Essays on Corruption

Salman Bahoo

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Salman Bahoo

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Executive Summary

Corruption is blamed for reductions in operational efficiency, information asymmetry, limited income distribution, policy failure, and weak economic growth and development. Corruption can originate from either the "demand-side" (the recipients of the bribe) or the "supply-side" (the givers of the bribe). This double edge effect of corruption on the economy and society makes it a multidisciplinary subject and phenomenon. Thus, scholars from different fields and disciplines, such as finance, banking, economics, accounting, law, foreign aid, and international business, examined and analyzed corruption as a multidisciplinary subject. In this dissertation, I investigate and explore the characteristics and association of corruption with firms, international business, banking, foreign direct investment (FDI), foreign aid, and international trade flows.

This dissertation comprises four essays/papers on corruption. In the first essay/paper, I conducted a hybrid literature review of corruption phenomena in international business. This paper explores the characteristics of corruption related to firm and international business literature. This review contributes to the literature on corruption in international business in the following ways: (i) identified seven research streams, (ii) presented definition and taxonomy of corruption in international business, (iii) identified influential aspects of literature, (iv) synthesize literature on corruption in international business, and (v) proposed 14 future research questions.

The second essay/paper is a bibliometric review of the phenomena of corruption in banks. In this paper, I explore and summarize the characteristics of corruption in banks. This study has the following contribution to the literature on corruption related to banks: (i) identification of six streams, (ii) presentation of influential aspects of literature, (iii) calls for the establishment of an anti-corruption architecture system by considering corruption as a managerial issue in banks, and (iv) it posits 20 future research questions.

The third essay/paper examines a combined nexus among corruption, foreign aid (Official Development Assistance (ODA)), and foreign direct investment (FDI). This study used concepts of neo institutional and transaction costs theory. In this study, I propose and investigate a framework that foreign aid (as a formal institution) moderates the negative impact of host country's corruption (as an informal institution) on FDI at two levels; (i) FDI propensity (when a company considers investing abroad), and (ii) FDI inflows (when they increase their

investments in corrupt countries in which they already invested). By applying the two-stage Heckman model, I confirm that corruption's asymmetric effect on FDI depends on two investment phases (FDI propensity and inflows). Furthermore, foreign aid (ODA) as a formal institution negates corruption's adverse impact as an informal institution on foreign investors.

The final essay/paper concerns the link between corruption, Aid (ODA), Aid for Trade (AfT), and international trade flows (imports and exports). Through the lens of neo-institutional and transaction costs theory, I present a framework that foreign aid (ODA and AfT) (as a formal institution) moderates the negative effect of trading partner's corruption (as an informal institution) on OECD countries' international trade flows (imports and exports). The findings of the study confirm that trading partner's corruption hurts OECD country's imports and exports. Bilateral aid (ODA) has no moderating effect on corruption's negative impact on OECD countries' imports, but only AfT has a moderating impact on OECD's imports. Finally, foreign aid (ODA and AfT) moderates the adverse effects of trading partners' corruption on OECD countries' exports. This study confirms that OECD member countries signatory of the Anti-Bribery Convention 1997 and avoid business transactions with corrupt trading partners.

Keywords: Corruption; Firm; Banking; International Business (IB); Foreign Direct Investment (FDI); Foreign Aid; Official Development Assistance (ODA); Aid for Trade (AfT); International Trade

List of Studies

This dissertation consists of the following essays/papers.

1. **Bahoo, S**., Alon, I., & Paltrinieri, A. (2020)[1]. Corruption in International Business: A Review and Research Agenda. *International Business Review*. https://doi.org/10.1016/j.ibusrev.2019.101660. (Published) (ABS 3 IF 3.6)

2. **Bahoo, S.** (2020)[2]. Corruption in Banks: A Bibliometric Review and Agenda. Finance Research Letters. https://doi.org/10.1016/j.frl.2020.101499. (Published) (ABS 2, IF 3.5)

3. **Bahoo, S.,** Alon, I., & Floreani, J. (2020). Corruption, Foreign Aid, and Foreign Direct Investment. *International Business Review*. (ABS 3, Under review)

4. **Bahoo, S.,** Floreani, J, & Alon, I. (2020). Impact of Corruption on International Trade Flows of OECD Countries: The Moderating Role of Aid and Aid for Trade. *World Development*. (ABS 2, Submitted).

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[1]*This paper is the most popular and downloaded article of International Business Review, ABS level 3 journal.*
[2]*This paper is the most popular and downloaded article of Finance Research Letters, ABD level 2 journal.*

Table of Contents

Overview of Dissertation:

Essays on Corruption

1. Introduction

Corruption is defined as an "illegal activity conducted through misuse of power by public or private officials or firms for personal benefits, financial or otherwise" (Bahoo, Alon, & Paltrinieri, 2019, p. 2). This broader definition of corruption represents the overall reported level of corruption in a country. Corruption is blamed for reductions in operational efficiency, information asymmetry, limited income distribution, failure of policy, and weak economic growth and development (Kouznetsov, Kim & Wright, 2019; Chen, Ding, & Kim, 2010; Mauro, 1995; Treisman, 2000). The controlling bodies (e.g., the IMF, OECD, and World Bank) are concerned about restricting corruption globally by introducing rules and regulations. Thus, academic scholars are also reviewing and analyzing the pathology of corruption in business, banking, economy, and society (Bahoo, Alon, & Floreani, 2020; Fisman & Miguel 2007; Olken 2009).

Different types of corruption are documented in the literature and include public corruption (Pontell & Geis, 2007), private corruption (Argandona, 2003), pervasive corruption, and arbitrary corruption (Rodriguez, Uhlenbruck, & Eden, 2005). Public corruption is further divided into four types: petty vs. grand corruption (Elliott, 1997) and organized vs. unorganized corruption (Shleifer & Vishny, 1993). Corruption can originate from either the "demand-side" (the recipients of the bribe) or the "supply-side" (the givers of the bribe) (Heimann & Boswell, 1998). This double edge effect of corruption on the economy and society makes it a multidisciplinary subject and phenomenon. Thus, corruption as a multidisciplinary subject is examined and analyzed by scholars from different fields and disciplines. There are studies about corruption in many disciplines such as law (Mijares, 2015), finance (Pantzalis, Chul, & Sutton, 2008; Rose-Ackerman, 2002), economics (Brada, Drabek, & Perez, 2012; He, Xie, & Zhu, 2015), accounting (Everett, Neu, & Rahaman, 2007), banking (Srivastav & Hagendorff, 2015; Nguyen, Hagendorff, & Eshraghi, 2017), foreign aid (Charron, 2011; Okada & Samreth, 2012; Mohamed et al., 2015) and international business (Cuervo-Cazurra, 2016; Tanzi & Davoodi, 2000; Duanmu, 2011). Therefore, this dissertation's objective and scope are to explore and investigate the characteristics and association of corruption with firms (including banking), international business, banking, foreign direct investment (FDI), foreign aid, and international trade flows.

1.1 Research Objectives of Four Essays/Papers

This dissertation's common theme is to explore the phenomena of corruption related to firms (including banking), international business, banking, foreign aid, FDI, and international trade flows (imports and exports). Thus, this dissertation's objectives are sub-divided, explored, and investigated into four essays/papers. Table i presents the objective/research questions of each essay/paper.

Table i. Research objectives of all four essays/paper

Essay/paper title	Type/nature	Research questions/objectives
Paper 1: Corruption in International Business: A Review and Research Agenda	Hybrid Literature Review	i. What is the domain of corruption in international business? ii. What are the leading research streams? iii. What are the most influential perspectives in the literature in terms of key journals, articles, methods, data sources, measurements, and theoretical frameworks? iv. How does the literature synthesize corruption in international business? V. What are the future research directions?
Paper 2: Corruption in Banks: A Bibliometric Review and Agenda	Bibliometric Literature Review	i. What are the key research streams in the literature on corruption in banks? ii. What are the influential aspects of literature, such as journals, institutions, countries, authors, articles, and networks among them? iii. What are the relevant future research questions?
Paper 3: Corruption, Foreign Aid and Foreign Direct Investment	Empirical	Is Foreign aid (ODA) has a moderating role on the negative impact of corruption on FDI at two stages: (i) FDI propensity and (ii) FDI flows?
Paper 4: Impact of Corruption on International Trade Flows of OECD Countries: The Moderating Role of Aid and Aid for Trade	Empirical	is Foreign aid (ODA and AfT) moderating the negative impact of trading partner's corruption on OECD countries' international trade flows? *Official Development Assistance (ODA) and Aid for Trade (AfT) *international trade flows include imports and exports

Note: This table presents the key objective/research question of each essay/paper in the dissertation.

The reaming part of the introduction chapter is divided into the following parts. Section 2 explains the overview of corruption literature and the contribution of each paper. Section 3 presents an overview of applicable theories. Section 4 presents the applied methodology in the dissertation. Finally, section 6 summarized four studies.

2. Overview of Corruption Literature and Contributions of Four Essays/Papers

In the essay/paper 01 (*Corruption in International Business: A Review and Research Agenda*), I explored corruption phenomena in international business. Corruption literature related to firms and international business is divided into seven research streams; (1) the legislation against corruption (Pacini et al., 2002; Kaikati et al., 2000), (2) its determinants (Guvenli & Sanyal, 2012; Frei, & Muethel, 2017), (3) combating it (Cuervo-Cazurra, 2008; Rose-Ackerman, 2002), (4) its effect on firms (Uhlenbruck et al., 2006; Roy & Oliver, 2009), (5) the political environment and corruption in international business (Rodriguez et al., 2006; Chen, Ding, & Kim, 2010), (6) corruption as a challenge to existing theories of management in international business (Cuervo-Cazurra, 2016), and (7) corruption's effect on foreign direct investments and trade (Habib & Zurawicki, 2002; Cuervo-Cazurra, 2006). This paper contributes to the literature of corruption related to firms and international business in the following ways: First, it presents a broader definition of corruption and taxonomy of corruption in international business. Second, it identifies quali- quantitatively seven research streams in the literature (see Figure 03 in paper 01). Third this paper contributes in the literature by identifying the influential literature aspects, such as key journals, studies, methods, data sources, measurements, and theoretical frameworks. Forth, its synthesis the literature of corruption in international business (see Figure 04 in paper 01). Finally, the paper posits 14 future research directions (Table 08 in paper 01) and call for establishing anti-corruption architecture, both global and local.

In the second essay/paper (*Corruption in Banks: A Bibliometric Review and Agenda*), I studied corruption phenomena in banking. The banking companies and financial institutions play a key role in hiding illegal money (Srivastav & Hagendorff, 2015). The poor corporate governance (Nguyen, Hagendorff, & Eshraghi, 2017), incompetent bank officials, and banks' involvement in corrupt activities have resulted in the bankruptcy of Bear Stearns, Lehman Brothers, and Washington Mutual (Nguyen, Hagendorff & Eshraghi, 2014). Corruption literature related to banking firms and the sector is dispersed into six strands; (1) the determinants of banks' lending

corruption (Akins, Dou, & Ng, 2017); (2) the impact of corruption on banks' lending and operational risk (Fungáčová, Kochanova, & Weill, 2015); (3) the impact of bank corruption on firms (Qi & Ongena, 2019); (4) the impact of political connections on bank corruption (Chen et al., 2017); (5) the impact of corporate governance and regulations on bank corruption (Beck, Demirgüç-Kunt, & Levine, 2006); and (6) the manipulation of the interbank offered rates (Fouquau & Spieser, 2015). This paper of the dissertation contributes to the literature on corruption in banks in the following ways. First, it identifies six research steams in the literature (see Figure 6 in paper 02). Second, it presents quali- quantitatively the influential aspects of literature, such as key papers, methods, theories, data sources, and journals. Third, it posits 20 future research directions (see Table 6 in paper 02). Finally, it calls for an anti-corruption architecture system and extension in theoretical frameworks by considering corruption as a managerial issue in banks.

