in clean countries similar to their home rather than those infused with corruptive behavior.

> ***Hypothesis 1:*** *Low-corruption countries direct their FDI more toward low-corruption countries than high-corruption countries.*

2.3. High-Corruption Source Countries

Although international business literature is relatively unanimous on the effects of corruption on MNEs of transparent countries, standpoints begin to diverge and debates arise when speculating about how firms located in highly corrupt states perceive and respond to widespread bribery in foreign markets. According to the dominant view of corruption, it negatively affects FDI regardless of the country of origin. As noted earlier, proponents of this view argue that corruption increases the difficulty of conducting business in a country by distorting its market and acts as an arbitrary tax on FDI (Shleifer & Vishny, 1993; Tanzi, 1998). Also, the "grabbing hand" of corrupt officials adds to the regular transaction costs associated with entering a foreign market and heightens the risks of investment (Voyer & Beamish, 2004; Wei, 2000). MNEs headquartered in high-corruption countries may be able to offset these increased costs with the experience gained through recurrent exposure to bribe requests at home, but their primary concern and disincentive to investment in other highly corrupt countries is the uncertainty surrounding such business environments.

This uncertainty stems mainly from the unpredictability and arbitrariness of corrupt exchanges as the payment of kickbacks may not be necessarily rewarded with delivered promises or elimination of further requests by others in charge. The numerous legal permits required to start a business coupled with authorities' discretion in interpreting legislation provides more rent-seeking opportunities and adds to the complexity of the environment (Karhunen & Ledyaeva, 2012). In this situation, foreign firms' background in dealing with corrupt officials is not likely to give them any edge over competitors.

Managers of MNEs may have experienced pervasive bribery in their own country but understanding the nature of corruption in a target market and differentiating it from what they define as a corrupt system is crucial to their foreign entry and expansion decisions (Rodriguez et al., 2005). While low corrupt countries have, in essence, the same rule-based governance mechanism running on checks and balances, the only common feature in highly corrupt settings is corruption itself and secrecy in transactions. These relation-based governance environments vary significantly in how bribery takes place and what is considered an acceptable norm of doing business (Li & Filer, 2007; Li & Samsell, 2009).

Based on the OLI paradigm, if the capabilities developed in the home country such as skills learned to cope with corruption are not applicable and relevant across borders, they cannot be used as grounds for internationalization. In other words, these experiences and skills are location-bound and cannot be easily transferred to other countries without substantial adaptations to local contexts. Cultivating close relationships with corrupt officials in a foreign country is time-consuming and burdensome even for the most experienced MNEs. This is because well-established connections in a country are not transferable to another and learning the unique cultural and social aspects of business in a foreign market is a lengthy process. As a result, regardless of their experience with

bribery at home, foreign firms find it difficult to break into highly corrupt environments and will be treated as outsiders subject to liabilities of foreignness and newness if they do so. Even if they manage to establish favorable relationships with authorities in a corrupt country, changes in the government can be fatal for them (Fisman, 2001). Therefore, the uncertainty induced by corruption cannot be compromised by the knowledge on dealing with corrupt officials and deters investments by MNEs of any origin.

From an institutional perspective, the unstable underlying mechanisms of operation in a society give rise to the uncertainty associated with corruptive practices. Lack of explicit rules and regulations on corruption, absence of independent and fair enforcement, and opaque social norms and expectations on acceptable behaviors create a chaotic environment in highly corrupt countries. These institutional voids contribute to the unknown nature, size, and number of bribes required to perform business activities in such contexts thereby reducing the efficacy of the corrupt system (Doh et al., 2003; Rodriguez et al., 2005). Even involving government officials in corrupt transactions and making them beneficiaries of the deals will be unlikely to help firms achieve legitimacy in these countries (Oliver, 1991).

Having experienced operating in such unstable business settings, MNEs of high-corruption states are also discouraged to invest in similar environments as they perceive the low quality of institutions and unknowable circumstances as serious threats to their survival in a foreign market. Instead, they are allured by the secure and transparent business systems utilized in less corrupt countries. Despite being at a disadvantage due to their less competitive capabilities developed in home countries with inferior institutions (Cuervo-Cazurra & Genc, 2008), they are confident that their investment is aimed at its intended profitable purpose rather than corrupt officials' pockets and is safe under strong protection of property rights. Business practices and the process of

legitimization may be different from those of their country of origin, yet they are clear and learnable with universally applied rules and norms that do not discriminate between domestic and foreign investors (Li & Samsell, 2009). Based on this view of corruption, we expect MNEs with highly corrupt home nations to prefer transparent destinations for their international activities.

> ***Hypothesis 2a:*** *High-corruption countries direct their FDI more toward low-corruption countries than high-corruption countries.*

Citing research findings that indicate corruption to have insignificant or positive effects on investment decisions (e.g., Henisz, 2000; Egger & Winner, 2005), the alternative perspective suggests that foreign firms' investing patterns vary with their home country and that not all MNEs are the same in their response to corruption (Cuervo-Cazurra, 2006; Godinez & Liu, 2015; Wu, 2006). The idiosyncrasies of the home country determine the level of uncertainty and costs as well as benefits for foreign investors to engage in bribery abroad thereby affecting their decisions on both FDI location and intensity. These include not only the formal rules and regulations that shape the firms' behavior, but also psychological characteristics reflected in cultural values and social norms that influence managerial attitudes and decision making (Erramilli, 1996). Thus, the additional costs and uncertainties of operating in a foreign market imposed by its prevalent corruption are mitigated, or even turned into benefits, for firms with experience in corruptive practices at home. This is because they are already familiar with taking on illegal payments as a norm in conducting business and its intricacies and secrecies (Cuervo-Cazurra, 2006), and also more resilient to government harassment which gives them the ability to extract the highest returns from the unproductive activity (Kaufmann & Wei, 1999).

On the other hand, MNEs of transparent countries have less tolerance towards excessive bribery and may simply exit the corrupt environments. Otherwise, they will incur the costs of unlearning their deep-rooted business routines based on rule-based, arm's length transactions and learning how to pay kickbacks through experience. Taking account of this, firms of highly corrupt countries may be even attracted by such environments as they see an opportunity to have an advantage over their otherwise more competent rivals with their skills in dealing with bribery. This advantage, however, diminishes and becomes a disadvantage moving toward less corrupt host countries which ultimately discourages the MNEs of high-corruption countries to invest in cleaner ones (Habib & Zurawicki, 2002).

MNEs of corrupt states develop competencies and organizational structures that are tied to and mirror the governance environment of their home country which enable them to cope with its complexities. The otherwise undesirable underdeveloped institutions provide an opportunity for them to leverage their skills in building intricate, private relationships as a response to opacity and inefficiency of market mechanisms. In the presence of institutional voids, firms are compelled to learn how to survive the predatory acts of government and weak protection of property rights and transactions through accessing and building relationships with the right authorities (Brada et al., 2019). These capabilities and organizational characteristics carry ownership advantages for the firm and will be valuable resources to utilize overseas, but only in countries with similar business contexts that offer location advantages and opportunities to reduce transaction costs through internalization (Dunning, 1998). In other words, the skills acquired at home in bribing officials and dealing with government opportunism will bring competitive advantages for MNEs entering corrupt host countries. Although location-bound, these skills may be transferred to similar foreign

markets at low marginal costs and redeployed there without significant adaptations (Godinez & Liu, 2015).

Moreover, exposure to rampant bribery in their country of origin provides a learning experience for these firms that allows them to make sense of the complex business environment and guides their behavior under extreme uncertainty induced by corruption. This internalized knowledge helps MNEs recognize and exploit location advantages in their foreign expansion endeavors and turn the risks and costs of operating in corrupt countries into benefits. It also serves as an organizational mechanism to develop political capabilities appropriate for interacting with rent-seeking governments and prepares them for similar encounters with corrupt exchanges abroad (Holburn & Zelner, 2010). Given that psychic closeness facilitates the transfer of information and learning about the host market which in turn reduces the uncertainty of internationalization (Habib & Zurawicki, 2002; Johanson & Vahlne, 1977), prior knowledge of illicit procedures will be an important strategic asset when entering corrupt environments. Therefore, MNEs of high-corruption countries are more inclined to invest in locations that resemble their home market conditions to which they are more accustomed and better able to utilize their resources and capabilities (Cuervo-Cazurra & Genc, 2008).

The knowledge on mainstream practices in a target market and familiarity with its business setting is also highlighted as a crucial factor in foreign entry and investment decisions from an institutional perspective. Similarities in the institutional environment of home and host countries facilitate interpreting local information which can be used to offset the increased costs and uncertainties associated with overseas operations and overcome liability of foreignness (Calhoun, 2002). MNEs originating in highly corrupt countries are knowledgeable on formal institutional voids, such as lack of enforceable rules protecting transactions, as well as corrupt behaviors

institutionalized into social norms. When entering similarly weak institutional environments, this information will help them mitigate the competitive disadvantages they have relative to local firms knowing that formal rules and regulations may not be reliable sources to resort to in such environments. A complete understanding of the institutional arrangements in the host country also accelerates establishing legitimacy as the lack of knowledge on rules and norms of doing business in a foreign market increases the costs of this process and puts MNEs at a disadvantage (Eden & Miller, 2004).

Compared to foreign firms from transparent countries, MNEs of highly corrupt origins are more familiar with how to pursue isomorphism and comply with institutional pressures to bribe in a way that avoids the risk of exposure and committing an offensive crime. The lengthy process of developing such knowledge on subtleties of bribery and engaging corrupt officials to obtain legitimacy at home provides these MNEs with invaluable expertise to benefit from in countries rife with corruption (Cuervo-Cazurra, 2006; Godinez & Liu, 2015). They are also less pressured by internal legitimacy threats when conforming to external local forces to engage in corrupt transactions as such practices are not likely to be frowned upon by managers at the headquarters. Since the managers' attitudes and values are shaped by the national culture and institutional environment of their home country (Erramilli, 1996), which are in line with those of the corrupt host market, these MNEs will not face conflicting pressures for internal and external legitimacy.

Although firms own different resources and skills that are critical for their survival at home, they may not be necessarily useful for navigating foreign markets. MNEs with high-corruption countries of origin have less incentive, and thereby less competence, in developing firm-specific advantages for fair competition such as proprietary technologies because property rights are not well protected in their home market. Thus, they will be at a disadvantage in more transparent

countries where firms compete based on such firm-specific assets (Brada et al., 2019). The location-bound nature of capabilities in coping with corruption and sophisticated bribery skills make the value and applicability of these ownership advantages limited to similarly corrupt environments. In other words, these competencies will yield little to no competitive advantages for MNEs contemplating entry into business settings where bribery is scarce. Therefore, less corrupt states do not offer sufficient location advantages for these firms to internalize since they cannot fully exploit their capabilities there and will be less likely to direct their investments to such markets.

The more different a foreign environment is from the country of origin, the more difficult it is for the MNEs to interpret and understand the information they receive on the market which adds to the uncertainty of conducting business there due to the psychic distance between home and host nations (Eren & Jimenez, 2015; Johanson & Vahlne, 1977). This dissimilarity also escalates the administrative and social costs of entering a foreign country stemming from unfamiliarity with its business context, managing relationships with different parties involved, and discrimination hazards (Eden & Miller, 2004; Godinez & Liu, 2015). These increased costs and uncertainties collectively heighten the liability of foreignness and cannot be compensated for by MNEs' ownership advantages as most competencies developed in a corrupt country are not transferable to a transparent one.

The disadvantages associated with liability of foreignness are also viewed as a result of institutional distance between countries. Both formal and informal institutions of the target market interact with those at home to influence foreign firms' investment decisions. Larger differences between institutional arrangements of the two countries raise the transaction costs and uncertainties of operating in a foreign environment where rules and regulations as well as norms

and values are relatively unknown to managers of MNEs. This puts foreign investors under greater pressure to adapt their strategies to local market conditions and makes it more challenging for them to establish and maintain external legitimacy (Kostova & Zaheer, 1999). In this vein, differences in corruption levels between home and host countries are considered as a subset of institutional distance with similar deterring effects on foreign investment (Godinez & Liu, 2015; Habib & Zurawicki, 2002). Although variations in formal laws on corruption also exist, the main differences are more implicit concerning informal norms embedded within business practices that define acceptable behavior. These differences are particularly difficult to understand for foreign managers since bribery may be an accepted way of doing business in a country but viewed as an offense in the other, while it is illegal in both. The resulting information asymmetries between MNEs and local firms regarding how to deal with the government create additional social costs for the former and intensify their liability of foreignness (Cuervo-Cazurra, 2016; Rabbiosi & Santangelo, 2014).

While local conformity and isomorphism may help reduce such administrative costs and uncertainties, it is more difficult to achieve in institutionally distant countries due to subtleties in what is considered standard practice. Therefore, as corruption distance grows, the process of legitimization will be also more obscure for foreign investors because they will be less familiar with rules and norms of the host market to comply with. As discussed earlier, these differences are especially problematic for MNEs of less corrupt countries expanding into environments filled with bribery and their consequent avoidance of such markets is well documented (Rose-Ackerman, 1999; Wei, 2000). However, firms from highly corrupt origins are not necessarily better equipped to explore low-corruption markets as they also face the challenges of a form of distance to overcome. The information on regulations, social norms, and cultural values of a transparent environment may be more readily available and comprehensible, but managers who are used to

paying bribes to get things done will have to cope with legal, social, and cultural clashes when operating in these business settings (Habib & Zurawicki, 2002; Rabbiosi & Santangelo, 2014). Altogether, this view of managers' perception of corruption in foreign markets suggests that MNEs of corrupt states are more attracted to similar environments and deterred by less corrupt contexts in their investments.

> ***Hypothesis 2b:*** *High-corruption countries direct their FDI more toward high-corruption countries than low-corruption countries.*

3. RESEARCH DESIGN

3.1. Sample and Data

In this study, we aim to explore the investing patterns among OECD countries based on their configuration of corruption. OECD economies provide a particularly suitable setting for the purpose of our research as they vary significantly in their size, development, and corruption levels. Together with their key partners, they also represent approximately 80% of world trade and investment. The sample comprises all the OECD member states (36 countries by the end of 2019) as both the source and recipient of investments. Data on bilateral FDI is collected from OECD database[1] and we use Transparency International's Corruption Perception Index (CPI) for the level of corruption in these countries. The index ranges from 0 (highly corrupt) to 100 (very clean). To examine the effect of corruption on bilateral investments, we focus on 36×35=1260 pairs of countries for a duration of 6 years from 2013 to 2018. After eliminating the missing values, the dataset includes 5330 observations over the study period.

[1] OECD (2020), "Benchmark definition, 4th edition (BMD4): Foreign direct investment: positions, main aggregates", *OECD International Direct Investment Statistics* (database), https://doi.org/10.1787/data-00746-en (accessed on 02 July 2020).

3.2. Dependent Variable

The dependent variable is bilateral outward FDI stock between pairs of countries. While FDI flows reflect the amount invested in foreign affiliates that may be spent to accumulate assets, repay debt, or achieve other purposes, FDI stock is an indicator of the total value of affiliates' assets engaged in international production that can be attributed to the foreign investor. Thus, FDI stock represents the investment position that is under foreign investors' control and is used as an approximation of value adding activities of MNEs (Stephan & Pfaffmann, 2001). In other words, stocks better capture the multilateral operations and global allocation of production by foreign firms as well as their capital ownership since FDI may be financed through local capital markets. FDI stock also indicates the size of MNEs' affiliates and their real investments in the host country and is therefore less volatile than investment flows which may fluctuate wildly with a few large takeovers, especially in smaller countries (Bénassy-Quéré, Coupet, & Mayer, 2007; Brada et al., 2019; Stein & Daude, 2007). In addition, we focus on outward FDI because our research question deals with the foreign firms' perception of corruption in other countries and how it shapes their investing behavior.

3.3. Independent Variable

The main predictor of bilateral FDI stock in this study is a categorical variable related to the level of corruption in the home and host countries. More specifically, four categories are formed based on whether the source and destination of investments are low or highly corrupt countries. This approach provides comparisons between different categories in their investment patterns and enables us to test our hypotheses on what type of markets are each group of investors more

attracted to. In order to differentiate between low- and high-corruption countries, we take the median of CPI scores in the sample as the cutoff point for each year. Although this method leads to changes in categories over time, the changes are not problematic as they correspond to the dynamic nature of our analysis.

3.4. Control Variables

We control for a number of other factors derived from gravity model which is widely used to explain bilateral FDI (Mishra & Jena, 2019; Zwinkels & Beugelsdijk, 2010). The basic model, inspired by Newton's gravity equation in physics, was initially applied to the field of international business to predict bilateral trade as a function of the size of source and recipient countries, reflected in their GDP, and the distance between them (Tinbergen, 1962). Subsequently, augmented models were developed to increase the explanatory power of the original equation by including additional variables such as GDP per capita of the two countries, a range of mutual relationship and proximity factors between home and host countries such as exchange rate and sharing a common language, and a set of macroeconomic indicators of the target market such as inflation rate.

In this study, GDP and GDP per capita of both investing and destination countries are included in the model. These variables along with GDP growth and inflation rates of the host market are taken from World Development Indicators of World Bank. In our gravity equation, we also incorporate proximity factors of geographic distance, common border, and common language extracted from CEPII database. Further, the information on regional trade agreements and bilateral investment treaties between home and host countries is collected from World Trade Organization and World Bank respectively. Other variables specific to the target market include interest rate and

international openness from OECD database[2], real effective exchange rate from Bruegel datasets, economic freedom from the Heritage Foundation, and corporate tax rate from KPMG.

3.5. Gravity Model

As noted, we develop a dynamic gravity model using panel data to examine the effect of corruption and control variables on FDI. The gravity approach is particularly relevant to one of the main premises of this study. On the one hand, distance is an integral part of the framework assumed to influence cross-border investments through increasing transaction costs and, on the other hand, our arguments are partly based on corruption differences between countries as a form of distance. In addition, employing a dynamic model is not only justified, but also crucial to capture the true relationships due to the long history of bilateral investments among OECD members. A country with established networks and infrastructure in the other is highly likely to continue investing in that target because the resources committed in a given year provide the basis for FDI activities in the next. Static gravity models ignore the delay effects of FDI which yields overestimated and erroneous results. In fact, most gravity equations in the extant literature are mis-specified and fail to control for the dynamic aspects of FDI leading to biased estimates (Kahouli & Maktouf, 2015; Zwinkels & Beugelsdijk, 2010). More specifically, Barassi and Zhou (2012) show that after controlling for other determinants, the impact of corruption on FDI differs significantly for countries with low and high levels of existing FDI stocks. As such, we include lagged investments as an explanatory variable to have a dynamic specification as follows:

[2] OECD (2020), Long-term interest rates (indicator). doi: 10.1787/662d712c-en (Accessed on 13 July 2020)
OECD (2020), Trade in goods and services (indicator). doi: 10.1787/0fe445d9-en (Accessed on 13 July 2020)

$$\ln FDI_{ij,t} = \beta_0 + \lambda \ln FDI_{ij,t-1} + \beta_1 \ln GDP_{i,t} + \beta_2 \ln GDP_{j,t} + \beta_3 \ln GDPpc_{i,t} + \beta_4 \ln GDPpc_{j,t} + \beta_5 \ln DIST_{ij} + \beta_6 GDPg_{j,t} + \beta_7 INFL_{j,t} + \beta_8 REER_{j,t} + \beta_9 INTR_{j,t} + \beta_{10} OPEN_{j,t} + \beta_{11} FREE_{j,t} + \beta_{12} TAX_{j,t} + \beta_{13} BORD_{ij} + \beta_{14} LANG_{ij} + \beta_{15} RTA_{ij} + \beta_{16} BIT_{ij} + \beta_{17} CORR_{ij,t}$$

where subscripts i and j denote source and host countries respectively and λ is the adjustment coefficient for the dynamic model. Thus, $FDI_{ij,t}$ represents bilateral outward FDI stock from country i to country j in year t and $FDI_{ij,t-1}$ captures the same for the previous year. GDPpc stands for GDP per capita that, similar to GDP, is incorporated for both investing and destination countries, and DIST is the geographic distance between the two. A number of economic indicators of the host market include GDPg the GDP growth rate, INFL the inflation rate (GDP deflator), REER the real effective exchange rate, INTR the interest rate, OPEN the international openness which is a measure of total trade as a percentage of GDP, FREE the economic freedom, and TAX the tax rate imposed on corporations by the government. BORD and LANG are dummy variables that take the value of 1 when the two countries share a common border or language respectively, and 0 otherwise. RTA and BIT are also dummy variables that equal 1 if both countries involved in FDI are signatories of a regional trade agreement or bilateral investment treaty respectively, and 0 otherwise. Finally, CORR is a categorical variable indicating whether the source and target of investment are low or highly corrupt countries and takes one of the forms of “LowLow”, “LowHigh”, “HighLow”, or “HighHigh”.

A critical issue in gravity equations is that zero and negative values of FDI are lost through the logarithmic transformation resulting in biased estimations. The problem with zero values is typically addressed by substituting ln(1+FDI) for ln(FDI) which are approximately equal since FDI values tend to be large. However, this approach is not effective in retaining negative values

and, following Yeyati, Panizza, and Stein (2007), we use sign(FDI)*ln(1+|FDI|) for both $FDI_{ij,t}$ and $FDI_{ij,t-1}$ to avoid losing valuable information on bilateral investments.

3.6. Estimation

Given the dynamic nature of our gravity model that includes a lagged version of the dependent variable, we use generalized method of moments (GMM) to empirically examine the effect of corruption and other factors on FDI stock. This method transforms all regressors through differencing and either focuses on the transformed equation, called difference GMM, or builds a system of the original and transformed equations to form a system GMM. The GMM estimator particularly suits our research design as it best serves panels with short time periods and large numbers of observations (Roodman, 2009). Moreover, this method overcomes several panel data econometric concerns including endogenous regressors, heteroskedasticity, and autocorrelation within groups while controlling for the fixed effects of time-invariant variables such as distance. Specifically, system GMM allows for introducing more instruments into the equation using lagged values of the independent variables and dramatically improves the estimator's efficiency (Kahouli & Maktouf, 2015; Roodman, 2009). Accordingly, we apply a two-step system GMM to our panel data analysis to test the research hypotheses.

4. RESULTS

Table 1.1 presents the coefficient estimates of the gravity equation. The positive and statistically significant estimated coefficient of the lagged dependent variable points to the dynamism of FDI gravity model and the fact that static specifications suffer from omitted variable bias. In order to test the hypotheses, different base categories are considered for the primary variable of interest,

CORR, that represents the level of corruption in home and host countries. In Model 1, we set "LowLow" as the base category to be able to compare it with other categories. The large, negative coefficient of "LowHigh" ($\beta = -3.016$, $p < 0.05$) indicates that investments from low to highly corrupt countries are significantly less than bilateral FDI between transparent markets. In other words, MNEs of low-corruption countries invest more heavily in environments more similar to their home than high-corruption countries, lending support to hypothesis 1.

In Model 2, we change the base category to "HighLow" to examine the opposing conjectures set forth in hypothesis 2 regarding investment preferences of highly corrupt states. The estimate for "HighHigh" category is positive with a large, significant magnitude ($\beta = 2.889$, $p < 0.05$) suggesting that bilateral FDI between two high-corruption countries is more prevalent and pronounced than investments made from highly corrupt markets to transparent ones. This finding rejects hypothesis 2a and, in support of hypothesis 2b, shows that foreign firms experiencing widespread bribery at home tend to invest more in similarly corrupt host countries rather than clean environments. It also upholds the assertion that corruption distance adversely influences cross-border investments. However, the coefficient of "LowHigh" in Model 2 ($\beta = -0.227$, $p > 0.1$) points to its insignificant difference to the base category "HighLow", and implies that the direction of such distance is immaterial and that corruption differences deter FDI in both routes alike.

[Insert Table 1.1 about here]

The results suggest that extent of bribery in the target market is not decisive per se and that corruption distance between home and host countries better explains MNEs' investment decisions. To further confirm this finding, we replace the categorical variable by continuous variables of corruption and distance and their interaction in Model 3. First, we reverse scale the corruption perception index to create RCPI by subtracting the values from 100 since CPI decreases with the

level of corruption. Second, the absolute value of the difference between RCPI scores of source and host countries is calculated to form the corruption distance construct, CORDIS. Although both variables negatively impact bilateral FDI, only the coefficient for CORDIS is significant (β = −0.169, $p < 0.05$) and the effect of RCPI is marginal ($\beta = -0.098$, $p < 0.1$), providing proof for the more substantial role of corruption distance in deterring foreign investment. Interestingly, the coefficient of the interaction term is positive and significant ($\beta = 0.004$, $p < 0.05$). To have a better perspective of this interaction effect, we plot FDI stock as a function of corruption distance for low and high levels of corruption determined by mean ± 1 standard deviation of RCPI.

Figure 1 illustrates that corruption distance has a slightly positive effect on FDI in highly corrupt host countries, whereas its negative impact is steeper in less corrupt hosts. This indicates that when the target is a high-corruption state, foreign investors are less sensitive to the differences they perceive in corruption levels relative to their country of origin. On the other hand, MNEs contemplating FDI in a transparent market are significantly discouraged to engage in investments as the corruption distance increases. These results further cast doubt on the assumption that corruption deters FDI as corruptly distant countries are less avoided by foreign investors than transparently distant ones.