The third essay/paper (*Corruption, Foreign Aid and Foreign Direct Investment*) investigates a combined nexus among corruption, foreign aid, and FDI. The literature on corruption, foreign aid, and FDI is divided into three strands: corruption and FDI nexus (Habib & Zurawicki, 2002; Cuervo-Cazurra, 2006; Cuervo-Cazurra, 2008a; Yi et al., 2019); foreign aid and corruption nexus (Efobi, Beecroft, & Asongu, 2019; Mohamed et al., 2015); and foreign aid and FDI (Aluko, 2020; Garriga & Phillips, 2013; Kimura & Todo, 2010). I used neo institutional and transaction costs theory concepts to explain the theoretical background (see Figure 1 in paper 03). I present a framework that foreign aid (as a formal institution) moderates the negative impact of the host country's corruption on FDI at two levels: (i) FDI propensity and (ii) FDI inflows. The FDI propensity is a level when a company considers investing abroad, and FDI inflows are a level when they increase their investments in corrupt countries in which they are already invested. Furthermore, foreign aid is the Official Development Assistance (ODA) to low-income developing countries for economic development (OECD, 2019b).

This study adds to the literature in three ways. First, I contribute to the neo-institutional theory that foreign aid as a formal institution negates corruption's adverse impact as an informal institution on foreign investors. Second, I extend and confirm the integrated model proposing that the asymmetric effect of corruption on FDI depends on two investment phases (FDI propensity and inflows) (Yi et al., 2019). Therefore, international business scholars should consider the phases of FDI when discussing corruption as sand or grease. Third, I introduce a new research line by considering the combined nexus among corruption, foreign aid, and FDI

to explain firms' international business strategies. I argue and confirm that foreign aid moderates the negative effect of corruption on FDI during two investment phases.

In the fourth essay/paper (*Impact of Corruption on International Trade Flows of OECD Countries: The Moderating Role of Aid and Aid for Trade*), I explore the association between corruption, international trade flows, aid (ODA), and aid for trade (AfT). The literature on corruption, trade, and foreign aid divided into the following strands: corruption and trade nexus (D'agostina, Dunne, & Pieroni 2016; De Groot et al., 2004); foreign aid (ODA and AfT), and corruption (Menard & Weill, 2016; Okada & Samreth, 2012); and foreign aid and trade (Martinez-Zarzoso, 2019; Hoekman & Shingal, 2020). Used neo institutional economics and transaction cost theories to explain the theoretical model and argument (see Figure 1 in paper 04). I propose that foreign aid (ODA and AfT) (as a formal institution) moderates the negative effect of trading partner corruption (as an informal institution) on OECD countries' imports and exports.

This paper contributes to the literature in the following ways: I present three main findings. First, trading partner's corruption hurts OECD country's imports and exports. The results confirm that OECD countries follow the guidelines of the Anti-Bribery Convention 1997 and avoid business transactions with corrupt trading partners. Second, bilateral aid (ODA) has no moderating effect on corruption's negative impact on imports of OECD countries. However, only AfT has a moderating effect on OECD's imports. The findings show that the OECD member avoids importing from corrupt trading partners, and even AfT boosts aid recipient countries' trade. Finally, bilateral foreign aid (ODA and AfT) moderates the negative impact of trading partners' corruption on OECD exports. The results confirm the role of foreign aid as formal institutions on OECD member exports. Therefore, foreign aid (as a formal institution) deserves more attention from OCED policymakers and manager of MNEs to boost international trade flows.

3. Applicable Theories

In paper 01, the hybrid review of corruption in international business is conducted. I identified that out of 137 papers between the period of 1992-2019, only 39 (28%) papers have discussed and applied different theories. Of these 39 papers, 17 used institutional theory, 05 applied agency theory, and 03 papers examined the neo-institutional theory. The use of institutional theory is logical because researchers consider corruption a proxy for institutional quality at the country level. Furthermore, only a few papers used the resource-based view, transaction cost

theory, or the resource dependence theory. Other theories that appeared referred in the literature are structuration (Luo, 2006), socialization (Muethel et al., 2011), diversification and portfolios (Jimenez, 2010), stakeholders (Roy & Goll, 2014), property rights (Driffield et al., 2016), self-selection (Gomes et al., 2018), anomie theory (Chen et al., 2015), and legitimacy theory (Blanc et al., 2019).

In paper 02, I review the literature on corruption in banking and banking companies. Through this paper's review and analysis, I identified that banking literature considers corruption a financial issue instead of a managerial problem. Surprisingly, only one journal in the field of international business published on corruption and banks. The citation analysis of these papers shows that corruption is a critical management issue in banks, overlooked by management and business journals. Thus, this study suggests investigating corruption in banks as a managerial phenomenon. In paper 03, I present a framework that corruption, foreign aid, and FDI are associated through the lens of neo institutional and transaction costs theory. I propose that foreign aid (ODA and AfT) as a formal institution moderates the relationship between corruption and FDI and corruption and international trade flows (imports and exports).

3.1 Neo-Institutional Theory

Neo-institutional theory reflects the sociological view of institutions. It suggests that isomorphism, which is a process that forces one unit to resemble other units in the population because they face the same set of environments, plays a role in corruption (Hawley, 1968). Isomorphism consists of three mechanisms: coercive, mimetic, and normative (DiMaggio & Powell, 1983). Currently, the neo-institutional perspective is quite popular in the organizational field and international business. It maintains that firms respond to the cognitive, normative, and regulatory pressures on other firms that are considered legitimate (DiMaggio & Powell, 1983).

Gao (2010) uses the neo-institutional framework to examine the effect of mimetic isomorphism on bribery by firms working in China. He confirms that the firms' bribery behavior reflects the habits of other companies in China. This theory explains the firms' choice about when to engage in corrupt practices themselves and when their subsidiaries do so as well (Lambsdorff, 2013). Cuervo-Cazurra (2016) also recommends extending the neo-institutional theory by considering corruption as a laboratory. Paper 1 discussed, and paper 03 and 04 applied the concepts of neo institutional theory.

3.2 Transaction Costs Theory

The transaction cost theory provides details of a firm's behavior based on the cost of its economic transactions. Bribery and corruption are viewed as an additional cost of operating nationally and internationally because they result in uncertainty in the relationship between the firm and the government (Cuervo-Cazurra, 2016). Meschi (2009) examines corruption's effect on international joint ventures through the transaction cost theory perspective. Paper 01 discussed, and paper 03 and 04 applied the concepts of transaction costs theory.

4. Methodology

This dissertation consists of four papers and used different methods, techniques, and data sources to fulfill each paper's objective. Paper 01 is a hybrid literature review of corruption in international business, consisting of two approaches: (i) systematic review and (ii) co-citation analysis. Paper 02 is a bibliometric review of literature on corruption in banks that consist of the following techniques: (i) citation analysis, (ii) co-citation analysis, (iii) citation network analysis, and (iv) cartography analysis. In paper 03, I used a two-stage Heckman model on the panel sample of corruption, bilateral FDI, and aid from18 European countries to 34 African countries. Finally, paper 04 applied the Fixed-Effect model on the panel sample of corruption, bilateral international trade (imports and exports), and foreign aid (ODA and AfT) from 29 OECD countries to 150 trading partners. Table ii presents the detailed summary and methodology, and variables of all four papers.

4.1 Data Sources and Variables

The first two papers (No. 01 & 02) used previous literature and citation data of articles on the relevant topics. The articles and citation data are collected from ISI Web of Knowledge, which is most commonly used in top review papers (Alon et al., 2018; Bahoo, Alon, & Floreani, 2020a, 2020b; Paltrinieri, Hassan, Bahoo, & Khan, 2019; Iddy & Alon, 2019). For paper 03, the FDI (propensity and inflow) data are collected from United Nations Conference on Trade and Development (UNCTAD) (Barassi & Zhou, 2012; Yi et al., 2019). The foreign aid data (ODA commitment, ODA disbursement, and Aid-TOF) came from the Organization of Economic Cooperation and Development (OECD) (Asiedu, Jin, & Nandwa, 2009; Kimura & Todo, 2010; Selaya & Sunesen, 2012). I used the corruption index score of countries from two sources; (i) International Country Risk Guide (ICRG) (Hayakawa, Kimura, & Lee, 2013), and (ii) Transparency International (TI) (Habib & Zurawicki, 2002; Cuervo-Cazurra, 2006).

Furthermore, in paper 04, the international trade flows (imports and exports) data is collected from the database of International Monetary Funds (IMF) (Jong & Bogmans, 2011). Foreign aid (ODA and AfT) is collected from OECD (Charron, 2011; Isaksson & Kotsadam, 2018). The corruption data came from two sources: (i) ICRG and (ii) World Governance Indicator (WGI) (Hayakawa, Kimura, & Lee, 2013; Osabutey, Okoro, 2015; Hakimi & Hamdi, 2017; Habib & Zurawicki, 2002).

Finally, the data for the control variable for paper 03 and 04 is collected from three primary sources; (i) World Development indicator, (ii) Heritage Foundation, and (iii) CePII database (Mayer & Zignago, 2011; Cali & Velde, 2011; La Porta et al., 1998) (see Table ii).

5. Summary of Studies and Conclusion

This dissertation comprises four related studies, and all of them share a similar structure. I presented these papers at several internal and external seminars and conferences and received constructed feedback to improve quality. At present, two of the four papers have been published in International Business Review (ABS 3) (paper 01) and Finance Research Letters (ABS 2) (paper 02). Paper 03 received a revision from the associate editor of International Business Review (ABS 3), and paper 04 is ready to submit to a good journal. The abstract of all four papers is given below. Moreover, I also present a summary of all four essays/papers in Table iii.

5.1. Essay/paper 1: Corruption in International Business: A Review and Research Agenda

Abstract: We systematically reviewed the literature on corruption in international business (137 articles) for the last 17 years between 1992 and 2019. Additionally, we identified seven research streams in this growing literature: (1) the legislation against corruption, (2) the determinants of corruption, (3) combating corruption, 4) the effect of corruption on firms, (5) the political environment, and corruption, (6) corruption as a challenge to existing theories of management, and (7) the effect of corruption on foreign direct investment and trade. Based on this review, we recommend that strong international laws are needed to minimize the negative impact of corruption on international business. Firms must also consider corruption when formulating strategies to increase operational efficiency and performance. Finally, corruption challenges some key assumptions of existing theories of management. Scholars need to test and expand these existing theories by considering corruption as an important issue in international business.

Table I i. Details of sample, methods, variables, and data sources of all four essays/papers

Paper No	Type	Period of study/sample	Dependent variable/data sources	Independent variable/data sources	Moderating variables/data sources	Control Variables/Data Sources
01	Hybrid Review	i. 137 articles between 1992-2019	i. ISI Web of Knowledge as the leading data sources for papers and citation data.			
02	Bibliometric Review	i. 819 articles between 1969-2019	i. ISI Web of Knowledge as the leading data sources for papers and citation data.			
03	Two-Stage Heckman model on panel data	i. Bilateral data between 18 European countries and 34 African. ii. Period: 2001-2012	i. FDI Propensity ii. FDI Inflow Source: (UNCTAD, 2019)	i. Corruption Source: (ICRG, 2019) ii. Corruption Source: (TI, 2019)	i. ODA-Disbursement ii. ODA-Commitments iii. Aid-Total official inflows Source: (OECD, 2019a)	i. Host country GDP ii. Home country GDP iii. Host Oil rents iv. Host net FDI inflow Source: (WDI, 2019) v. Host openness to trade vi. Host openness to FDI Source: Heritage Foundation (2019) vii. Distance viii. Common language ix. Common colony (Source: CePII by Mayer and Zignago (2011))
04	Fixed-Effect model on panel data	i. Bilateral data between 29 OECD member countries and 150 trading partners. ii. Period: 1995-2019	i. Bilateral exports ii. Bilateral imports Source: (IMF, 2020)	i. Corruption Source: (ICRG, 2020) ii. Corruption Source: (WGI, 2020)	i. ODA-Disbursement ii. ODA-Commitments iii. Aid for Trade Source: (OECD, 2020)	i. Trading partner GDP ii. Trading partner population iii. Trading partner net FDI inflow Source: (WDI, 2020) iv. Trading partner openness to trade v. Trading partner openness to FDI Source: Heritage Foundation (2019) vi. Distance vii. Common language viii. Colonel link ix. Common border (Source: CePII by Mayer and Zignago (2011))

Note: The table presents details of the sample, methods, variables, and data sources for this dissertation.

5.2. Essay/paper 2: Corruption in Banks: A Bibliometric Review and Agenda

Abstract: This paper is a bibliometric review of 819 articles, between 1969 and 2019, on corruption in banks. We identified six research streams: (1) the determinants of banks' lending corruption; (2) the impact of corruption on banks' lending and operational risk; (3) the impact of bank corruption on firms; (4) the impact of political connections on bank corruption; (5) the impact of corporate governance and regulations on bank corruption; and (6) the manipulation of the inter-bank offered rate. We recommend an anti-corruption architecture system and an extension in theoretical frameworks related to corruption in banks. We propose 20 future research questions.

5.3. Essay/paper 3: Corruption, Foreign Aid and Foreign Direct Investment

Abstract: This paper examines the moderating effect of foreign aid on corruption and foreign direct investment (FDI) at two points: when companies consider investing abroad (FDI propensity) and when they increase their investments in corrupt countries in which they are already invested (FDI inflows). Corruption has an asymmetric relationship with FDI. We test an integrated framework in which foreign aid as a formal institution moderates the negative impact of corruption as an informal institution on FDI during these two investment phases. We present three findings. First, corruption has a negative effect on FDI propensity, confirming the "corruption as sand" theory. Second, corruption has a positive effect on FDI inflows, confirming the "corruption as grease" theory. Third, foreign aid negatively moderates the impact of corruption on FDI. This result suggests that for foreign investors, the formal institution of foreign aid negates the adverse outcomes of the informal institution of corruption. Countries that provide foreign aid contingent on reductions in corruption promote future economic activity, mitigate investment risks, and improve the corrupt country's governance and institutional quality. Therefore, foreign aid deserves more attention from companies and governments when formulating strategies and policies related to FDI and controlling corruption.

5.4. Essay/paper 4: Impact of Corruption on International Trade Flows of OECD Countries: The Moderating Role of Aid and Aid for Trade

Abstract: This paper examines the moderating role of bilateral foreign aid (as a formal institution) on the impact of trading partners' corruption (as an informal institution) on OECD countries' international trade flows. This study considers two main categories of bilateral

foreign aid: Official Development Assistance (ODA) and Aid for Trade (AfT) as moderator. We investigate the proposed framework using the gravity model of bilateral trade flows between 29 OECD countries and their 150 trading partners from 1995 to 2018. We present three main findings. First, trading partner's corruption hurts OECD country's imports and exports. The results confirm that OECD countries follow the guidelines of the Anti-Bribery Convention 1997 and avoid business transactions with corrupt trading partners. Second, bilateral aid (ODA) has no moderating effect on corruption's negative impact on imports of OECD countries. However, only AfT has a moderating effect on OECD imports. The findings show that the OECD member avoids importing from corrupt trading partners, and even AfT boosts aid recipient countries' trade. Finally, bilateral foreign aid (ODA and AfT) moderates the negative impact of trading partners' corruption on OECD exports. The results confirm the role of foreign aid as formal institutions on OECD member exports. Therefore, foreign aid (as a formal institution) deserves more attention from OCED policymakers and managers of MNEs to boost international trade flows.

Table iii. Summary of four papers in thesis

Essay/paper title	Type/nature	Research questions/objectives	Theoretical background	Methodology/technique/sample	Findings/conclusion
Paper 1: Corruption in International Business: A Review and Research Agenda	Hybrid Literature Review	i. What is the domain of corruption in international business? ii. What are the leading research streams? iii. What are the most influential perspectives in the literature in terms of key journals, articles, data sources, methods, measurements, and theoretical frameworks? iv. How does the literature synthesize corruption in international business? V. What are the future research directions?	i. Corruption as managerial issues in international business. ii. Discussed multiple theories related to corruption and international business.	i. Hybrid review of literature ii. Systematic review iii. Co-citation analysis iv: Sample 137 paper between 1992-2019 (17 years)	i. Hybrid literature review of 137 articles between 1992-2019 on corruption in international business. ii. Identification of seven research streams: (1) the legislation against corruption, (2) the determinants of corruption, (3) combating corruption, 4) the effect of corruption on firms, (5) the political environment and corruption, (6) corruption as a challenge to existing theories of management, and (7) the effect of corruption on foreign direct investment and trade. iii. Identification and analysis of key aspects of literature. iv. Synthesized the antecedents: (1) country factors, (2) economic factors, (3) cultural factors, (4) firm characteristics. V. Identified the consequences: (1) effect on firms, (2) impact on FDI and trade, (3) political links, and lobbying (4) anti-corruption laws. vi. Calls on the establishment of anti-corruption architecture, both global and local. vi. Identification of 20 future research questions.

Paper	Type	Research Questions	Theory	Methodology	Findings
Paper 2: Corruption in Banks: A Bibliometric Review and Agenda	Bibliometric Literature Review	i. What are the key research streams in the literature on corruption in banks? ii. What are the influential aspects of literature, such as journals, institutions, countries, authors, articles, and networks among them? iii. What are the relevant future research questions?	i. Corruption as managerial phenomena for banking companies ii. Theories on corruption in Banks's literature	i. Bibliometric analysis: citation, co-citation, citation network, and cartography. ii. HistCite and VOSviewer software iii. Sample: 819 articles, between 1969 and 2019 (50 years)	i. Identification of Research streams: (1) determinants, (2) lending and risk, (3) effect on firms, (4) political connections, (5) governance and supervision, (6) IBOR. ii. Identification and analysis of key aspects of literature. iii. Call for establishing an anti-corruption architecture system within banks. iii. Call for extension in theoretical frameworks by considering corruption as a managerial issue in banks. iv. Identification of 20 future research questions.
Paper 3: Corruption, Foreign Aid and Foreign Direct Investment	Empirical	Is Foreign aid (ODA) has a moderating role on the negative impact of corruption on FDI at two stages: (i) FDI propensity, and (ii) FDI flows?	i. Transaction costs and institutional theory ii. Foreign aid as a formal institution.	i. Two-stage Heckman model analysis. ii. Bilateral FDI and Aid from 18 OECD European countries to 34 developing African countries between 2001-2012.	i. The moderating role of foreign aid is analyzed between corruption and FDI at two stages: (i) FDI propensity and (ii) FDI flows. ii. Corruption has a negative effect on FDI propensity, confirming the "corruption as sand" theory. iii. Corruption has a positive impact on FDI flows, confirming the "corruption as grease" theory. iv. Foreign aid (as a formal institution) moderates the negative effects of corruption (as an informal institution) on FDI.

Paper 4: Impact of Corruption on International Trade Flows of OECD Countries: The Moderating Role of Aid and Aid for Trade				
Empirical	Is Foreign aid (ODA and AfT) moderating the negative impact of trading partner's corruption on OECD countries' international trade flows? *Official Development Assistance (ODA) and Aid for Trade (AfT) *international trade flows include imports and exports	i. Neo institutional economics and Transaction costs theory ii. Foreign aid as a formal institution.	i. Fixed-Effect model, panel regression analysis ii. Bilateral international trade and bilateral aid (ODA and AfT) between 29 OECD countries and 150 trading partners between 1995-2018.	i. Foreign aid (as a formal institution) plays a moderating role between corruption (an informal institution) on international trade flows. ii. Trading partner's corruption has a negative impact on OECD countries' trade (imports and exports). OECD members avoid doing business with corrupt partners. iii. Bilateral foreign aid (ODA and AfT) negatively moderate the negative impact of trading partner's corruption on OECD countries' exports. iv. Overall, bilateral aid (ODA and AfT) has not moderated the effect between trading partner's corruption and OECD countries' imports. However, AfT individually is having a moderating impact between corruption and OECD countries' imports, which confirm the objective of AfT.

Table 1 presents a summary of four papers in the dissertation.

15

6. Overview of Four Essays/Papers in Dissertation

The updated status of all four essays/papers in this thesis is given below.

Paper 1: **Corruption in International Business: A Review and Research Agenda**
Status: Published
Authors: Salman Bahoo, Ilan Alon, and Andrea Paltrinieri
Journal: International Business Review (ABS 3, Impact Factor: 3.6)

Bahoo, S., Alon, I., & Paltrinieri, A. (2020). Corruption in International Business: A Review and Research Agenda. *International Business Review*. https://doi.org/10.1016/j.ibusrev.2019.101660. *(Published) (ABS 3 IF 3.6)*
Award: This paper is the most download/popular paper journal of International Business Review.

Paper 2: **Corruption in Banks: A Bibliometric Review and Agenda**
Status: Published
Authors: Salman Bahoo
Journal: Finance Research Letters (ABS 2, Impact Factor: 3.5)

Bahoo, S. (2020). Corruption in Banks: A Bibliometric Review and Agenda. *Finance Research Letters*. https://doi.org/10.1016/j.frl.2020.101499. *(Published) (ABS 2, IF 3.5)*

Award: This paper remains the most download/popular paper of journal: Finance Research Letters.