[Insert Figure 1 about here]

4.1. Robustness Checks

In this section, we seek to test the robustness of our findings to an alternative measure of corruption. To this end, we use the Control of Corruption index provided by World Bank as part of the Worldwide Governance Indicators project that reflects the perceptions of the extent to which public power is exercised for private gain, as well as “capture” of the state by elites and private

interests. Since the index runs from −2.5 to 2.5 representing low to high control of corruption, we subtract the values from 2.5 to have a measure that ranges from 0 to 5 and is consistent with RCPI (i.e., higher values signify higher levels of corruption). We call the new measure WRCPI to reflect the World Bank index and follow the same procedures to create the categorical variable WCORR and corruption distance construct WCORDIS. As shown in Table 1.2, delayed FDI remains a significant predictor in the model providing strong evidence on the dynamic nature of cross-border investments. Once again, Models 1 and 2 demonstrate the results for the categorical variable based on different categories and Model 3 includes corruption level, distance, and their interaction. The sign and significance of the coefficients are generally similar to those reported in Table 1. Nonetheless, the categories in Models 1 and 2 are now less distinct in their foreign investment patterns while corruption distance explains FDI stock more significantly in Model 3. The shorter range of the alternative measure of corruption may have accounted for this somewhat paradoxical finding since it makes categorizations, and thereby bilateral investments, more sensitive to changes in corruption levels.

[Insert Table 1.2 about here]

5. DISCUSSION

This study adds to the literature on corruption in international business in general, and the discussion on its adverse effect on FDI in particular, delving deeper into differences in corruption levels across countries and how these influence the investment decisions of firms venturing abroad. Specifically, we argue that extant research has largely ignored the attitude of investors toward graft in other countries by primarily concentrating on inward FDI. However, it is crucial to know how managers of MNEs respond to opacity or transparency in foreign environments as they face the

realities of corruption when doing business in a multinational context (Judge et al., 2011). Therefore, we shifted the focus to outward investments to investigate how MNEs originating in low and highly corrupt settings differently perceive widespread bribery, or lack thereof, in target markets which is reflected in their resource commitments. To this end, we made a distinction between clean and corrupt countries and found that low-corruption sources are deterred by widespread bribery in a foreign market and tend to invest in cleaner environments. On the other hand, our results suggest that when the country of origin is highly corrupt, firms invest more intensively in markets with high levels of corruption similar to their home rather than low corrupt countries.

While the first finding is in line with the predominant perspective in the literature pointing to the adverse consequences of corruption, the second finding challenges this view and accords more with the concept of corruption distance. MNEs headquartered in less corrupt countries are expected to be repelled by prevalent bribery in a foreign market not only due to increased costs of engaging in corrupt practices, but mainly because the "rules of the game" are unknown to them. The resulting uncertainty coupled with conflicting pressures for conformity from two different institutional forces at home and host countries significantly hinders obtaining legitimacy (Rodriguez et al., 2005). Further, these investors' firm-specific advantages developed in and suitable for rule-based governance environments may not be useful in highly corrupt business contexts where property rights are weakly protected. Instead, these firms are more attracted to transparent countries in which the uncertainties of conducting business and contradictory pressures for legitimacy fade away for them and where they can better exploit their capabilities to achieve competitive advantages (Dunning, 1998; Li & Samsell, 2009). On the contrary, MNEs with high-corruption countries of origin develop competencies that best serve them in business environments

rampant with bribery. Such skills and capabilities in dealing with corrupt government officials will have little to no value in clean countries where firms compete based on proprietary advantages (Brada et al., 2019). These firms' lack of knowledge on rules and norms of doing business in transparent markets along with their better understanding of the institutional arrangements in highly corrupt countries makes legitimization a more streamlined process for them in the latter (Eden & Miller, 2004; Kostova & Zaheer, 1999). As a result, they tend to invest more heavily in foreign markets where paying bribes is a common way to get things done.

The additional analyses on the impacts of corruption in the host and corruption distance between home and host on outward FDI provide further support for the more prominent role of differences in corruption levels in deterring investments. Moreover, the results for the interaction effect of corruption and distance on FDI suggest that differences in corruption levels are more pronounced as an impediment to investments when the target market is transparent. Since most distant countries are highly corrupt, this finding runs contrary to arguments for the direction of corruption distance (e.g., Wu, 2006), and may be attributed to different firm-specific advantages of MNEs. Those originating in highly corrupt markets lack the resources and capabilities necessary to compete in rule-based countries because they have risen from underdeveloped institutional environments where bribery skills are more critical for survival. As the gap widens between their home and host countries, they will be more vulnerable as their skills lose their utility in protecting them from competitive pressures. In other words, they will be more intimidated by competitive advantages of local firms and foreign investors of low-corrupt origins, thereby limiting their presence in such markets.

Towards highly corrupt destinations, MNEs of transparent countries perceive the largest distance. While these investors are deterred by extensive bribery abroad, they are less sensitive to

increases in corruption differences and prefer not to reduce their already low level of investments. This is in line with the results of research by Qian and Sandoval-Hernandez (2016) suggesting that industrial source countries are not likely to consider corruption distance when investing in developing host countries. Their firms' international experience gained through navigating foreign markets and a long-established network of subsidiaries in various countries grants them sufficient skills and competencies to mitigate rent-seeking behavior of corrupt authorities overseas. All these findings are valid even after using World Bank index for corruption and are therefore robust to an alternative measure of corruption.

This study makes several important contributions. First, it draws attentions to a generally overlooked aspect of the association between corruption and FDI by shifting the emphasis to source countries and their firms' perception of bribery abroad reflected in their investment patterns. Focusing on outward FDI, this research particularly provides new insights on the attitude of highly corrupt nations toward graft in other countries pointing to their preference for opaque settings for their international business activities. Second, we add more clarity to the long-standing debate on whether foreign investors are discouraged or encouraged by corruption in a host market. We consolidate the opposing arguments by adopting a more holistic approach that focuses on both "absolute" and "relative" perspectives of the situation in the investing and recipient countries. The distinction between low and highly corrupt environments also provides a finer-grained framework to evaluate the challenges and opportunities encountered by MNEs of different origins when investing in foreign markets with different corruption levels. Third, our research theoretically enriches the study of corruption in international business extending the application of institutional theory and OLI model to a field of study in which the literature is mostly atheoretical in nature (Bahoo, Alon, & Paltrinieri, 2020; Judge et al., 2011). This is most likely due to the challenges

posed to many assumptions of theories of the firm by the unethical and illegal nature of corruption and the differences in how it is perceived and controlled across countries (Cuervo-Cazurra, 2016). Finally, employing a dynamic gravity model, we recognized and empirically demonstrated that FDI is past-dependent and that treating foreign investment as a static phenomenon yields biased results. Thus, we included previous investments as a predictor of current bilateral FDI between countries and took advantage of dynamic modeling to overcome the shortcomings of static gravity models.

Nonetheless, there are several limitations to this study that can be addressed in future research. Although outward FDI stock captures the international activities of a country's MNEs, it assumes firms and industries in that country to be homogenous. Therefore, analyzing how firms and industries within the same country vary in their approach to corruption in foreign markets is warranted. For example, firm-level characteristics such as risk propensity or experience in the host market may condition their various responses to bribery abroad. We have also treated both corruption and FDI as monolithic concepts while taking into account their different dimensions can change the nature of their relationship. For instance, pervasive and arbitrary corruption have been argued to have different impacts on FDI and entry strategies of multinationals (Cuervo-Cazurra, 2008; Rodriguez et al., 2005), and the effect of corruption has been found not to be the same for market-seeking and resource-seeking FDI (Brouthers, Gao, & McNicol, 2008). Moreover, our findings may not generalize to other forms of internationalization such as contractual entry modes. Compared to direct investments, portfolio investments are also found to be shaped differently by governance environments (Li & Filer, 2007). Although OECD economies account for a major portion of international trade and investments, the study results should be interpreted with caution as these countries are, on average, less corrupt than non-OECD countries

and many members considered highly corrupt in this study have transparency scores above average among world economies.

5.1. Conclusion

OECD countries experienced a staggering amount of more than US$2.8 trillion increase in FDI stocks received in 2019[3] despite a steep decline in their transparency from the previous year. This raises concerns over whether foreign firms attach any weight to corruption in target markets when making investment decisions. The present research was therefore aimed at delineating managerial perceptions and attitudes toward bribery in foreign environments and MNEs' corresponding investment patterns reflected in stocks of outward FDI. The results acknowledge the criticality of the problem as only low corrupt countries were found to be deterred by corruption in the host market and their sensitivity to the phenomenon remained unchanged as differences with the destination grew. High-corruption sources of investment, on the other hand, were not only attracted more to countries similar to their home, but also more discouraged to commit resources to transparently distant targets.

While our first finding is more intuitive, the second finding points to an ironic twist where foreign firms prefer highly corrupt destinations, and their investment incentives fade away as the target market transparency increases. MNEs originating in environments rife with bribery find it easier to legitimize their activities in corrupt countries where institutional norms are more familiar to them. Their capabilities developed at home, such as bribery skills, are also better exploited in high-corruption countries. These advantages, however, turn into disadvantages in clean markets with different institutional arrangements and business norms that make such firms competitively

[3] OECD (2020), FDI stocks (indicator). doi: 10.1787/80eca1f9-en (Accessed on 17 September 2020)

vulnerable. Contrary to previous studies, our results indicate that MNEs of highly corrupt countries are more sensitive to home-host differences in corruption levels compared to those headquartered in transparent countries. The longer history of MNEs of developed economies in international expansion and their widespread networks of subsidiaries, especially those in corrupt countries, have likely gained them some experience in dealing with bribery. But those with highly corrupt origins find their strengths quickly dissipating into weaknesses as they climb up the transparency ladder.

Taken together, OECD multinationals seem to be rather indifferent to corruption in a foreign market in absolute terms and tend more to relative differences in this respect. The fact that OECD economies were also the destination of investments in the present study and that these countries are generally characterized by low levels of corruption may have accounted for this finding. Yet, it is in contrast with studies that suggest countries signing laws against bribery abroad, such as OECD members, are deterred by corruption in foreign environments (e.g., Cuervo-Cazurra, 2006). More specifically, the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions has been argued to be ineffective due to lack of enforcement. The convention aims to reduce corruption in developing countries by requiring signatory states to criminalize and punish bribing foreign officials. However, many of the signatories have failed to enact appropriate legislation or allocate sufficient resources to enforce the convention effectively through investigating bribery overseas (Brada et al., 2019; Dell, 2020).

The results also underline the role of institutional proximity and psychic closeness between home and host countries in stimulating foreign investments. Even though we argued that this represents an opportunity for MNEs based in less developed institutional environments to gain the upper hand in highly corrupt states, it may pose a dilemma for policy makers. While combating

corruption envisages stronger institutional arrangements with rule-based governance mechanisms, such environments take time to develop. From the source country perspective, it suggests that firms will encounter restrictions to practice bribery at home which erodes their distinctive competencies in highly corrupt foreign markets with grim chances of developing firm-specific advantages to compete in advanced economies in the near future. Recipient countries of FDI also face similar challenges since realizing transparency requires going through a transition phase that may drive away investors from both low and highly corrupt countries. Overall, the high prices of cleaning a country from corruption may not pay off immediately as transitioning to a developed economy is a lengthy process and may discourage authorities to contemplate this strategic direction. However, policy makers must have long term perspectives and bear in mind that battling corruption eventually benefits the society in all facets including international trade and investments. To illustrate, Estonia's transparency score has been continuously on the rise since 2012, an effort rewarded with significant increases in both inward and outward FDI stock over the years[4].

The recent trend of deglobalization triggered by the increasingly coming apart between the mature democracies and non-democratic countries makes our study more relevant. Beyond OECD economies, there are even stronger signs that countries of similar institutional settings, such as China, Russia, and Iran, for example, may form new trade blocs. The institutional environment of these countries is characterized by high level of corruption. Our study not only explains their incentive to invest in each other, but also foretells the difficulty for them to interact with democratic countries for years to come.

[4] OECD (2020), FDI stocks (indicator). doi: 10.1787/80eca1f9-en (Accessed on 19 September 2020)

6. CHAPTER 1 REFERENCES

Bahoo, S., Alon, I., & Paltrinieri, A. (2020). Corruption in international business: A review and research agenda. *International Business Review*, 29(4), 101660.

Barassi, M. R., & Zhou, Y. (2012). The effect of corruption on FDI: A parametric and non-parametric analysis. *European Journal of Political Economy*, 28(3), 302-312.

Bénassy-Quéré, A., Coupet, M., & Mayer, T. (2007). Institutional determinants of foreign direct investment. *World Economy*, 30(5), 764-782.

Brada, J. C., Drabek, Z., Mendez, J. A., & Perez, M. F. (2019). National levels of corruption and foreign direct investment. *Journal of Comparative Economics*, 47(1), 31-49.