Paper 3: **Corruption, Foreign Aid and Foreign Direct Investment**
Status: Received revision from associate editor
Authors: Salman Bahoo, Ilan Alon, Josanco Floreani
Journal: International Business Review (revision from the associate editor)

Bahoo, S., Alon, I., & Floreani, J. (2020). Corruption, Foreign Aid, and Foreign Direct Investment. *International Business Review*. (Under review)

Paper 4: **Impact of Corruption on International Trade Flows of OECD Countries: The Moderating Role of Aid and Aid for Trade**
Status: Ready to submit any good journal.
Authors: Salman Bahoo, Josanco Floreani, Ilan Alon

Journal: Submitted to Journal: *World Development* (ABS 2)

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Essay/paper 01

Corruption in International Business: A Review and Research Agenda

Corruption in international business: A review and research agenda[1]

Salman Bahoo[a,b], Ilan Alon[b], Andrea Paltrinieri[a]

[a]*Department of Economics and Statistics, University of Udine*
[b]*School of Business & Law, University of Agder*

Abstract

We systematically reviewed the literature on corruption in international business (137 articles) for the last 17 years between 1992 and 2019. Additionally, we identified seven research streams in this growing literature: (1) the legislation against corruption, (2) the determinants of corruption, (3) combating corruption, 4) the effect of corruption on firms, (5) the political environment and corruption, (6) corruption as a challenge to existing theories of management, and (7) the effect of corruption on foreign direct investment and trade. Based on this review, we recommend that strong international laws are needed to minimize the negative impact of corruption on international business. Firms must also consider corruption when formulating strategies to increase operational efficiency and performance. Finally, corruption challenges some key assumptions of existing theories of management. Scholars need to test and expand these existing theories by considering corruption as an important issue in international business.

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[1]*This paper is the most popular and downloaded article of International Business Review, ABS level 3 journal.*

1.Introduction

Corruption is a multidisciplinary subject that scholars from different fields and disciplines have examined and analyzed. There are studies about corruption in many disciplines such as law (Mijares, 2015), finance (Rose-Ackerman, 2002; Pantzalis et al., 2008), economics (Brada, Drabek, & Perez, 2012; He, Xie, & Zhu, 2015), accounting (Everett, Neu & Rahaman, 2007), and international business (Cuervo-Cazurra, 2016). However, research on corruption in international business was almost non-existent before the globalization of business in the 1980s and 1990s. Globalization prompted international business researchers to investigate and discuss the context, dimensions, models, and theories about corruption as well as its association with foreign direct investment. The first paper on corruption in international business was published in 1992, and a considerable amount of literature has accumulated on the topic during the last 17 years (see Figure 2). However, much of this literature is scattered in numerous areas and directions. Therefore, we maintain that a systematic, in-depth review that summarizes our current knowledge is essential.

In an effort to capture the richness of the literature on corruption in international business, we conducted a systematic, comprehensive literature review for the last 17 years between 1992 and June 2019 using bibliometric citation analysis (Fetscherin, Voss, & Gugler, 2010; White et al., 2016) and content analysis (Paul, Parthasarathy, & Gupta, 2017; Paul & Benito, 2018). This literature review is unique in terms of its objectives and methods, and explores several research questions: (1) What is the domain of corruption in international business? (2) What are the leading research streams? (3) What are the most influential perspectives in the literature in terms of key journals, articles, methods, data sources, measurements, and theoretical frameworks? (4) How does the literature synthesize corruption in international business? (5) What are the future research directions? As a result of our investigation, we identified 7 research streams, 6 areas in which there are gaps in our knowledge, and 14 future research questions.

2. A taxonomy of corruption in international business

2.1 The definition of corruption

Synthesizing the literature, we define corruption as *"an illegal activity (bribery, fraud, financial crime, abuse, falsification, favoritism, nepotism, manipulation, etc.) conducted through misuse of authority or power by public (government) or private (firms) officeholders*

for private gain and benefit, financial or otherwise." Our definition of corruption captures three important characteristics of corruption in the international business context. The first is that the person or firm is conducting some form of illegal activity. The second is that the person or firm is misusing power or authority in violation of existing rules and regulations or acting beyond legal limits. The third characteristic is that the person or firm is using a position of power to reap personal benefits (financial or otherwise) instead of benefiting the nation or the shareholders. Our definition is intended to be inclusive of all forms of corruption, including bribery, fraud, financial crimes, abuse, falsification, favoritism, nepotism, manipulation, and misrepresentation by public or private officials, domestically or internationally, in a social, business, or governmental context.

2.2 Types and causes of corruption

Different types of corruption are documented in the literature and include public corruption (Pontell & Geis, 2007), private corruption (Argandona, 2003), pervasive corruption, and arbitrary corruption (Rodriguez et al., 2005). Public corruption is further divided into four types: petty vs. grand corruption (Elliot, 1997) and organized vs. unorganized corruption (Shleifer & Vishny, 1993).

Public corruption can be defined as an illegal activity conducted by a government official, bureaucrat, or politician that involves the offer or receipt of financial or non-financial benefits by other government or private persons. Public corruption is classified as petty when small gifts or favors are exchanged, and as grand when large sums of money are exchanged. Public corruption is further classified as organized when it is planned, and the individuals or firms involved must pay a lump sum, and as unorganized when it is unplanned, and the individuals or firms involved pay an unspecified sum at every step of the illegal activity. In contrast to public corruption, *private corruption* can be defined as an illegal activity conducted by an employee, manager, or firm that involves the offer or receipt of benefits by other private or government persons. Private corruption is classified as pervasive when the employee or manager can be certain of the necessity for bribery when dealing with government officials, and as arbitrary otherwise (Cuervo-Cazurra, 2016, p. 38).

Corruption can originate from either the "demand side" (the recipients of the bribe) or the "supply side" (the givers of the bribe) (Heimann & Boswell, 1998). Public and private corruption are associated with the demand side and supply side, respectively. In the international business context, Cuervo-Cazurra (2016) suggests that the demand-side

incentives of government officials be distinguished from the supply-side incentives of managers. Everett et al. (2006) maintain that the demand side of corruption is the activity of a few "rotten eggs" that takes place at the individual level due to "resource scarcity." Hamir (1999) shows that private corruption originates at the organizational level when good governance procedures and proper oversight are lacking. Caiden, Dwivedi, and Jabbra (2001a) argue that both public and private corruption are endemic in individualistic societies where people are not exposed to traditional or collectivistic norms and education. Furthermore, they provide evidence that supply-side corruption in foreign investment commonly involves foreign investors who offer bribes to government officials.

3. Methods

To conduct this review, we adopted a unique approach that coupled bibliometric citation analysis (Fetscherin, Voss, & Gugler, 2010; White et al., 2016; Bahoo, Alon, & Paltrinieri, 2019; Iddy & Alon, 2019; Naatu & Alon, 2019) and content analysis (Paul, Parthasarathy, & Gupta, 2017; Paul & Singh, 2017; Paul & Benito, 2018; Rosado-Serrano, Paul, & Dikova, 2018a; Paul & Rosado-Serrano, 2019). Price first championed bibliometric analysis in 1965 to explore the relationships between articles based on the number of citations (Kim & McMillan, 2008), using the article as the basic unit of analysis (Alon et al., 2018). We used HistCite software for the bibliometric analysis. We present the key terms related to the bibliometric analysis in Table 1. Content analysis, which is an accepted methodology in the social sciences (Bahoo et al., 2018; Gaur & Kumar, 2018; Ahmed et al., 2019), classifies textual material by reducing it to more relevant, manageable bits of data (Weber, 1990). Our method, illustrated in Figure 1, involves three steps: sample selection and data collection, analysis, and results (Gomezelj, 2016).

3.1 Sample selection and data collection

Our data collection involves three steps. First, we selected the journals from which to collect articles and citation data on the subject. To avoid selection bias in considering only top-ranked or international business journals (Terjesen, Hessels, & Li, 2013), we searched all of the journals that are listed on the ISI Web of Knowledge (henceforth WoS) database. The WoS consists of five databases covering several disciplines and provides citation data about articles dating back to 1950 (Alon et al., 2018).

The second step was to choose the sample period and the search technique. We searched all of the articles on corruption in international business published between 1950 and June 2019 using

a variety of keywords. By following White et al. (2016), Alon et al. (2018), and Fetscherin, Voss, and Gugler (2010), we used 17 keywords for corruption in combination with words such as *"international business, multinational enterprises, multinational corporations, MNEs, and MNCs"* to cover the complete literature on the topic. Table 1 lists the 17 keywords for corruption and key filters applied to search the literature. These searches yielded 322 articles of potential interest that we examined cursorily to confirm their relevance.

In the third step, two independent researchers read through and critically examined the 322 articles using the following criteria: the article must explicitly state that it is about corruption in international business, and it must address the subject in a non-trivial and non-marginal way. After excluding irrelevant articles, our resulting dataset contained 137 articles. The first paper to address corruption in international business explicitly was published in 1992. As Figure 2 illustrates, there has been continuous growth in the literature.
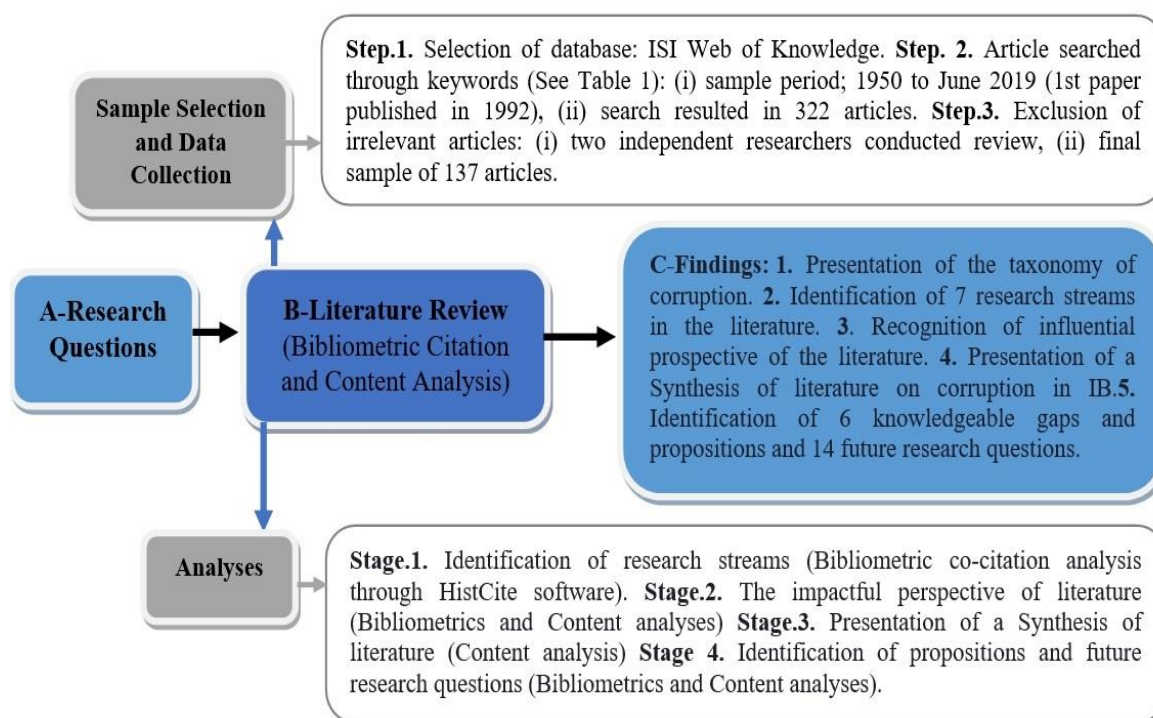
Figure 1: Methodological approach.

Table 1. Key terms and process of selecting the sample

(1)-Key terms entered into the HistCite software ((HistCite - Glossary, 2018)

Term	Sign	Concept/Definition
Total global citation	(TGC)	TGC is the number of times an article is cited by any other articles that are available on the WoS database.
Total local citation	(TLC)	TLC is the number of times an article is cited by the same literature sample (in our case, the 137 articles mentioned above).
Total number of articles published on the subject	(PCIB)	PCIB is the total number of articles published on corruption in international business.

(2)- The process of selecting the sample from the ISI Web of Knowledge

Seventeen keywords for corruption	Search in combination with the following words
(1) Corruption, (2) Bribe, (3) Bribery, (4) Abuse, (5) Crime, (6) Criminal, (7) Degradation, (8) Extortion, (9) Falsification, (10) Fraud, (11) Graft, (12) Manipulating, (13) Manipulation, (14) Misconduct, (15) Misconduct, (16) misrepresentation, and (17) wrongdoing.	International Business, Multinational Enterprise, Multinational Corporation, MNEs, MNCs.

Filters applied to search in the ISI Web of Knowledge

(1) Search filters	Topic (Search keywords in "Title, keywords, and Abstract")
(2) Paper type and language	Articles and English.
(3) Period of search	1950 to June 2019 (1st paper published in 1992 on the subject)

Note: The table lists the terms used to search the database to obtain the sample, and the data entered into the HistCite software.
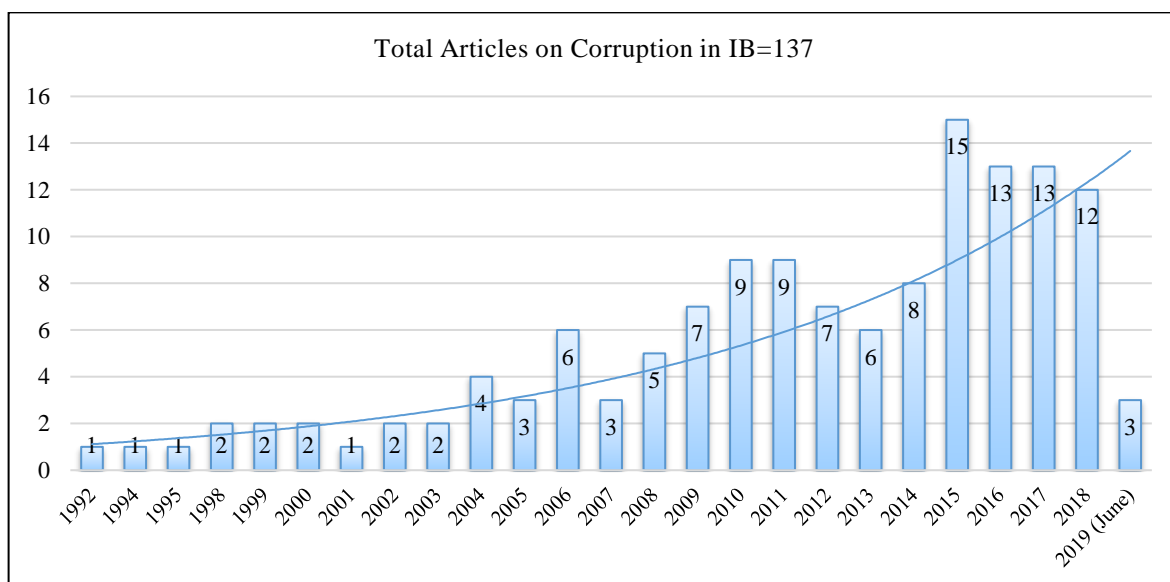
Figure 2: Publications on corruption in IB between 1950 to June 2019[*]. [*]The first article on subject published in 1992.

3.2 Analysis

We utilized various complementary tests such as (1) co-citation analysis, (2) citation analysis, and (3) content analysis during four stages of analysis. In the first stage, we identified research streams in the literature through bibliometric co-citation analysis (Fetscherin, Voss, & Gugler, 2010; Dzikowski, 2018; Øyna & Alon, 2018; Paltrinieri, Hassan, Bahoo, & Khan, 2019). We used the HistCite software program, which accepts citation data as inputs and provides several outputs, for bibliometric analysis. In the second stage, we identified influential aspects of the literature, such as key journals, articles, methods, data sources, measurements of corruption, and theoretical frameworks (Rosado-Serrano, Paul, & Dikova, 2018). In the third stage, we created a taxonomy and synthesis of the literature on corruption in international business (Carvalho et al., 2014). Finally, through our analysis, we presented propositions and questions for future research (Fernando & Serra, 2014; Paul & Benito, 2018).

4. Results

4.1 Co-citation mapping: Research streams in the literature on corruption in international business

Co-citation mapping is the mapping of top-cited papers in relation to the papers that cite them (Alon et al., 2018). Co-citation mapping is conducted through HistCite software. We established the criteria to identify the mapping by following Øyna and Alon (2018), Alon et al. (2018), and Apriliyanti and Alon (2017). However, the criteria depend on the nature of the subject and the growth of the literature. Therefore, we utilized a two-level procedure. First, to be included in the mapping, an article must have a minimum of one total local citation (TLC $\geq$ 1). We identified 37 influential articles as a subsample. We then included all articles that cited these 37 influential articles in the mapping. As a result, we added 39 more papers to the subsample. Thus, the co-citation map has 76 articles, details of which appear in Table A1 (Figure 3).

In Figure 3, articles, represented by nodes, are positioned along the horizontal axis, and years of publication are positioned along the vertical axis. Co-citation linkages are depicted by lines that connect the nodes and citing vs. cited articles are indicated by arrows. The size of the node reflects the magnitude of influence of an article based on total local citations received (TLC). In our citation map, the largest nodes are 20 (i.e., Rodriguez, Uhlenbruck, & Eden, 2005), 21 (Sanyal, 2005), 24 (Uhlenbruck et al., 2006), and 14 (Doh et al., 2003).

31

We then asked two independent researchers to conduct the content analysis of the subsample of 76 articles. The content analysis consists of a critical review of each article's title, author, journal, research question(s), theory, data sources, variables, category, and key findings (Salipante, Notz, & Bigelow, 1982; Ahmed, Bahoo, & Ayub, 2019; Bahoo et al., 2019). As a result of this content analysis, combined with our bibliometric analysis, we were able to identify seven distinctly but interrelated research streams in the literature on corruption in international business: (1) the legislation against it, (2) its determinants, (3) combating it, (4) its effect on firms, (5) the political environment and corruption in international business, (6) corruption as a challenge to existing theories of management in international business, and (7) corruption's effect on foreign direct investments and trade (see Figure 3). We were also able to identify some outliers, namely, articles not cited by other articles but whose content fits in one or more of the research streams (1, 3, 36, 114, 105, 12, 102, 91, 60, and 15). We discuss these articles in their relevant research streams. The numbers refer to Figure 3. However, there are two articles cited by other articles but whose content does not fit in any of the research streams (102 and 115) (Jiménez & Bjorvatn, 2018). Lord and Levi (2017) (no. 102 in Fig. 3) and Karhunen et al. (2018) (no. 115 in Fig. 3) discuss the financial aspects of corruption related to money laundering and corrupt exchanges in Chinese Guanxi and Russian Blat/Svyazi, respectively. We now discuss the seven research streams.

4.1.1 The legislation against corruption in international business

In the 1990s, corruption emerged as a global political issue with dire implications for international business (Kaikati et al., 2000) and remained a persistent problem despite the passage of national and international legislation to control it (Nichols, 2012). Everett et al. (2006) (no. 23 in Fig. 3) argue that existing anti-corruption laws need to be updated by all relevant regulatory bodies. The United States was the first country to pass laws prohibiting corruption by individuals or firms, namely, the 1977 Foreign Corrupt Practices Act (FCPA) (Hotchkiss, 1998) (no. 4 in Fig. 3). However, Klaw (2012) (no. 60 in Fig. 3) maintains that the FCPA is unable to prevent and punish demand-side corruption in business transactions. Kaikati et al. (2000) (no. 9 in Fig. 3) have recommended that the OECD broaden the scope of the FCPA and adopt the amended version in full. In 1997, for the first time, the UN, OECD, and EU convened to discuss passing legislation against bribery and corruption (Mijares, 2015) (no. 80 in Fig. 3). The guidelines of the UN's 1996 declaration, the OECD's 1997 convention, and the EU's 1997 convention were the foundation of current anti-corruption laws (Gantz, 1998). Under these guidelines many developed and emerging economies have established national

anti-corruption laws in international business, including Canada (Mijares, 2015) (no. 80 in Fig. 3), the US (Spalding, 2011) (no. 54 in Fig. 3), and the EU (Pacini et al., 2002) (no. 11 in Fig. 3). Moreover, the OECD convention provides guidelines for member states to establish uniform laws and policies (Pacini et al., 2002). Implementation of the OECD's 1997 convention is compulsory for the 36 signatory countries.

4.1.2 The determinants of corruption in international business

The dominant research stream in the literature is the determinants of corruption in international business. Carmichael (1995) presents three common situations in which a multinational enterprise becomes involved in corruption in a host country. The first is when the company is unable to engage in a new business transaction or complete an existing one without offering a bribe. The second is when the legal institutions in the host country are weak. The third is when the multinational firm is involved in corruption in its home country as well.

One group of studies argues that the determinant of corruption is the firm. Chen, Cullen, and Parboteeah (2015) (no. 82 in Fig. 3) explore the relationship between culture, management, shareholder control, and a firm's propensity to bribe. They find that manager-controlled firms are more likely than shareholder-controlled firms to engage in bribery.

The second group of studies maintains that the determinant of corruption is cultural factors. Based on a survey they conducted, Guvenli and Sanyal (2012) (no. 56 in Fig. 3) explore whether attitudes toward bribery differ between men and women in international business. They found that men are more inclined toward bribery than women. Recently, Tuliao and Chen (2017) (no. 99 in Fig. 3) analyzed gender as a determinant of bribery among CEOs and found that male CEOs are more likely to be involved in corruption. Relatedly, Frei, and Muethel (2017) (no. 103 in Fig. 3) argue that the host country provides a breeding ground for multinational firms for corruption through weak values and laws. Therefore, regional characteristics are significant determinants of corruption (Sanyal & Samanta, 2002) (no. 98 in Fig. 3).

Finally, the third group of studies claims that the determinant of corruption is economic factors. Sanyal (2005) (no. 21 in Fig. 3) suggests that countries with low per capita income and poor income distribution, and those that score high on Hofstede's scales of power distance and masculinity are more inclined toward bribery. Similarly, Sanyal and Guvenli (2009) (no. 33 in Fig. 3) show that firms from countries where the power distance or the long-term orientation is low, and individualism is high are less involved in corruption. Baughn et al. (2010) (no. 41

in Fig. 3) confirm that firms from countries that score high on power distance are more likely to be involved in bribery. Mazar and Aggarwal (2011) (no. 51 in Fig. 3) find that bribery varies with the degree of collectivism. Huang et al. (2015) (no. 81 in Fig. 3) argue that concern about evaluations plays a moderating role between collectivism and corruption: collectivism facilitates corruption in countries where there is little concern about evaluations.