Brouthers, L. E., Gao, Y. A. N., & McNicol, J. P. (2008). Corruption and market attractiveness influences on different types of FDI. *Strategic Management Journal*, 29(6), 673-680.

Calhoun, M. A. (2002). Unpacking liability of foreignness: identifying culturally driven external and internal sources of liability for the foreign subsidiary. *Journal of International Management*, 8(3), 301-321.

Cuervo-Cazurra, A. (2006). Who cares about corruption? *Journal of International Business Studies*, 37(6), 807-822.

Cuervo-Cazurra, A. (2008). Better the devil you don't know: Types of corruption and FDI in transition economies. *Journal of International Management*, 14(1), 12-27.

Cuervo-Cazurra, A. (2016). Corruption in international business. *Journal of World Business*, 51(1), 35-49.

Cuervo-Cazurra, A., & Genc, M. (2008). Transforming disadvantages into advantages: Developing-country MNEs in the least developed countries. *Journal of International Business Studies*, 39(6), 957-979.

Dell, G. (2020). *Exporting Corruption: Progress Report 2020: Assessing Enforcement of the OECD Anti-Bribery Convention*. Transparency International.

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 147-160.

Doh, J. P., Rodriguez, P., Uhlenbruck, K., Collins, J., & Eden, L. (2003). Coping with corruption in foreign markets. *Academy of Management Perspectives*, 17(3), 114-127.

Dunning, J. H. (1980). Toward an eclectic theory of international production: Some empirical tests. *Journal of International Business Studies*, 11(1), 9-31.

Dunning, J. H. (1998). Location and the multinational enterprise: a neglected factor? *Journal of International Business Studies*, 29(1), 45-66.

Eden, L., & Miller, S. R. (2004). Distance matters: Liability of foreignness, institutional distance and ownership strategy. In *"Theories of the Multinational Enterprise: Diversity, Complexity and Relevance"*. Emerald Group Publishing Limited.

Egger, P., & Winner, H. (2005). Evidence on corruption as an incentive for foreign direct investment. *European Journal of Political Economy*, 21(4), 932-952.

Eren, T. M., & Jimenez, A. (2015). Institutional quality similarity, corruption distance and inward FDI in Turkey. *Journal for East European Management Studies*, 88-101.

Erramilli, M. K. (1996). Nationality and subsidiary ownership patterns in multinational corporations. *Journal of International Business Studies*, 27(2), 225-248.

Fisman, R. (2001). Estimating the value of political connections. *American Economic Review*, 91(4), 1095-1102.

Ghemawat, P. (2001). Distance still matters–the hard reality of global expansion, *Harvard Business Review*, 79, 137.

Godinez, J. R., & Liu, L. (2015). Corruption distance and FDI flows into Latin America. *International Business Review*, 24(1), 33-42.

Habib, M., & Zurawicki, L. (2002). Corruption and foreign direct investment. *Journal of International Business Studies*, 33(2), 291-307.

Henisz, W. J. (2000). The institutional environment for multinational investment. *The Journal of Law, Economics, and Organization*, 16(2), 334-364.

Hines Jr, J. R. (1995). *Forbidden payment: Foreign bribery and American business after 1977* (No. w5266). National Bureau of Economic Research.

Holburn, G. L., & Zelner, B. A. (2010). Political capabilities, policy risk, and international investment strategy: Evidence from the global electric power generation industry. *Strategic Management Journal*, 31(12), 1290-1315.

Huntington, S. P. (1968). *Political order in changing societies*. Yale University Press.

Javorcik, B. S., & Wei, S. J. (2009). Corruption and cross-border investment in emerging markets: Firm-level evidence. *Journal of International Money and Finance*, 28(4), 605-624.

Johanson, J., & Vahlne, J. E. (1977). The internationalization process of the firm—a model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies*, 8(1), 23-32.

Judge, W. Q., McNatt, D. B., & Xu, W. (2011). The antecedents and effects of national corruption: A meta-analysis. *Journal of World Business*, 46(1), 93-103.

Kahouli, B., & Maktouf, S. (2015). The determinants of FDI and the impact of the economic crisis on the implementation of RTAs: A static and dynamic gravity model. *International Business Review*, 24(3), 518-529.

Karhunen, P., & Ledyaeva, S. (2012). Corruption distance, anti-corruption laws and international ownership strategies in Russia. *Journal of International Management*, 18(2), 196-208.

Kaufmann, D. (1997). Corruption: the facts. *Foreign Policy*, 114-131.

Kaufmann, D., & Wei, S. J. (1999). *Does "grease money" speed up the wheels of commerce?* (No. w7093). National Bureau of Economic Research.

Kostova, T., & Zaheer, S. (1999). Organizational legitimacy under conditions of complexity: The case of the multinational enterprise. *Academy of Management Review*, 24(1), 64-81.

Leff, N. H. (1964). Economic development through bureaucratic corruption. *American Behavioral Scientist*, 8(3), 8-14.

Li, S. (2019). *Bribery and Corruption in Weak Institutional Environments: Connecting the Dots from a Comparative Perspective*. Cambridge University Press.

Li, S., & Filer, L. (2007). The effects of the governance environment on the choice of investment mode and the strategic implications. *Journal of World Business*, 42(1), 80-98.

Li, S., Park, S. H., & Li, S. (2003). The great leap forward: The transition from relation-based governance to rule-based governance. *Organizational Dynamics*, 33(1), 63-78.

Li, S., & Samsell, D. P. (2009). Why some countries trade more than others: The effect of the governance environment on trade flows. *Corporate Governance: An International Review*, 17(1), 47-61.

Mishra, B. R., & Jena, P. K. (2019). Bilateral FDI flows in four major Asian economies: a gravity model analysis. *Journal of Economic Studies*, 46(1), 71-89.

Oliver, C. (1991). Strategic responses to institutional processes. *Academy of Management Review*, 16(1), 145-179.

Petrou, A. P., & Thanos, I. C. (2014). The “grabbing hand” or the “helping hand” view of corruption: Evidence from bank foreign market entries. *Journal of World Business*, 49(3), 444-454.

Qian, X., & Sandoval-Hernandez, J. (2016). Corruption distance and foreign direct investment. *Emerging Markets Finance and Trade*, 52(2), 400-419.

Rabbiosi, L., & Santangelo, G. D. (2014). When in Rome, do as the Romans do: Subsidiary Autonomy as a Response to Corruption Distance. In *Academy of Management Proceedings* (Vol. 2014, No. 1, p. 13763). Briarcliff Manor, NY 10510: Academy of Management.

Rodriguez, P., Uhlenbruck, K., & Eden, L. (2005). Government corruption and the entry strategies of multinationals. *Academy of Management Review*, 30(2), 383-396.

Roodman, D. (2009). How to do xtabond2: An introduction to difference and system GMM in Stata. *The Stata Journal*, 9(1), 86-136.

Rose-Ackerman, S. (1999). *Corruption and government: Causes, consequences, and reform*. Cambridge University Press.

Shleifer, A., & Vishny, R. W. (1993). Corruption. *The Quarterly Journal of Economics*, 108(3), 599-617.

Spencer, J., & Gomez, C. (2011). MNEs and corruption: The impact of national institutions and subsidiary strategy. *Strategic Management Journal*, 32(3), 280-300.

Stein, E., & Daude, C. (2007). Longitude matters: Time zones and the location of foreign direct investment. *Journal of International Economics*, 71(1), 96-112.

Stephan, M., & Pfaffmann, E. (2001). Detecting the pitfalls of data on foreign direct investment: scope and limits of FDI data. *MIR: Management International Review*, 189-218.

Svensson, J. (2005). Eight questions about corruption. *Journal of Economic Perspectives*, 19(3), 19-42.

Tanzi, V. (1998). Corruption around the world: Causes, consequences, scope, and cures. *Staff Papers*, 45(4), 559-594.

Tinbergen, J. (1962). Shaping the world economy; suggestions for an international economic policy.

Uhlenbruck, K., Rodriguez, P., Doh, J., & Eden, L. (2006). The impact of corruption on entry strategy: Evidence from telecommunication projects in emerging economies. *Organization Science*, 17(3), 402-414.

Voyer, P. A., & Beamish, P. W. (2004). The effect of corruption on Japanese foreign direct investment. *Journal of Business Ethics*, 50(3), 211-224.

Wei, S. J. (1997). *Why is corruption so much more taxing than tax? Arbitrariness kills* (No. w6255). National Bureau of Economic Research.

Wei, S. J. (2000). How taxing is corruption on international investors? *Review of Economics and Statistics*, 82(1), 1-11.

Wu, S. Y. (2006). Corruption and cross-border investment by multinational firms. *Journal of Comparative Economics*, 34(4), 839-856.

Yeyati, E. L., Panizza, U., & Stein, E. (2007). The cyclical nature of North–South FDI flows. *Journal of International Money and Finance*, 26(1), 104-130.

Zaheer, S. (1995). Overcoming the liability of foreignness. *Academy of Management journal*, 38(2), 341-363.

Zwinkels, R. C., & Beugelsdijk, S. (2010). Gravity equations: Workhorse or Trojan horse in explaining trade and FDI patterns across time and space? *International Business Review*, 19(1), 102-115.

TABLE 1.1
Dynamic Panel Data Estimations for the Effect of Corruption on FDI

Variables	Dependent variable: $FDI_{ij,t}$		
	Model (1)	Model (2)	Model (3)
$FDI_{ij,t-1}$	0.452*** (7.22)	0.452*** (7.22)	0.323*** (4.73)
$GDP_{i,t}$	0.593*** (4.86)	0.593*** (4.86)	0.982** (3.25)
$GDP_{j,t}$	1.066*** (6.46)	1.066*** (6.46)	1.168*** (4.35)
$GDPpc_{i,t}$	2.208*** (4.04)	2.208*** (4.04)	1.363* (2.05)
$GDPpc_{j,t}$	0.024 (0.07)	0.024 (0.07)	0.182 (0.24)
$DIST_{ij}$	-0.841*** (-5.05)	-0.841*** (-5.05)	-1.289*** (-5.73)
$GDPg_{j,t}$	0.011 (0.47)	0.011 (0.47)	0.127† (1.94)
$INFL_{j,t}$	-0.048* (-2.03)	-0.048* (-2.03)	-0.054 (-0.74)
$REER_{j,t}$	-0.008 (-0.90)	-0.008 (-0.90)	-0.024 (-1.23)
$INTR_{j,t}$	0.044 (1.44)	0.044 (1.44)	0.028 (0.49)
$OPEN_{j,t}$	0.010*** (4.55)	0.010*** (4.55)	0.008 (1.64)
$FREE_{j,t}$	0.032† (1.84)	0.032† (1.84)	0.013 (0.24)
$TAX_{j,t}$	0.005 (0.32)	0.005 (0.32)	0.004 (0.10)
$BORD_{ij}$	-0.328 (-0.95)	-0.328 (-0.95)	0.156 (0.32)
$LANG_{ij}$	-0.156 (-0.38)	-0.156 (-0.38)	0.623 (1.41)
RTA_{ij}	-0.206 (-0.50)	-0.206 (-0.50)	-0.512 (-1.00)
BIT_{ij}	1.056* (2.37)	1.056* (2.37)	1.006* (1.98)
$CORR_{ij,t}$			
LowLow	–	2.790* (2.08)	–
LowHigh	-3.016* (-2.31)	-0.227 (-0.47)	–
HighLow	-2.790* (-2.08)	–	–
HighHigh	0.099 (0.19)	2.889* (2.37)	–
$RCPI_{j,t}$	–	–	-0.098† (-1.72)
$CORDIS_{ij,t}$	–	–	-0.169* (-2.45)
$RCPI_{j,t}$*$CORDIS_{ij,t}$	–	–	0.004* (2.15)
N/Groups	5330/1141	5330/1141	5330/1141
F Statistic	2573.29***	2573.18***	1450.02***
AR(2)	0.498	0.498	0.300
Hansen	0.281	0.281	0.213