4.1.3 Combating corruption in international business

Laws and regulations against corruption exist but are largely ineffective due to weak judicial systems and the indifference of governments (Cuervo-Cazurra, 2008). The major research question in this stream is related to the practical effectiveness of laws, the adoption of ethical standards, and the implementation of legal frameworks to combat corruption.

Hotchkiss (1998) (no. 4 in Fig. 3) argues that the 1977 Foreign Corrupt Practices Act was considered just a moral obligation until the US government began enforcing it in 1998. Kaczmarek and Newman (2011) show that extraterritorial intervention by US prosecutors to reduce corruption and bribery in target countries is effective. Weber and Getz (2004) (no. 17 in Fig. 3) review the efforts of the EU, US, and OECD to combat corruption. Cuervo-Cazurra (2008) (no. 30 in Fig. 3) advocates an increase in the scope of implementation of existing anti-corruption laws and a reduction in investment in corrupt countries by signatories to the OECD convention.

Rose-Ackerman (2002) (no. 12 in Fig. 3) considers abstention from corruption to be the moral responsibility of the firms and argues that the formation of ethical standards can be helpful in this regard. Kaptein (2004) (no. 15 in Fig. 3) reviews the business codes and standards of 200 of the largest firms and finds that 46% of them have ethical codes against corruption. Osuji (2011) (no. 52 in Fig. 3) highlights the importance of ethical corporate social responsibility (CSR) to combat corruption. Rodriguez, Uhlenbruck, and Eden (2005) (no. 20 in Fig. 3) analyze the effect of public corruption on multinational enterprises in terms of organizational legitimacy, strategic decision-making, and entry choice. Cleveland et al. (2010) (no. 39 in Fig. 3) build a model based on hard and soft laws, and enforcement and compliance mechanisms to assess progress in reducing the level of bribery.

4.1.4 The effect of corruption on firms in international business

How does corruption affect the entry strategy of a company, international joint ventures, and the performance of subsidiaries? Uhlenbruck et al. (2006) (no. 24 in Fig. 3) examine the effect

of corruption on firms' entry strategies in foreign markets and find that firms in the telecommunication industry face pressure to engage in corrupt practices during short-term contracts and joint ventures. Kouznetsov, Dass, and Schmidt (2014) (no. 70 in Fig. 3) confirm the negative effect of weak laws against corruption on small-to-medium-sized foreign manufacturing enterprises in Russia. Roy and Oliver (2009) (no. 37 in Fig. 3) show that the rule of law and control of corruption have a strong impact on the selection of partners for joint ventures. Krueger (2009) (no. 38 in Fig. 3) argues that international firms doing business in China face ethical issues due to the authoritarian government, lack of transparency, and the high level of corruption.

Jensen, Li, and Rahman (2010) (no. 46 in Fig. 3) report that in a political environment where freedom of the press is restricted, firms utilize a no-comment or false disclosure option as a self-protection strategy. Lambsdorff (2013) (no. 65 in Fig. 3) argues that firms should be liable for the illegal activities of the corrupt intermediaries with whom they engage in business transactions. Petrou (2014) (no. 84 in Fig. 3) finds that arbitrary corruption hurts the performance of subsidiaries. Finally, Gomes et al. (2018) (no. 106 in Fig. 3) provide evidence that the self-selection theory works only in environments with a low level of corruption.

4.1.5 The political environment and corruption in international business

This research stream examines the link between corruption, international business, and the political environment in the host and home countries. Rodriguez et al. (2006) (no. 25 in Fig. 3) review papers on the link between politics, corruption, and corporate social responsibility and propose some future research directions. Luo (2006) (no. 26 in Fig. 3) uses a structuration model to show that in a highly corrupt environment, multinational enterprises with a high level of ethics bargain with governments, while less ethical firms use social and political connections to engage in bribe-giving. Chen, Ding, and Kim (2010) (no. 47 in Fig. 3) find that corruption has more influence on the earnings forecasts of highly politically connected firms than less politically connected ones. Boubakri, Mansi, and Saffar (2013) (no. 64 in Fig. 3) document that sound political institutions have a positive effect on corporate risk-taking when government extraction is high, and the level of corruption is low. Yim, Lu, and Choi (2017) (no. 100 in Fig. 3) show that in business transactions, political lobbying has a more positive impact on firm performance than bribery. Brockman, Rui, and Zou (2013) (no. 67 in Fig. 3) find that where there are strong legal institutions or a low level of corruption, politically connected firms' post-merger and acquisition performance is low compared to that of non-political firms. Hung, Kim,

and Li (2018) (no. 112 in Fig. 3) argue that politically non-connected firms issue more management forecasts than politically connected firms.

4.1.6 Corruption as a challenge to existing theories of management in international business

The sixth research stream is relatively new and at the fact-finding and evaluation stage. It often provides counterexamples to many existing theories of management in international business because the unethical, criminal nature of corruption challenges certain assumptions of those theories. For example, Gomes et al. (2018) (no. 106 in fig. 3) find that contrary to the self-selection theory, if the level of corruption is high, productivity does not have a positive effect on the value of exports. After reviewing the literature related to the firm's response to government corruption, Galang (2012) (no. 58 in Fig. 3) summarizes the key theories that support its strategies, such as institutional economics, institutionalism, resource dependence, public choice, social network, and stakeholder theory. Doh et al. (2003) (no. 14 in Fig. 3) explore the impact of government corruption on multinational enterprises. They provide a framework based on two dimensions of government corruption: pervasiveness and arbitrariness. The framework proposes several strategies that firms should adopt to respond to corruption: avoidance, adjusting their entry mode, corporate codes of conduct, training, development and public education, social contributions and public donations, and laws and agreements. Cuervo-Cazurra (2016) (no. 88 in Fig. 3) proposes expanding this approach by considering corruption as a laboratory. He reviews and recommends extensions of several theories: agency theory, transaction cost economics, the resource-based view, resource dependence, and neo-institutional theory. He also argues that the agency and resource-dependence theories are best for explaining the causes of corruption, whereas the resource-based view and neo-institutional theory are more appropriate for exploring the consequences of corruption. Transaction cost theory is best for determining how to control corruption in international business.

4.1.7 The effect of corruption on foreign direct investment and trade in international business

The seventh research stream is also in the fact-finding and evaluation stage. It examines the impact of home- and host-country corruption on foreign direct investment and trade. Habib and Zurawicki (2002) find that corruption has a negative effect on foreign direct investment and operational efficiency. Cuervo-Cazurra (2006) (no. 27 in Fig. 3) shows that firms from

countries with a high level of corruption are more likely to invest in host countries with a high level of corruption than firms from less corrupt countries. Driffield, Jones, and Crotty (2013) (no. 63 in Fig. 3) argue that firms from countries with a high level of corruption, weak legal institutions, and less concern about corporate social responsibility are more likely to invest in host countries with a high level of corruption. Sambharya and Rasheed (2015) argue that if the level of corruption is low, economic and political freedom has a positive effect on foreign direct investment and trade. Jime, Marcelus, Guoliang, and Jiang (2017) (no. 104 in Fig. 3) show that host-country corruption is positively related to a high failure rate of private participation projects. However, Egger and Winner (2005) demonstrate that corruption stimulates foreign direct investment. Driffield et al. (2013) (no. 63 in Fig. 3) argue that firms from corrupt countries are very involved in investment in corrupt locations and countries.
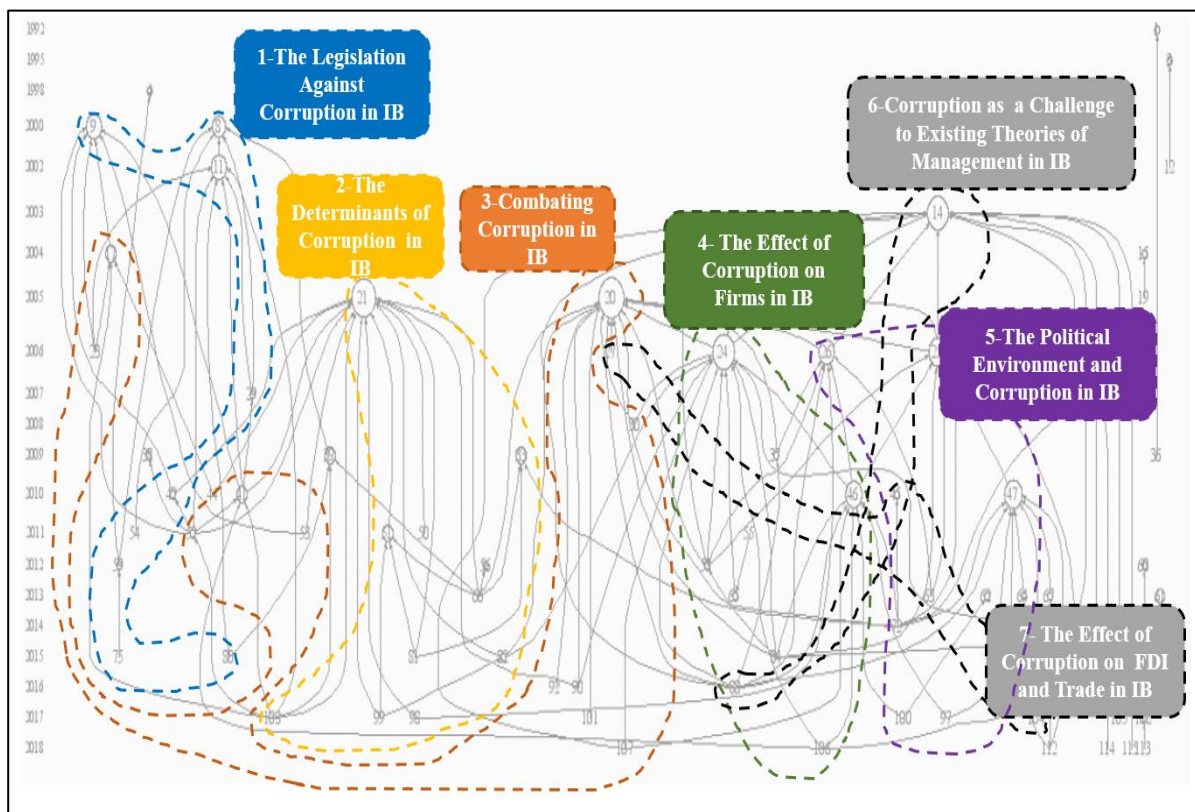
Figure 3. Citation map of the literature on corruption in IB. The HistCite software is used to create map. *76 articles form this map. For details see Table A.1.

4.2 Influential aspects of the literature on corruption in international business

We identified the key journals, studies, methods, data sources, measurements, and theoretical frameworks in the literature (Paul, Parthasarathy, & Gupta, 2017; Alon et al., 2018; Paul & Benito, 2018). In Section 6, we also highlighted the gaps in our knowledge and posited several propositions.