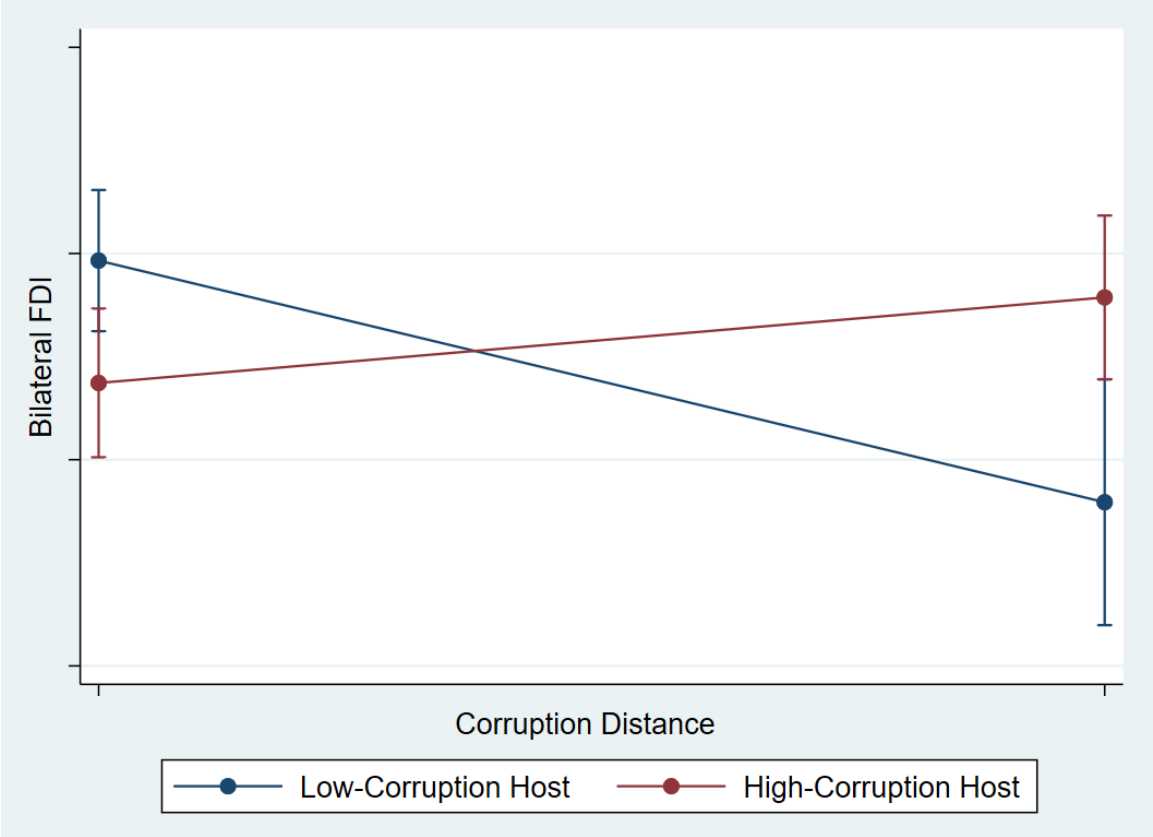
†p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001 (t-statistics in parentheses).
AR(2): Arellano-Bond test of autocorrelation (p-value).
Hansen: Test of over-identifying restrictions (p-value).

TABLE 1.2
Dynamic Panel Data Estimations (World Bank Index)

Variables	Dependent variable: $FDI_{ij,t}$		
	Model (1)	Model (2)	Model (3)
$FDI_{ij,t-1}$	0.447*** (7.00)	0.447*** (7.00)	0.298*** (4.14)
$GDP_{i,t}$	0. 608*** (5.25)	0. 608*** (5.25)	0.983** (3.23)
$GDP_{j,t}$	1.119*** (6.54)	1.119*** (6.54)	1.192*** (4.19)
$GDPpc_{i,t}$	2.155*** (4.34)	2.155*** (4.34)	0.924 (1.21)
$GDPpc_{j,t}$	0.032 (0.09)	0.032 (0.09)	0.426 (0.49)
$DIST_{ij}$	-0.851*** (-5.09)	-0.851*** (-5.09)	-1.411*** (-5.94)
$GDPg_{j,t}$	0.005 (0.21)	0.005 (0.21)	0.120† (1.92)
$INFL_{j,t}$	-0.044 (-1.51)	-0.044 (-1.51)	-0.040 (-0.58)
$REER_{j,t}$	-0.006 (-0.59)	-0.006 (-0.59)	-0.020 (-0.95)
$INTR_{j,t}$	0.045 (1.43)	0.045 (1.43)	-0.034 (-0.58)
$OPEN_{j,t}$	0.011*** (4.47)	0.011*** (4.47)	0.008 (1.59)
$FREE_{j,t}$	0.036† (1.89)	0.036† (1.89)	0.035 (0.65)
$TAX_{j,t}$	-0.000 (-0.03)	-0.000 (-0.03)	0.010 (0.27)
$BORD_{ij}$	-0.248 (-0.70)	-0.248 (-0.70)	0.040 (0.08)
$LANG_{ij}$	-0.150 (-0.33)	-0.150 (-0.33)	0.634 (1.45)
RTA_{ij}	0.004 (0.01)	0.004 (0.01)	-0.697 (-1.28)
BIT_{ij}	1.103* (2.22)	1.103* (2.22)	1.085* (2.14)
$WCORR_{ij,t}$			
LowLow	–	2.704† (1.80)	–
LowHigh	-2.722† (-1.85)	-0.018 (-0.04)	–
HighLow	-2.704† (-1.80)	–	–
HighHigh	-0.002 (-0.01)	2.702† (1.88)	–
$WRCPI_{j,t}$	–	–	-2.168† (-1.82)
$WCORDIS_{ij,t}$	–	–	-3.726** (-2.73)
$WRCPI_{j,t}$*$WCORDIS_{ij,t}$	–	–	2.270* (2.40)
N/Groups	5330/1141	5330/1141	5330/1141
F Statistic	2182.46***	2182.34***	1445.95***
AR(2)	0.574	0.574	0.257
Hansen	0.489	0.489	0.198

†p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001 (t-statistics in parentheses).
AR(2): Arellano-Bond test of autocorrelation (p-value).
Hansen: Test of over-identifying restrictions (p-value).

FIGURE 1
Interaction Plot for Corruption Level and Corruption Distance



CHAPTER 2

DIGITALIZATION: THE DOUBLE-EDGED SWORD TO COMBAT CORRUPTION

ABSTRACT

Digital technologies are often perceived to be uniformly positive tools for anti-corruption purposes creating more transparency and making governments more accountable. However, the evidence is scarce and inconsistent. This study offers new insights based on a more nuanced, context-dependent perspective to solve the puzzle. We distinguish between rule-based and relation-based countries as different governance environments and suggest that the context determines how digitalization plays out. While digital tools contribute to the fight against bribery in rule-based economies, they facilitate corruptive practices in relation-based countries. A panel data analysis on 82 countries over a 9-year period from 2012 to 2020 supports our arguments and confirms the context-specific nature of digital transformation and its discrepant implications for different societies.

Keywords: Digitalization, Corruption, Governance Environment, Rule-Based, Relation-Based

1. INTRODUCTION

Corruption is not only common in many countries, but has also been aggravated in recent years by governments inaction fertilizing an already ripe environment. Transparency International analyses indicate that a multitude of countries are failing to tackle corruption with little to no progress while the average country leans toward the high end of the spectrum. The Organization for Economic Cooperation and Development (OECD) also reports that public procurement, accounting for 13% of gross domestic product (GDP) in its member countries, always entails risks of corruption and is involved in the majority of foreign bribery cases (OECD, 2020). Although graft is more prevalent in emerging economies, it plagues all nations at different levels (Husted, 1999; Petrou & Thanos, 2014). The fewer incidents in developed countries may in fact have more profound impacts. In January 2020, for instance, Airbus, the world's largest plane maker based in France, agreed to pay US$4 billion to settle an investigation into its alleged briberies to public officials around the world between 2004 and 2016 to buy its products (Alderman, 2020).

The age-old phenomenon has long intrigued scholars of various fields to identify what causes or curbs corruption. Indeed, understanding the underlying mechanisms is a prerequisite step for managing and tackling corruption effectively from the roots. In an international business context, several factors at different levels (i.e., individual, firm, and country) have been shown to hinder or contribute to firm managers and public officials engaging in bribery (Bahoo, Alon, & Paltrinieri, 2020; Kouznetsov, Kim, & Wright, 2019). However, the extant literature falls short of addressing more recent trends in the global economy. Most notably, the scarcity of research on the role of technology is surprising given the way it has transformed business practices around the world. The few studies in this area primarily focus on the positive consequences of information and communication technology (ICT) tools for combating corruption and mostly lack pragmatic

evidence to support their conjectures (e.g., Bertot, Jaeger, & Grimes, 2010). To the best of our knowledge, no empirical research has taken into account the potential downsides of technological developments helping the corrupt more so than the clean.

This study aims at examining digitalization as a neglected aspect of both lines of research on factors combating and contributing to corruption. In this respect, we consider both positive and negative implications of digital transformation depending on where it unfolds. Since corruption has been mainly attributed to the poor quality of institutions creating grounds for unethical practices (Kouznetsov et al., 2019), institutional arrangement provides a suitable context for the purpose of this research. As such, we build on the governance environment framework developed by Li, Park, and Li (2003) to investigate the differential impacts of digitalization on rule-based and relation-based countries. Therefore, this research seeks to answer the question of how effectively and in what contexts digitalization can be used to tackle corruption. Although digital technologies can help prevent bribery by improving public scrutiny, they may also backfire and be used to create new corruption opportunities (Adam & Fazekas, 2018). We argue that digital tools are used for their intended purpose in rule-based governance systems, characterized by an already low level of graft, and will support the fight against bribery. However, introducing digitalization into a relation-based economy infused with corruption only exacerbates the problem by opening up new avenues for corruptive behavior thereby facilitating bribery.

ICT tools such as crowdsourcing platforms and transparency portals improve public access to critical information and facilitate monitoring government officials and reporting corruptive behavior (Adam & Fazekas, 2018). Therefore, they best serve the anti-bribery efforts in rule-based countries where people rely predominantly on public ordering and rules to protect their rights (Li, 2019). However, digitalization also entails several challenges and pitfalls (Kossow & Dykes,

2018). While anonymity and privacy are essential components of a digital environment, they can also be used for evil purposes such as maintaining secrecy of a corruptive exchange. Even the well-intended technologies may be used inappropriately with their potential not fully realized due to lack of enforcement. Such dark sides of digital tools are more pronounced in relation-based economies where people's distrust in formal rules and regulations leads private ordering and personal relations to dominate social and economic exchanges (Li, 2019). Thus, we contend that the effectiveness of digital technologies in reducing corruption is context specific and hinges on the governance environment of the country in which they are employed.

2. THEORETICAL DEVELOPMENT

2.1. Corruption in International Business

Given its profound impacts on every aspect of life in the global society, the notion of corruption has been the subject of numerous studies in different disciplines. As a result, the definition of corruption also varies across, and even within, contexts in which it is investigated. Transparency International defines corruption as the abuse of entrusted power for private gain. This broad and widely used definition spans all facets of the phenomenon; a person (or persons) assigns power to an individual who takes advantage of his/her position to achieve benefits at the expense of those who are supposed to be served. Therefore, it applies to both public corruption, which involves government officials and firm managers interactions typically addressed in business literature, and private corruption in different types of organizations which is categorized into the realm of corporate fraud and white-collar crime (Cuervo-Cazurra, 2016). In this study, we use this definition in an international business setting in which a firm attempts to achieve unwarranted advantages through interventions of a public official with sufficient power (Kouznetsov et al., 2019).

2.2. Causes and Controls of Corruption

The underlying causes of corruption and the means of controlling it are interrelated as an understanding of what leads to bribery facilitates the fight against it. Scholars in different fields of study have identified a wide range of psychological, cultural, economic, and political factors contributing to corruption (Bahoo et al., 2020; Kouznetsov et al., 2019). Personal values and beliefs of managers and government officials (i.e., their integrity), firm-specific attributes (e.g., ownership structure), size and scope of government, cultural dimensions (e.g., power distance), and economic conditions (e.g., per capita income) have all been linked to the level of corruption in a society (Chen, Cullen, & Parboteeah, 2015; Goel & Nelson, 2010; Husted, 1999; Pedigo & Marshall, 2009; Rogow & Lasswell, 1963; Sanyal, 2005). However, most studies, either explicitly or implicitly, consider weak formal institutions as the nurturing ground conducive to corruptive practices. Accordingly, we focus on institutional arrangements as the context conditioning cause-and-effect relationships and argue that influences on bribery play out differently depending on the institutional environment.

A large body of research has also been devoted to investigating effective ways to control corruption in international business. This stream of literature is dominated by studies on laws against bribery abroad, their enforcement, and effectiveness (Bahoo et al., 2020; Kouznetsov et al., 2019). Such laws include the U.S. Foreign Corrupt Practices Act (FCPA) and OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions. Although some researchers found these regulations to be relatively successful (e.g., D'Souza, 2012; Kaczmarek & Newman, 2011), others doubt their effectiveness due to poor enforcement by signatory countries, loopholes in the laws allowing for circumventions, and the

fact that these acts mostly target the supply side, i.e., bribe givers, and not the demand side, i.e., bribe takers (Dell, 2020; Weber & Getz, 2004; Weismann, Buscaglia, & Peterson, 2014). Thus, combating corruption requires strong law enforcement in courts by impartial, efficient judges who are not susceptible to pressures from politicians (Cuervo-Cazurra, 2016). That said, the success of anti-bribery efforts depends to a great extent on the quality of institutions in a given country and we maintain that effective control of corruption is also context specific affected by the governance environment.

The literature on both facilitating and restraining factors considers corruption to be the result of negative aspects and shortcomings, and the means to combat bribery to be the positive counterparts with favorable outcomes if employed correctly. In other words, both causes and controls of corruptive practices are assumed to be clearly and distinctly defined. As Kouznetsov et al. (2019) point out, for example, legislation is often examined in isolation without considering what contributes to a corrupt environment to determine whether and what type of legislative measures are needed. Without a deep understanding of the causes, the fight against bribery will lead to symptomatic treatments instead of eradicating the roots. Accordingly, they call for more integrative approaches to study the causes, controls, and consequences of corruption (Kouznetsov et al., 2019). Responding to this call, we focus on digitalization as an emerging trend largely ignored in the literature and argue for its double-edged effects as both a cause and a cure for corruptive behavior. The role of digital technologies in helping or preventing bribery varies by the type of governance system (i.e., rule-based vs. relation-based).

2.3. Governance Environment

According to North (1990), institutions are the rules of the game that structure socioeconomic interactions among individuals and organizations as the players who seek to maximize their interests. In other words, institutions guide the players' behavior through certain constraints that could be formal (e.g., rules and regulations) and informal (e.g., social norms and values). Building on institutional theory, Li et al. (2003) developed a governance environment framework including social, economic, political, and legal institutions that shape and constrain the economic actors' behavior toward maximizing their profits and reducing their costs in transactions.

In rule-based governance systems, the process of crafting legislation is transparent and is carried out through representative democracy, laws and regulations are interpreted and applied universally by courts, and law enforcement is done by an impartial and efficient state. Such environments are characterized by the separation of power and independence of legislative, judicial, and executive branches that perform checks and balances on one another. Thus, people mainly rely on public ordering and formal rules to protect their rights in social and economic exchanges. This also implies a high level of generalized morality and public trust in these societies that supports efficient enforcement of public rules. In contrast, relation-based countries have opaque and unfair legal systems with biased laws, judges that are amenable to political influence and apply regulations selectively, and states that are not able to enforce contracts impartially and efficiently. In the absence of strong formal institutions, people resort to their personal relations and private networks as informal institutions to substitute the ineffective regulatory systems and attain public goods or protect their property rights. In these societies, therefore, generalized public trust is scant and social norms emphasize personal loyalty instead (Li et al., 2003; Li & Samsell, 2009).

A reliable information infrastructure renders the rule-based governance effective and efficient in providing accurate information needed for micro-level behavior and business functions. Such infrastructures require free flow of information from opposing sources brought by press freedom and high-quality information on business activities made publicly available through robust accounting and auditing. On the contrary, in countries relying on private ordering, authorities strictly control the mass media undermining free flow of information. Accountants' and auditors' lack of independence and their lax standards also introduce considerable noise into public information on businesses making it unreliable. Consequently, people tend to avoid publicly available information and rely on private agreements based on their mutual relations which are typically secretive and cannot be verified by third parties (Li & Filer, 2007; Li et al., 2003). The differences in information requirements and characteristics of the two governance environments are particularly relevant to our research as information is an integral part of digitalization which is essentially the application of information and communication technologies.

2.4. Digitalization and Corruption

Digitalization has become a global force transforming all spheres of businesses and lives, creating both opportunities and challenges. While the terms "digitalization" and "digitization" are closely related and often confused with each other and used interchangeably, they represent different concepts. Digitization is essentially "taking analog information and encoding it into zeroes and ones so that computers can store, process, and transmit such information" (Bloomberg, 2018, p. 2). Therefore, it only involves the transformation of information and not the processes. Digitalization, on the other hand, refers to "the structuring of many and diverse domains of social life around digital communication and media infrastructures" (Brennen & Kreiss, 2016, p. 560). It

is a distinctive feature of life in the contemporary era, also called the digital era, brought about by extensive use of digital technologies that shaped its emergence from industrial and information eras. In fact, the role of such technologies in the evolution of information age corresponds to that of mechanization in the Industrial Revolution (Naisbitt, 1984).

Digital technologies have also been emphasized as useful tools in the fight against corruption as governments and international organizations are increasingly using these technologies in their anti-bribery initiatives. Adam and Fazekas (2018) and Kossow and Dykes (2018) discuss various ICT tools and the ways they can be used to tackle corruptive practices. Electronic government (e-government) and digital public services aim at increasing the effectiveness and efficiency of governments through automation and simplifying bureaucratic procedures thereby improving downward transparency (i.e., opening up the government and informing the public of its activities). Other tools with similar implications include transparency portals that provide open data and information on government operations, and blockchain and distributed ledger technologies (DLT). The latter is a decentralized and synchronized database stored in a peer-to-peer network of "blocks" containing encrypted data that cannot be altered without changes made in all other blocks in the chain. This ensures accountability through a permanent and secure record of documents and transactions with complete information about alterations publicly available. Another sophisticated technology is artificial intelligence characterized by machine learning and problem solving. Applying neural networks, this technology can make predictions based on patterns of data and has therefore the potential to reveal corrupt exchanges and relationships.

In contrast, crowdsourcing and whistleblowing platforms improve upward transparency by enabling citizens to report public officials' wrongdoing. Crowdsourcing platforms allow people to

publicly share their personal experiences and provide input on incidents of petty corruption in which government officials require small payments to expedite a process that would happen anyway (Cuervo-Cazurra, 2016). Given the frequency of such incidents, crowdsourcing platforms are particularly useful for gathering reports in large quantities and publicizing informal accounts of corruptive behavior. Therefore, these platforms along with social media also offer a great opportunity to mobilize citizens and coordinate the efforts of different initiatives toward collective action against corruption through facilitating communications and information sharing. Whistleblowing tools, on the other hand, are used to collect detailed reports of fewer incidents of grand corruption in which a benefit is granted only if a bribe is paid (Cuervo-Cazurra, 2016). As such, the more in-depth, formal reports are collected with the purpose of building legal cases and prosecution of corrupt parties.

In general, scholars claim that ICT tools have the potential to connect citizens to their governments more effectively and bring greater transparency and openness (Bertot et al., 2010; Sturges, 2004). The wide-ranging and up-to-date information made available to citizens through such technologies turns them into watchdogs to hold their governments accountable and help the fight against corruption. Digitalization of governments also makes internal collection of open data possible which facilitates monitoring public officials and reducing their discretion in decision making processes (Makowski, 2017; Shim & Eom, 2008). However, the empirical evidence is scarce and the few studies addressing the link between ICT and corruption have either focused on a narrow aspect of digitalization such as internet access or e-government, failed to establish the direction of causality, or conducted cross-sectional research (e.g., Andersen, Bentzen, Dalgaard, & Selaya, 2011; DiRienzo, Das, Cort, & Burbridge, 2007; Elbahnasawy, 2014; Lio, Liu, & Ou, 2011; Nam, 2018; Shim & Eom, 2009). The more serious issue in this strand of literature is

ignoring the role of institutional context as the main underlying cause of corruption. An exception is Kim (2014) who suggests that e-government is more effective in controlling corruption in settings with stronger rule of law.

While we also believe digital technologies have the potential to prevent bribery, we argue that this potential is only realized in rule-based governance environments. As discussed, the mechanisms through which ICT tools help the fight against corruption mainly revolve around improving public scrutiny by providing access to public information which is intended to increase transparency and encourage citizens to report incidents of corruptive behavior. This intended purpose can be only fulfilled in settings where public information is reliable and verifiable, and people trust the system. In other words, greater access to information translates into transparency when the information is not distorted, and people will be motivated to engage in corruption reporting when they are confident that their reports will have the desired consequences. Given the reliability of the information infrastructure and the high level of public trust in rule-based societies, we expect digital technologies to be employed the way they are supposed to in detecting and reducing bribery. Since an established generalized morality and a set of social norms supporting public ordering are characteristic of rule-based systems (Li & Filer, 2007), such environments offer a suitable context to bolster the anti-corruption efforts through digitalization as the ethical universalism guides citizens to embrace any new opportunity to combat corruption. Thus, we hypothesize:

> ***Hypothesis 1:*** *Digitalization leads to lower levels of corruption in rule-based governance environments.*

Research findings also indicate that ICT tools do not necessarily help prevent corruptive practices in all settings (e.g., Rotchanakitumnuai, 2013). In other words, the effectiveness of these tools in battling corruption depends on the context. We go beyond this point and assert that introducing digitalization worsens the situation in certain contexts and creates new opportunities for bribery. For instance, while the purpose of artificial intelligence is to contribute to efforts in predicting and detecting corruption, its accuracy depends on the provided data which means loops of biased and erroneous predictions if data are forged. Corrupt authorities can also utilize machine learning for their own evil goals and increase their ability to predict and counter threats to their network of criminals (Adam & Fazekas, 2018). Distributed ledger technology, another ICT tool suggested to be effective in addressing the risks of corruption, is associated with cryptocurrencies which can be used for money laundering purposes (Kossow & Dykes, 2018). Social media can also be a source of misinformation when it is controlled by corrupt states.

As a result of institutional voids in relation-based environments, corruption is the norm rather than exception and corruptive relationships define the rules of the game that shape socioeconomic behavior of players in the society (Li et al., 2003; Marquette & Peiffer, 2018; Mungiu-Pippidi & Hartmann, 2019). In such contexts, anti-bribery efforts tend to fail due to lack of enforcement of rules and scant accountability since those in charge of enforcing the rules are corrupt themselves. In fact, instruments designed to fight corruption are more likely to be used for the opposite purpose in hands of corrupt authorities controlling critical resources in a country. Without freedom of expression and the right to seek alternative sources of information in countries with systemic corruption, anti-bribery programs, if any, will be symbolic. The additional information provided by digital technologies only serves authoritarian government actors to identify activists and civil movements for oppression purposes (Stockmann & Luo, 2015).

Corruption can also be considered a collective action problem created by the perception that short-term costs of fighting it outweigh the long-term benefits for the society (Persson, Rothstein, & Teorell, 2013). In this perspective, state officials and citizens are complicit in corruption which is the result of a governance system built on particularism rather than ethical universalism (Mungiu-Pippidi, 2015). Unless there is public will to voluntarily promote common interests, putting constraints on corruption will not be possible. In relation-based societies, therefore, corruptive payments are justified even by the supply side of bribes (i.e., businesses) since they see these exchanges as opportunities to achieve competitive advantages through private relationships with government officials. To them, digitalization is a boon that facilitates their search for the right person to bribe and receive an exclusive benefit. In other words, both supply and demand exist for bribery in relation-based economies and neither side consider it harmful as they perceive it to be an effective substitute for the efficient markets and strong institutions found in rule-based governance environments. Introducing digital tools into such contexts only bridges the two parties of corruptive exchanges more easily and helps them establish and secure their relationship. Thus, we hypothesize:

> ***Hypothesis 2:*** *Digitalization leads to higher levels of corruption in relation-based governance environments.*

3. RESEARCH DESIGN

3.1. Sample and Data

In this study, we seek to understand how digitalization diminishes or escalates corruption depending on the governance environment. To that end, we focus on a sample of 82 countries for which data is available for all the variables (see the Appendix for the list of countries), particularly

for a comprehensive index of digitalization as the main predictor of corruption. The countries represent a broad range of developed and developing countries with various governance systems allowing us to examine the role of context in the relationship between digitalization and corruption. Data on digitalization is collected from the Digital Planet project, and Transparency International's Corruption Perception Index (CPI) is used for the level of corruption across countries. For governance environment, we use the data provided by World Bank's Worldwide Governance Indicators (WGI) project, and for a number of economic predictors of corruption as control variables, we use World Bank's World Development Indicators (WDI) as the source. Collecting data on all variables for the 82 countries in the sample over a 9-year period from 2012 to 2020 yields 738 observations to be analyzed in this study.

3.2. Dependent Variable

The dependent variable is the level of corruption across countries for which we use Transparency International's CPI. The global civil society organization annually publishes transparency scores for many countries and territories based on their perceived level of corruption in the public sector according to business experts and professionals in different fields (Transparency International, 2020). The index, which is the most widely used in the literature on corruption in international business (Bahoo et al., 2020), ranges from 0 to 100 where 0 means highly corrupt and 100 means very clean. Since this is a reversed scale representing transparency rather than corruption, we subtract the values from 100 to have an index that increases with the level of corruption.

3.3. Independent Variable

In this study, the main predictor of corruption in a given country is digitalization. Since we aim at a holistic approach to investigating the role of digitalization rather than specific ICT tools such as e-government, we use Digital Intelligence Index (DII) developed as part of the Digital Planet project, an interdisciplinary research initiative in the Institute for Business in the Global Context at The Fletcher School at Tufts University. The index is based on a comprehensive evaluation of the development of digital economies aggregating more than 358 indicators into a Digital Evolution scorecard built on 12 years of research (Chakravorti, Chaturvedi, Filipovic, & Brewer, 2020).