4.2.1 Key journals

The 137 articles in our sample came from 85 journals with 3,059 total global citations. Table 2 lists the 34 leading journals having an ABS ranking (4*, 4, 3, 2, 1). We do not report the remaining 51 journals due to space limitations. Sixty-one percent of our sample accounted for 2,685 of the citations. The largest number of articles was published by the *Journal of Business Ethics (JBE) (18 articles), Journal of International Business Studies (JIBS) (13 articles), International Business Review (IBR) (6 articles), and Journal of World Business (JWB) (6 articles).* This ranking is logical, given that the first journal is the leading publication outlet in the field of ethics and business, and the second is the oldest and most prominent journal. The fact that we found articles on this topic in journals devoted to financing and law confirms its multidisciplinary nature.

Table 2. Key journals in the literature on corruption in IB

#	Journals	No. of articles	Global Citations (TGC)	References
1	Journal of Business Ethics	18	551	Armstrong, 1992; Tsalikis & Latour, 1995; Kaikati et al., 2000; Pacini et al., 2002; Kaptein, 2004; Sanyal, 2005; Everett et al., 2006; Argandona, 2007; Peng & Beamish, 2008; Koerber, 2010; Pedigo & Marshall, 2009; Krueger, 2009; Cleveland et al., 2010; Baughn et al., 2010; Darrough, 2010;Osuji, 2011; Blanc et al., 2019; Horak, 2018.
2	Journal of International Business Studies	13	908	Rodriguez et al., 2006; Luo, 2006; Cuervo-Cazurra, 2006; Cuervo-Cazurra, 2008; Pajunen, 2008; Roy & Oliver, 2009; Franke & Jr Richey, 2010; Jensen et al., 2010; Chen et al., 2010; Muethel et al., 2011; Boubakri et al.,2013; Brockman et al., 2013; Hung et al., 2018.
3	International Business Review	6	73	Jimenez, 2010; Driffield et al., 2013; Roy & Goll, 2014; Yi et al., 2018; Krammer et al., 2018; Guo et al., 2018.
4	Journal of World Business	6	54	Hearn, 2015; Petrou, 2015; Cuervo-Cazurra, 2016; Driffield et al., 2016; Xie et al., 2017; Lewellyn & Rosey, 2017.
5	Business Ethics Quarterly	3	38	Weber & Getz, 2004; Windsor, 2004; Gelbrich et al., 2016
6	Journal of International Management	3	21	Tunyi & Ntim, 2016; Geleilate et al., 2016; Muellner et al., 2017
7	Journal of Management Studies	2	114	Galang, 2012; Keig et al., 2015

8	Asia Pacific Journal of Management	2	29	Meschi, 2009; Lee & Hong, 2012
9	Journal of Business Research	2	4	Czinkota & Skuba, 2014; Hub & Shing, 2016
10	Management and Organization Review	2	2	Chen et al., 2015; Karhunen et al., 2018
11	Management International Review	2	26	Czinkota & Ronkainen, 2009; Jimenez et al., 2017
	Academy of Management Executive	1	104	Doh et al., 2003
12	Academy of Management Journal	1	178	Martin et al, 2019
13	Academy of Management Review	1	200	Rodriguez et al., 2005
14	Administrative Science	1	2	Lord et al., 2018
14	Economica	1	2	Celentani et al., 2004
15	International Marketing Review	1	0	Gomes et al., 2018
16	Journal of Banking & Finance	1	39	Rose-Ackerman, 2002
17	Journal of Comparative Economics	1	18	Perez et al., 2012
18	Journal of Empirical Finance	1	12	Pantzalis et al., 2008
19	Journal of Management Inquiry	1	0	Frei & Muethel, 2017
20	Organization Science	1	150	Uhlenbruck et al., 2006
21	Psychological Science	1	59	Mazar & Aggarwal, 2011
22	Corporate Governance-An International Review	1	51	Bondyet al., 2008
23	Cross Cultural Management-An International Journal	1	0	Sanyal & Guvenli, 2009
24	Baltic Journal of Management	1	3	Kouznetsov et al.,2014
25	European Journal of International Management	1	0	Oesterle & Bjorn, 2017
26	European Journal of Law and Economics	1	10	Lambsdorff, 2013
27	International Journal of Emerging Markets	1	6	Dikova et al., 2016
28	Journal of East-West Business	1	0	Sanyal & Samanta, 2017
29	Management Decision	1	3	Tuliao & Chen, 2017
30	Multinational Business Review	1	2	Yim, Lu, & Choi, 2017
31	Post-Communist Economies	1	6	He, Xie, & Zhu, 2015
32	Review of Development Economics	1	17	Brada, Drabek, & Perez, 2012
33	Western Journal of Legal Studies	1	0	Mijares, 2015
34	Culture and Organization	1	3	Maria, 2010
Total		84	2685	(61% of total 137 articles)

Note: The table shows the list of key journals (ABS ranking 4*, 4, 3, 2 and 1) that published articles in our sample.

4.2.2 Key studies

Through bibliometric citation analysis, we identified key empirical and theoretical papers that had at least 10 global citations (TGC≥ 10). Tables 3 and 4 provide summaries of these empirical and theoretical papers, respectively, through content analysis. Note that in previous literature, empirical papers have received more citations than theoretical ones. The most cited articles refer to the effect of corruption on firms in international business (Uhlenbruck et al., 2006; Pantzalis et al., 2008; Meschi, 2009; Roy & Oliver, 2009; Jensen et al., 2010; Jiménez, 2010; Mazar & Aggarwal, 2011; Muethel et al., 2011; Lee & Hong, 2012; Hearn, 2015; Keig et al., 2015; Tunyi & Ntim, 2016), confirming that the firm is the topic of most interest.

4.2.3 Key methods

The researchers utilized qualitative and quantitative methods in the literature to explore corruption in international business (see Table 5). Out of 137 articles, 35 (40%) used content analysis, 37 (48%) used regression analysis, and 12 (8%) used document analysis. Researchers used content analysis to formulate concepts, theoretical backgrounds, and models related to corruption (Kaptein, 2004; Everett et al., 2006; Rodriguez et al., 2006; Krueger, 2009; Cuervo-Cazurra, 2016). They utilized simple and panel regressions to examine the effect of corruption (Sanyal, 2005; Cuervo-Cazurra, 2006; 2008; Jiménez, 2010; Jiménez, 2011; Boubakri et al., 2013). Finally, they adopted the document analysis approach to critically examine, discuss or comment on the impact of laws on corruption in international business (Kaikati et al., 2000; Pacini et al., 2002; Kaptein, 2004).

Table 3. Key empirical papers in the literature on corruption in IB

Author(s)/ Global Citations*	Purpose	Sample	Dependent Variables	Independent Variables	Findings
Tsalikis and Latour (1995)/29	-How does culture perceive bribery and extortion? -What is the effect of Greek and US culture on bribery and extortion?	-240 American and Greek business students	-Perceived bribery and extortion	-Culture variables	-Greeks receive and offer bribery more than Americans. -Greek culture impacts more perceived bribery and extortion.
Zhu (2017)/11	-What is the effect of MNEs' activity on the level of corruption in developing countries?	-Case study of China	-Corruption	-MNEs' activity	-MNCs' activities contribute to rent creation in developing countries, which leads to a high level of corruption. -In China, the provinces with more MNC activities are strongly associated with more corruption.
Sanyal and Guvenli (2009)/12	-What is the effect of national culture on a firm's propensity to bribe?	-30 countries -Period: 2006	-Bribe payers' index	-Cultural variables	-Firms from countries low on power distance or long-term orientation, or high on individualism, are less likely to engage in bribe giving, but economic development impacts this relationship. -Firms from high-income countries are less likely to give bribes.
Chen et al. (2010)/59	-What is the impact of political connections and corruption of firms on earnings forecasts?	-114 firms in 17 countries -Period: 1997 to 2001	-Forecast accuracy	-Political connection, corruption	-Analysts experience greater difficulty in predicting the earnings forecasts of politically connected firms. -Where the corruption level is high, political connections impact more earnings forecasts.
Muethel et al. (2011)/11	-Employees' prosocial values increase the firm's performance, and corporate corruption is an impediment. -Corporate corruption negatively affects prosocial values.	-19,026 individuals from 17 countries -Cross-country level analysis	-Employees' prosocial values	-Transformational leadership, professional altruism, corporate corruption	-National business ideology has a positive impact on employee's prosocial values. -National business ideology does not affect the control of corporate corruption because employees use rationalization strategies against corruption.
Keig et al. (2015)/29	-What is the effect of formal and informal corruption environment on multinational enterprises' social irresponsibility (CSR)?	-Seven hundred firms from the 2010 KLD social responsibility rating dataset.	-Corporate social irresponsibility (KLD, authors' calculation)	-Formal Corruption Environment (FCE), Informal Corruption Environments (ICE)	-MNEs' corruption environment is comprised of both a formal and informal dimension. -MNEs' portfolio of locations is characterized by higher levels of formal and informal corruption and is associated with higher levels of CSR.

41

Author (Year)/No.	Research question	Sample/Period	Dependent variable	Variables	Findings
Sanyal (2005)/66	-What is the effect of economic and cultural variables on the level of corruption and bribe-taking in international business?	-50 countries	-Corruption perception index	-Economic variables, foreign trade, income distribution, cultural variables (power distance, individualism, masculinity, Uncertainty avoidance)	-Bribe taking is conventional in countries with low per capita income and smaller disparities in income distribution. -The bribe is also associated with high power distance and high masculinity in the country.
Tunyi and Ntim (2016)/11	-Effect of the firm- and country-specific antecedents of African M&As activities. -Location advantage and market development effect on M & A. -National governance quality effect on M & As.	-1490 African firms from 15 countries -Period: 1996 to 2012	-M&A volume	-Country-level determinants; (see Table A1), national governance: measured through corruption (TI), Firm-level determinants (see Table A2)	-Location advantages (market size, human capital, and efficiency opportunities) have a positive effect on M & A volume. -High quality national governance (less corruption) also has a positive effect. -Market development is positively related to M & A volume.
Jensen et al. (2010)/42	-Firm-level survey data, nonresponse, and false response bias related to issues of corruption in international business examined. -During surveys on corruption, most of the firms do not respond to or false responses about corruption.	-44,000 firms in 72 countries Period: 2000 to 2005	-Corruption	-Press freedom (non-response and false response), Political freedom.	-Firms that belong to countries with less press freedom used non-response and false response options during surveys on corruption. -Ignorance of these firms' responses leads to a severe underestimation of corruption levels in political countries.
Lee and Hong (2012)/12	-What is the impact of the level of corruption on MNCs' profitability?	-US MNC in Asia Pacific Region -MNC subsidiaries	-Subsidiaries' profitability	-Level of corruption in the host country and at home, Local Sales Ratio (LOCAL)	-MNC subsidiaries located in countries with a lower level of corruption are more profitable than those in corrupt countries. -MNC subsidiaries with a greater focus on local sales are more profitable than international sales-focused ones when the corruption level is low at home.
Boubakri et al. (2013)/43	-The effect of political institutions and political connections of the firms on their risk-taking.	-26,513 non-financial firms from 77 countries -Period: 1988 to 2008	-Risk-taking variables	-Political constraints index, political connections, corruption, other country-level variables (see Table A1)	-Political institutions affect corporate risk-taking; however, this relationship strength when govt. extraction is higher. -Politically connected firms engage in more risk-taking. -To increase corporate investment, the government should control corruption.