3.4. Moderating Variable

The main premise of our research is that the effect of digitalization on corruption is context-specific and the context is determined by the governance environment of countries. Following Li and Filer (2007), we develop a Governance Environment Index (GEI) using five dimensions of the WGI project that reports individual and aggregate governance indicators for different countries and territories. The indicators are based on more than 30 individual data sources reporting perceptions of the quality of governance by a large number of expert, enterprise, and citizen respondents in developing and developed countries (World Bank, 2020). The dimensions include voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. However, we exclude control of corruption as it is our dependent variable that we believe is a consequence and not an underlying mechanism of governance. To generate the GEI, we first standardize the five indicators of WGI across the countries in the sample to have means of zero and standard deviations of one, and then

add the five components. High GEI scores indicate more rule-based and low scores indicate more relation-based governance systems. With a cutoff point of zero, positive values of GEI are attributed to rule-based countries and negative values to relation-based countries.

3.5. Control Variables

We also control for a number of economic factors identified in the literature to be strong predictors of corruption. These include per capita income, foreign direct investment (FDI), international openness, and government size (e.g., Goel & Nelson, 2010; Husted, 1999; Robertson & Watson, 2004; Sanyal, 2005). All these variables are derived from World Bank's WDI database which is a collection of global development indicators at regional, national, and global levels compiled from officially recognized, international sources (World Bank, 2021). We use gross national income (GNI) per capita in purchasing power parity (PPP) for per capita income, net inflows and net outflows of foreign direct investment for inward and outward FDI respectively, trade as a percentage of gross domestic product (GDP) for international openness, and general government final consumption expenditure as a percentage of GDP for government size.

3.6. Estimation

Due to the longitudinal nature of our dataset, panel data analysis is used to estimate the effect of digitalization on corruption in rule-based and relation-based countries. To that end, we first create the dummy variable "Relation" that takes the value of 0 for rule-based governance systems (GEI > 0), and 1 for relation-based countries (GEI < 0). Accordingly, the regression equation is as follows:

$$\text{Corruption}_{it} = \beta_0 + \beta_1 \text{ Digitalization}_{it} + \beta_2 \text{ Relation}_i + \beta_3 (\text{Digitalization*Relation})_{it} + \beta_4 \ln \text{OutwardFDI}_{it} + \beta_5 \ln \text{InwardFDI}_{it} + \beta_6 \ln \text{GNIpc}_{it} + \beta_7 \text{GovSize}_{it} + \beta_8 \text{Openness}_{it} + u_{it} \quad (1)$$

where subscripts i and t denote the country and the year respectively. Further, GNIpc represents GNI per capita in purchasing power parity (PPP), GovSize stands for the size of the government, and Openness is the international openness of the given country. A common approach to make data with large values (such as FDI and GNI per capita) normally distributed is logarithmic transformation. However, doing so generates many missing values for FDI since both inward and outward FDI represent net values including 0 and negative numbers the natural logarithm of which is undefined. To solve this problem and avoid losing valuable information, we follow Yeyati, Panizza, and Stein (2007) and use the following formula for both inward and outward FDI in equation (1): sign(FDI)*ln(1+|FDI|).

We estimate the model using a fixed effects regression with Driscoll and Kraay (1998) standard errors. This method overcomes many econometric issues associated with panel data which may result in severely biased estimates. In this model, standard errors are robust to cross-sectional dependence, heteroscedasticity, and autocorrelation (Hoechle, 2007). Due to the possibility of reverse causality, particularly from corruption to FDI, temporal lags are introduced in the model so that all predictors including moderating and control variables are lagged by one year.

4. RESULTS

Table 2.1 presents the results of the panel data regression with Driscoll-Kraay standard errors. Model (1) represents the estimated coefficients of Equation (1). Since a fixed effects regression is used to estimate this model, the time-invariant dummy variable “Relation” is eliminated from the

analysis. Nonetheless, its interaction with digitalization as the main predictor provides us with the information we need to test the hypotheses. The negative and statistically significant coefficient of "Digitalization" ($\beta_1 = -0.058$, $p < 0.01$) indicates that digitalization leads to lower levels of corruption in rule-based economies, lending support to hypothesis 1. However, the interaction term between "Digitalization" and "Relation" yields a positive coefficient suggesting that digital technologies are less effective in relation-based countries. Since this positive coefficient is greater than the absolute value of the negative coefficient of "Digitalization", the effect of digitalization on corruption is in fact positive in relation-based contexts ($\beta_1 + \beta_3 = 0.038$, $p < 0.1$), supporting hypothesis 2.

[Insert Table 2.1 about here]

In Model (2), we replace the dummy variable "Relation" with the continuous variable of Governance Environment Index "GEI" to examine the influence of digitalization across all countries in the sample using the following panel regression equation:

$$\text{Corruption}_{it} = \beta'_0 + \beta'_1\ \text{Digitalization}_{it} + \beta'_2\ \text{GEI}_{it} + \beta'_3\ (\text{Digitalization*GEI})_{it} + \beta'_4\ \ln \text{OutwardFDI}_{it} + \beta'_5 \ln \text{InwardFDI}_{it} + \beta'_6 \ln \text{GNIpc}_{it} + \beta_7\ \text{GovSize}_{it} + \beta_8\ \text{Openness}_{it} + u_{it} \quad (2)$$

The large, negative, and highly significant coefficient of GEI ($\beta'_2 = -3.229$, $p < 0.001$) points to the importance of governance environment as the strongest predictor of corruption and justifies its use as the context in this study. As demonstrated in this model, digitalization per se is not a significant predictor of corruption ($\beta'_1 = 0.013$, $p > 0.1$), but its interaction with GEI yields a negative and statistically significant coefficient ($\beta'_3 = -0.824$, $p < 0.01$) indicating that the effectiveness of digital tools in reducing the level of corruption increases as the quality of governance improves.

5. DISCUSSION

Corruption is detrimental to both society and economy and is yet prevalent in many countries. Thus, research in this field is imperative to help alleviate the problem. In order to combat corruption, we must first understand how it works, identify its adverse and dire consequences, and enlighten managers and policy makers about these aspects of the phenomenon. However, tackling corruption more fundamentally requires digging deeper to identify its root causes and vehicles of spread. As such, in this study, we sought to delineate the mechanisms through which different factors, particularly digitalization of economies, influence corruption. While various ICT-based anti-corruption interventions have been proposed as useful tools for fighting corruption, their unintended aggravating consequences for corrupt environments are underexplored. This is particularly alarming for many such countries as some scholars have warned about the potential for digital technologies to be also gateways to corruption (Adam & Fazekas, 2018; Kossow & Dykes, 2018).

The literature suggests that ICT tools such as digital public services and e-government, crowdsourcing platforms, whistleblowing tools, transparency portals and big data, distributed ledger technology (DLT) and blockchain, and artificial intelligence (AI) can be used to combat corruption in different ways. The underlying logic is that these technologies enhance public scrutiny through access to public information which improves transparency and encourages corruption reporting (Adam & Fazekas, 2018). In other words, these digital tools are useful in the fight against corruption since they offer opportunities for increased downward transparency, i.e., disclosing information about government activities, upward transparency, i.e., citizens reporting corruptive behavior by public officials, and mobilization, i.e., coordinating efforts toward collective action against corruption (Kossow & Dykes, 2018). The intended purpose of these

technologies is more likely to be fulfilled in a rule-based governance environment where the independence of legislative, judicial, and executive branches ensures quality of regulations that are universally applied and efficiently enforced (Li et al., 2003). These formal institutions are also supported by high levels of public trust and reliable information infrastructures. As a result, the greater transparency rendered through digitalization will be geared towards providing useful information and mobilizing people in the battle against corruption.

However, digital technologies may act as a double-edged sword with favorable results only for developed, rule-based countries. In fact, the effectiveness of digitalization in reducing corruption can be context-specific, depending on its suitability to institutions, cultural backgrounds, and technology experience of the local political parties and civil societies (Adam & Fazekas, 2018). Thus, we argue that not only is digitalization ineffectual in combating unethical behaviors in relation-based economies, but it will also backfire in such environments facilitating rather than preventing corruption. This is partly due to the fact that it is impossible for developing countries to skip the industrialization phase and jump into the digital era (Ferran & Salim, 2005). The institutional voids, characteristic of emerging and transition economies, give rise to private relationships as substitutes to efficient market mechanisms. The poor quality of the regulatory system coupled with a lack of public trust in the society and the absence of free flow of information create an environment fraught with misinformation. Such contexts are conducive to the misuse of well-intended technologies and will therefore turn ICT tools into means of creating new corruption opportunities as the additional information generated adds to the confusion and opacity rather than transparency.

The results of our study confirm these arguments. While digitalization is not found to be a significant predictor of corruption across all countries, its positive and negative effects are

manifested when we take into account the governance environment as the context. Digital technologies are used for their intended purpose and lead to lower levels of corruption in rule-based economies, but they have the opposite consequences in relation-based societies and add to the already high level of corruption. Considering the differential impact of digitalization on corruptive practices depending on the context, we can also infer that it will widen the gap between emerging and advanced economies in this regard (i.e., increases corruption distance between them).

This study makes several contributions to the field of international business in general, and comparative research on corruption in particular. While the digital era has been around for a long time and corruption is rooted in history, research on their intersection is still in its infancy with a very limited scope. The few studies mainly focus on the anti-corruption role of ICT tools, provide preliminary frameworks, and lack empirical evidence to put their arguments to the test (e.g., Bertot et al., 2010). The even fewer studies that attend to the potential downsides of digital technologies are either purely conceptual or offer suggestions based on anecdotal evidence and literature reviews (e.g., Adam & Fazekas, 2018, 2020). We fill these gaps with a panel data analysis on 82 countries over a 9-year period from 2012 to 2020. Addressing both positive and negative implications of digital transformation for bribery, this study brings together two major themes of research on corruption in international business, namely, factors combating and contributing to corruptive behavior. Drawing on institutional theory (North, 1990), we use the framework of governance environments developed by Li et al. (2003) to differentiate the role of digitalization in rule-based and relation-based countries. Thus, this research also adds theoretically to a field of study that suffers from lack of theoretical underpinnings (Bahoo et al., 2020; Judge, McNatt, & Xu, 2011).

Our findings have practical implications for policy makers in rule-based economies pointing to the opportunities digitalization offers in the fight against corruption in such contexts and suggest that they will benefit enormously from accelerating the process of digital transformation in their countries. However, the same cannot be recommended for relation-based economies since introducing digital technologies into these environments only exacerbates the problem and opens up new avenues for corruptive practices. In fact, advising policy makers of such countries is irrelevant as the authorities who are in charge of formulating and implementing policies are very likely to be corrupt themselves. Nevertheless, the results have useful implications for the people in these societies because citizens and businesses are also involved in spreading corruptive behavior as the supply side of bribes. Considering corruption as a collective action problem, citizens are complicit in this situation as their indifference contributes to prevalence of briberies. With a long-term orientation that recognizes the eventual harms of bribery to the society as a whole over its short-term gains for particular parties, people and business managers can leverage digital technologies to promote common interests and put constraints on corruptive behavior. This can be achieved through using ICT tools to check on public officials, mobilize people to pressure their government, and reveal and spread information on corruptive practices to improve social accountability and make anti-bribery initiatives more than merely symbolic legislation (Kossow, 2020).

We acknowledge that the results of this study must be interpreted with caution due to limitations that also offer opportunities for future research. Since a fixed effects regression was the proper analytical technique for estimating our model, we could not include time-invariant control variables, most notably culture the role of which has been emphasized in the literature as a conducing factor to corruption (Bahoo et al., 2020; Kouznetsov et al., 2019). Also, most corruption

indices, including Transparency International's CPI used in this study, capture perceived rather than objective levels of corruption which may lead to biased results. Although objective measures of corruption are scarce and limited in temporal and geographical coverage (e.g., Hlatshwayo, Oeking, Ghazanchyan, Corvino, Shukla, & Leigh, 2018), they provide fertile ground for future research on corruption and comparing the results with perception-based approaches. Additionally, we did not examine the impact of digitalization on supply and demand sides of bribery separately in this research. Future studies can address this issue by evaluating how firm managers and government officials might be affected differently by emerging technologies in different contexts. Finally, future research can also focus on globalization as the center of a long-standing debate over its influence on corruption. While it has long been convicted as the culprit spreading corruptive practices around the world through FDI, many scholars argue that it diminishes incentives to engage in bribery as openness of a market exposes it to higher standards of the global economy. Once again, it can be argued that context matters with different consequences of globalization for rule-based and relation-based countries depending on their investment partner's level of corruption. Results of the current research will also be relevant providing new insights for another contextual factor since ICT reduces the costs of information flows across borders conditioning how globalization plays out. Considering more recent events such as Brexit, it will also be warranted to explore how waves of de-globalization impact business environments in their extent of bribery prevalence.

5.1. Conclusion

Overall, this study confirms the importance of digitalization in both controlling and causing corruption. It also points to the tenacity of corruptive practices and the difficulty of overcoming

them as digital technologies not only fail to curb them in relation-based countries, but also serve them to flourish. Our findings also imply that more effective anti-corruption programs relying on digital tools first require a transition from relation-based to rule-based governance environments to ensure such tools are used for their intended purpose.

6. CHAPTER 2 REFERENCES

Adam, I., & Fazekas, M. (2018). *Are emerging technologies helping win the fight against corruption in developing countries?* Background Paper, 21.

Adam, I., & Fazekas, M. (2020). *Are emerging technologies helping win the fight against corruption? A review of the state of evidence.* Working Paper Series: GTI-WP/2020:02.

Alderman, L. (2020, January 31). Airbus to pay $4 billion to settle corruption inquiry. *The New York Times*. Retrieved from https://www.nytimes.com/.

Andersen, T. B., Bentzen, J., Dalgaard, C. J., & Selaya, P. (2011). Does the Internet reduce corruption? Evidence from US states and across countries. *The World Bank Economic Review*, 25(3), 387-417.

Bahoo, S., Alon, I., & Paltrinieri, A. (2020). Corruption in international business: A review and research agenda. *International Business Review*, 29(4), 101660.

Bertot, J. C., Jaeger, P. T., & Grimes, J. M. (2010). Using ICTs to create a culture of transparency: E-government and social media as openness and anti-corruption tools for societies. *Government Information Quarterly*, 27(3), 264-271.

Bloomberg, J. (2018). *Digitization, digitalization, and digital transformation: confuse them at your peril*. Forbes. Retrieved on August 28, 2019.

Brennen, J. S., & Kreiss, D. (2016). Digitalization. *The International Encyclopedia of Communication Theory and Philosophy*, 1-11.

Chakravorti, B., Chaturvedi, R. S., Filipovic, C., & Brewer, G. (2020). *Digital in the time of COVID: Trust in the digital economy and its evolution across 90 economies as the planet paused for a pandemic*. The Fletcher School, Tufts University.

Chen, C. W., Cullen, J. B., & Parboteeah, K. P. (2015). Are manager-controlled firms more likely to bribe than shareholder-controlled firms: A cross-cultural analysis. *Management and Organization Review*, 11(2), 343-365.

Cuervo-Cazurra, A. (2016). Corruption in international business. *Journal of World Business*, 51(1), 35-49.

Dell, G. (2020). *Exporting Corruption: Progress Report 2020: Assessing Enforcement of the OECD Anti-Bribery Convention*. Transparency International.

DiRienzo, C. E., Das, J., Cort, K. T., & Burbridge, J. (2007). Corruption and the role of information. *Journal of International Business Studies*, 38(2), 320-332.

Driscoll, J. C., & Kraay, A. C. (1998). Consistent covariance matrix estimation with spatially dependent panel data. *Review of Economics and Statistics*, 80(4), 549-560.

D'Souza, A. (2012). The OECD anti-bribery convention: changing the currents of trade. *Journal of Development Economics*, 97(1), 73-87.

Elbahnasawy, N. G. (2014). E-government, internet adoption, and corruption: an empirical investigation. *World Development*, 57, 114-126.

Ferran, C., & Salim, R. (2005). Electronic business in developing countries: the digitalization of bad practices? In *Electronic business in developing countries: Opportunities and challenges* (pp. 1-35). IGI Global.

Goel, R. K., & Nelson, M. A. (2010). Causes of corruption: History, geography and government. *Journal of Policy Modeling*, 32(4), 433-447.

Hlatshwayo, S., Oeking, A., Ghazanchyan, M. M., Corvino, D., Shukla, A., & Leigh, M. L. Y. (2018). The measurement and macro-relevance of corruption: A Big Data approach. *International Monetary Fund*. Working Paper 18/195.

Hoechle, D. (2007). Robust standard errors for panel regressions with cross-sectional dependence. *The Stata Journal*, 7(3), 281-312.

Husted, B. W. (1999). Wealth, culture, and corruption. *Journal of International Business Studies*, 30(2), 339-359.

Judge, W. Q., McNatt, D. B., & Xu, W. (2011). The antecedents and effects of national corruption: A meta-analysis. *Journal of World Business*, 46(1), 93-103.

Kaczmarek, S. C., & Newman, A. L. (2011). The long arm of the law: Extraterritoriality and the national implementation of foreign bribery legislation. *International Organization*, 745-770.

Kim, C. K. (2014). Anti-corruption initiatives and e-government: a cross-national study. *Public Organization Review*, 14(3), 385-396.

Kossow, N. (2020). *Digitizing Collective Action: How Digital Technologies Support Civil Society's Struggle against Corruption* (Doctoral Dissertation, Hertie School).

Kossow, N., & Dykes, V. (2018). *Embracing Digitalisation: How to use ICT to strengthen Anti-Corruption.* Anti-Corruption and Integrity Programme.

Kouznetsov, A., Kim, S., & Wright, C. (2019). An audit of received international business corruption literature for logic, consistency, completeness of coverage. *Journal of International Management*, 25(4), 100688.

Li, S. (2019). *Bribery and Corruption in Weak Institutional Environments: Connecting the Dots from a Comparative Perspective*. Cambridge University Press.

Li, S., & Filer, L. (2007). The effects of the governance environment on the choice of investment mode and the strategic implications. *Journal of World Business*, 42(1), 80-98.

Li, S., Park, S. H., & Li, S. (2003). The great leap forward: The transition from relation-based governance to rule-based governance. *Organizational Dynamics*, 33(1), 63-78.

Li, S., & Samsell, D. P. (2009). Why some countries trade more than others: The effect of the governance environment on trade flows. *Corporate Governance: An International Review*, 17(1), 47-61.

Lio, M. C., Liu, M. C., & Ou, Y. P. (2011). Can the internet reduce corruption? A cross-country study based on dynamic panel data models. *Government Information Quarterly*, 28(1), 47-53.

Makowski, G. (2017). From Weber to the Web… Can ICT Reduce Bureaucratic Corruption? In *Beyond Bureaucracy* (pp. 291-312). Springer, Cham.

Marquette, H., & Peiffer, C. (2018). Grappling with the "real politics" of systemic corruption: Theoretical debates versus "real-world" functions. *Governance*, 31(3), 499-514.

Mungiu-Pippidi, A. (2015). *The quest for good governance: How societies develop control of corruption.* Cambridge University Press.

Mungiu-Pippidi, A., & Hartmann, T. (2019). Corruption and Development: A Reappraisal. In *Oxford Research Encyclopedia of Economics and Finance*. Oxford: Oxford University Press.

Nam, T. (2018). Examining the anti-corruption effect of e-government and the moderating effect of national culture: A cross-country study. *Government Information Quarterly*, 35(2), 273 282.

Naisbitt, J. (1984). *Megatrends: ten new directions changing our lives.* New York: Warner Books.

North, D. C. (1990). *Institutions, institutional change and economic performance*. Cambridge University Press.

OECD (2020). *Policy measures to avoid corruption and bribery in the COVID-19 response and recovery*. OECD Publishing, Paris. Retrieved from https://www.oecd.org/coronavirus/policy-responses/policy-measures-to-avoid-corruption-and-bribery-in-the-covid-19-response-and-recovery-225abff3/.

Pedigo, K. L., & Marshall, V. (2009). Bribery: Australian managers' experiences and responses when operating in international markets. *Journal of Business Ethics*, 87(1), 59-74.

Persson, A., Rothstein, B., & Teorell, J. (2013). Why anticorruption reforms fail—systemic corruption as a collective action problem. *Governance*, 26(3), 449-471.

Petrou, A. P., & Thanos, I. C. (2014). The "grabbing hand" or the "helping hand" view of corruption: Evidence from bank foreign market entries. *Journal of World Business*, 49(3), 444-454.

Robertson, C. J., & Watson, A. (2004). Corruption and change: The impact of foreign direct investment. *Strategic Management Journal*, 25(4), 385-396.

Rogow, A. A., & Lasswell, H. D. (1963). *Power, corruption, and rectitude*. Englewood Cliffs, NJ: Prentice-Hall.

Rotchanakitumnuai, S. (2013). The governance evidence of e-government procurement. *Transforming Government: People, Process and Policy*, 7(3), 309-321.

Sanyal, R. (2005). Determinants of bribery in international business: The cultural and economic factors. *Journal of Business Ethics*, 59(1), 139-145.

Shim, D. C., & Eom, T. H. (2008). E-government and anti-corruption: Empirical analysis of international data. *International Journal of Public Administration*, 31(3), 298-316.

Shim, D. C., & Eom, T. H. (2009). Anticorruption effects of information communication and technology (ICT) and social capital. *International Review of Administrative Sciences*, 75(1), 99-116.

Stockmann, D., & Luo, T. (2015). Authoritarianism 2.0: Social media and political discussion in China. *Available at SSRN 2650341*.

Sturges, P. (2004). Corruption, transparency and a role for ICT. *International Journal of Information Ethics*, 2(11), 1-9.

Transparency International (2020). *Corruption perceptions index 2020*. Retrieved from https://www.transparency.org/en/cpi/2020/index/.

Weber, J., & Getz, K. (2004). Buy bribes or bye-bye bribes: The future status of bribery in international commerce. *Business Ethics Quarterly*, 695-711.

Weismann, M. F., Buscaglia, C. A., & Peterson, J. (2014). The Foreign Corrupt Practices Act: Why it fails to deter bribery as a global market entry strategy. *Journal of Business Ethics*, 123(4), 591-619.

World Bank (2020). *Worldwide governance indicators.* Retrieved from https://info.worldbank.org/governance/wgi/.

World Bank (2021). *World Development Indicators*. Retrieved from https://datacatalog.worldbank.org/dataset/world-development-indicators/.

Yeyati, E. L., Panizza, U., & Stein, E. (2007). The cyclical nature of North–South FDI flows. *Journal of International Money and Finance*, 26(1), 104-130.

TABLE 2.1
Panel Data Estimations for the Effect of Digitalization on Corruption

Variables	Dependent variable: $Corruption_{it}$	
	Model (1)	Model (2)
$Digitalization_{it}$	-0.058** (-3.51)	0.013 (0.47)
$Relation_{i}$	–	–
$(Digitalization*Relation)_{it}$	0.095† (2.00)	–
$OutwardFDI_{it}$	0.006† (1.98)	0.002 (0.33)
$InwardFDI_{it}$	-0.008 (-1.84)	0.000 (-0.02)
$GNIpc_{it}$	-2.434** (-4.67)	-2.422** (-3.15)
$GovSize_{it}$	-0.004 (-0.06)	-0.085 (-1.14)
$Openness_{it}$	0.003 (0.28)	-0.009 (-1.20)
GEI_{it}	–	-3.229*** (-22.66)
$(Digitalization*GEI)_{it}$	–	-0.824** (-2.67)
N/Groups	738/82	738/82
F Statistic	676.67***	3023.87***

†p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001 (t-statistics in parentheses).
Fixed effects regression with Driscoll-Kraay standard errors.

APPENDIX
Sample Countries

Algeria	Germany	Philippines
Argentina	Ghana	Poland
Australia	Hong Kong	Qatar
Austria	Hungary	Russia
Azerbaijan	Iceland	Rwanda
Bahrain	India	Saudi Arabia
Bangladesh	Indonesia	Serbia
Belgium	Iran	Singapore
Bolivia	Ireland	Slovakia
Bosnia & Herzegovina	Israel	Slovenia
Brazil	Italy	South Korea
Cambodia	Japan	Spain
Cameroon	Jordan	Sri Lanka
Canada	Kazakhstan	Sweden
Chile	Kenya	Switzerland
China	Laos	Tanzania
Colombia	Latvia	Thailand
Costa Rica	Lebanon	Tunisia
Côte d'Ivoire	Lithuania	Turkey
Croatia	Malaysia	Uganda
Czechia	Mexico	Ukraine
Denmark	Morocco	United Arab Emirates
Ecuador	Netherlands	United Kingdom
Egypt	New Zealand	United States
Estonia	Nigeria	Uruguay
Ethiopia	Norway	Vietnam
Finland	Pakistan	
France	Peru	

VITA

Mahdi Forghani Bajestani

Old Dominion University
Strome College of Business
2149 Constant Hall
Norfolk, VA. 23508

(757) 907-0060
mforg001@odu.edu

EDUCATION

2017–2021 **PhD in Business Administration**
Management–Strategy & International Business
Old Dominion University, Norfolk, Virginia.

2011–2014 **Master of Business Administration**
MBA–Strategy
University of Tabriz, Tabriz, Iran.

2005–2010 **Bachelor of Science**
Electrical Engineering–Control
Shahrood University of Technology, Shahrood, Iran.