Author (Year)/ Citations	Objective	Sample	Dependent variable	Independent variables	Findings
Jiménez (2010)/37	-Effect of institutions on international diversification. -Relationship between political risk and the scope of internationalization. -Effect of corruption (political risk measured through corruption) on internationalization.	-166 Spanish firms with FDI -119 countries	-Firm's internationalization	-Political risk measured through three indexes: economic freedom, corruption perception index, political constraint index	-Spanish firms partially follow the Uppsala model. Political capabilities play a crucial role in the internationalization strategy. -Firms rely on the corrupt host country in the short and long terms. -Political risk and corruption hurt internationalization.
Kaczmarek and Newman (2011)/24	-What is the effect of US extraterritoriality and national policy on combating corruption globally?	-29 OECD members -Period: 1998 to 2008	-Significant enforcer of bribe cases	-US enforcement (FCPA 1977 law enforcement), international integration: trade openness, outward FDI, total countries enforcement, peer review	-US extraterritoriality and national policy are twenty times more effective in combating corruption. Likely to enforce their national rules. -Domestic laws have an essential influence.
Cuervo-Cazurra (2006)/196	-Impact of corruption at foreign direct investment (FDI).	-Home countries 186 -Host countries 106	-Bilateral FDI inflows	-Host-country corruption, host country with laws against bribery, the home country with high corruption	-Corruption results in less FDI from countries that signed the OECD Convention on combating bribery. Corruption results in more FDI from countries having a high level of corruption.
Driffield et al. (2013)/25	-Effect of a conflict zone on FDI. -Conflict zones are identified based on the level of corruption.	-2,509 firms -Period between; 1997 to 2009	-Conflict zone (level of corruption)	-Profitability, number of subsidiaries, firm's age, ownership, industry, the home country of MNEs dummy	-Identified MNEs investing in low-income countries with weak institutions. -MNEs from weaker institutions (high level of corruption) and fewer concerns about CSR invest in conflict zones. -Firms with concentrated ownership invest in conflict zones.
Perez et al. (2012)/18	-How do illicit money flows influence the volume of FDI to countries that are centers of money laundering, and what is the role of host and home country corruption?	-83 host countries	-FDI location choice	-Corruption, culture, money laundering status of the country, governance measures	-The traditional model of FDI does not work in highly corrupt countries.

43

Author	Objectives	Sample	Dependent variable	Independent variables	Findings
Brockman et al. (2013)/29	-The effect of institutional environments on the performance of mergers & acquisition (M&A) of politically connected firms. -The role of corruption as a proxy of the institutional environment.	-Politically 168 firms and 509 deals from 22 countries -Period: 1993 to 2014	-M & A performance, post M & A	-Country-level institutional variables; the level of corruption, weakness of the legal system	-Political connections play an economically significant role in post-mergers. -The nature of the effect depends on institutional settings. -In countries with reliable legal systems or low levels of corruption, politically connected bidders underperform unconnected bidders by roughly 15% in terms of abnormal stock returns over three years.
Pajunen (2008)/89	-What is the effect of institutions on FDI? -Corruption is an institutional factor.	-Host countries 47 -Period: 1999 to 2003	-FDI attractiveness and unattractiveness of country; Fuzzy-set index	-Institutional factors (sets), non-corrupt, flexible labor regulations, just judicial system, political rights and civil liberties, favorable taxation, political stability, property rights	-Institutional factors have varying influence, and a combination of institutional factors affects FDI in countries. -There are several paths to confirming the effect of institutional factors on FDI. -Corruption and property rights affect FDI in all combinations.
Franke et al. (2010)/41	-There are generalizations issues in findings from a small number of countries as a sample in international business. -The confirmation of the effect of corruption and population density on the economic development of a country.	-Cross-cultural studies in international business between 1995 and 2005	-Economic development	-Level of corruption	-7-10 countries may support generalization in international business but include large samples. Corruption hurts economic development.
Jiménez (2011)/12	-Effect of political risk and corruption on FDI inflows to African and Central Eastern Europe.	-FDI from Spain, France, and Italy -To North African and CEE countries -Period: 1999 to 2006	-Outflows of FDI	-Corruption, Political Constraint Index, Index of Economic Freedom.	-Greater levels of political risk, measured through scales of political discretion, corruption, and economic freedom, attract larger inflows. -As a consequence of political risk, the inflow should fall, but it increases because the firms are searching for a market niche where they can take advantage of their political capabilities.
Meschi (2009)/17	-What is the effect of government corruption on the equity stake of foreign partners in international joint ventures (IJV) formed with local firms?	-Firms in emerging Asian countries -171 European firms -Period: 1996 to 2007	-European firms' partners' stake in IJV-IJV survival/termination variable (Dummy)	-Level of government corruption	-Government corruption is significantly related to the likelihood of foreign partners terminating the IJV. -However, the country's experience of foreign partners moderates the relationship between government corruption and foreign partners in IJVs.

Study	Research question	Sample	Dependent variable	Independent variables	Findings
Cuervo-Cazurra (2008)/70	-What is the effect of laws against combating bribery and corruption?	-Host-countries 106 -Period: 1996 to 2002	-Bilateral FDI inflows	-Investor-host-country implemented OECD anti-bribery convention, Investor-home country is the US, the investor-home country is the US before 1998, the investor-home country is the US after 1998, host-country corruption, host-country corruption.	-Laws should be implemented in multiple countries collectively because investors bypass the laws when others are not following them. -Countries that signed the OECD convention combating bribery and US investors invest less in corrupt countries.
Hearn (2015)/13	-Effect of institutions on the board composition of an international joint venture (IJV) in emerging markets. -Control of corruption represents the institutions.	-200 IPOs in African countries -Period: January 2000 to January 2004	-Likelihood of IPO firm being an IJV	-Ratio of social elites to military ratio, ratio of social elites to government, ratio social of elites to commerce, ratio of social elites to university, interactive variables (see Table 3), institutional environment, institutional quality, control of corruption.	-Social and political legitimacy concerns dominate the external role of boards. -Governmental elites are associated with country-level improvements in corruption control and political stability. -Business elites are only marginally associated with improvements in political stability, regulatory quality, the rule of law, and democratic voice and accountability measure.
Baughn et al. (2010)/32	-What are the determinants of a firm's bribery in international business? -Which domestic and international factors lead to the firm's bribery abroad?	-30 countries	-2006 bribe payer's index	-Level of corruption in each country, OECD convention acceptance by countries, patterns of trade, exports to OECD countries, imports from OECD, overall trade with OECD, GDP per capita, cultural variables	-Firms from countries that are signatories of the OECD anti-bribery convention do not bribe due to the low level of corruption at home while controlling for economic and cultural variables. -Firms from high power distance and less developed countries have a greater propensity to bribe.

Author (year)/cites	Research questions	Sample	Variable	Measure	Findings
Pantzalis et al. (2008)/12	-What is the impact of country-level corruption on US MNCs' value?	-528 MNCs from the US -Period: 1995–1998	-Level of corruption	-Tobin-q, Adjusted Tobin-q, Excess value	-Country-level corruption has a multi-dimensional impact on MNCs' valuation. -Intangible assets (IPRs) have less impact on MNCs' value in corrupt countries due to less protection of IPRs. -MNCs' expansion in corrupt countries negatively impacts their value. -Geographic diversification in corrupt countries significantly increases the firm's value if the MNC has high levels of intangibles, such as technological know-how and marketing expertise.
Uhlenbruck et al. (2006)/150	-What is the effect of corruption on the entry mode strategy of MNEs in emerging economies? -How do firms adjust their strategy for entering foreign markets in corrupt environments? -How do different types of corruption affect firms' choices?	-220 telecommunications development projects in 64 emerging economies -Period: 1996–1998	-Entry mode of MNEs	-Pervasiveness and arbitrariness of corruption, and CPI	-MNEs will respond to pervasive and arbitrary corruption in a host country by selecting particular types of equity and non-equity modes of entry. -Firms adapt to the pressures of corruption via short-term contracting and entry into joint ventures. -Arbitrariness surrounding fraudulent transactions has a significant impact on firms' decisions. -MNEs use non-equity-entry modes or partnering as an adaptive strategy to participate in markets despite the presence of corruption.
Mazar and Aggarwal (2011)/58	-What is the effect of national culture on the propensity to bribe in international business partners? -Why are there national differences related to the propensity to bribe?	-62 countries	-Level of corruption	-National culture	-A significant effect of the degree of collectivism versus individualism present in a national culture on the propensity to offer bribes to international business partners. -The effect was mediated by individuals' sense of responsibility for their actions. -Together, these results suggest that collectivism promotes bribery through less perceived responsibility for one's actions.
Brada, Drabek, and Perez (2012)/17	-Effect of home and host country corruption on FDI.	-84 host countries -Period: 2000–2003	-FDI outflow	-Home country corruption, -Host country corruption.	-The model separates the effects of corruption on FDI location decisions and the amount invested. -A linear and negative relationship is found between host-country corruption and the likelihood of MNCs locating in that country. -The relationship between home-country corruption and FDI is non-monotonic, with an inverse U shape were both high and low levels of corruption in the home country, reducing the probability of outward FDI flows. -If FDI is undertaken in a host country, the volume of FDI is affected by home-country but not by host-country corruption.

Author (year)/N	Research question	Sample	Variables	Findings
Roy and Oliver (2009)/49	-What is the effect of the host-country legal environment (control of corruption and the rule of law) on international joint ventures (IJVs)?	-11 corporate executives involved in 169 IJVs -Canadian MNEs	-Partner selection criteria, partner-related criteria, task-related criteria, appropriation concerns, coordination cost concerns. -Host country's legal environment, control of corruption, the rule of law	-The legal and institutional environment of the country-control of corruption and the rule of law are significant factors for Canadian MNEs in selecting a partner for IJVs.
Luo (2006)/ 98	-Evaluate the way MNEs manage political and social forces in emerging markets. Combine three lenses: political behavior, corporate social responsibility (CSR), and corruption.	-126 MNEs operating in China	-Politics (assertiveness, cooperativeness social, connections, arm's-length bargaining), CSR (ethical codes, org. credibility, philanthropic contribution) (survey) -Perceived corruption	-If perceived corruption is high, MNEs with higher CSR use arm's length bargaining. Moreover, MNEs with lower CSR use social connections to deal with governments.

Notes: Table 3 shows the summary of key empirical papers that have TGC greater than or equal to 10[*].

ble 5. Key methods used in the literature on corruption in IB

Type	Method	No. of articles*	References
Qualitative Analysis	Content Analysis	35	Rodriguez et al., 2006; Kaptein, 2004; Everett et al., 2006; Krueger, 2009; Blanc et al., 2019; Cuervo-Cazurra, 2016; Xie et al., 2017; Weber & Getz, 2004; Windsor, 2004; Galang, 2012; Celentani et al., 2004; Frei & Muethel, 2017; Nichols, 2012; Foster, 2015; Doh et al.,2003; Marat, 2015; Funk & Treviño, 2017; Maria, 2010; Lord & Levi, 2017; Lambsdorff, 2013; Hefendehl, 2010; Fard & Hassanpour, 2016; Hotchkiss, 1998; Mijares, 2015; Armstrong, 1992; Pedigo & Marshall, 2009; Cleveland et al., 2010; Darrough, 2010; Osuji, 2011; Blanc et al., 2019; Guvenli & Sanyal, 2012; Kouznetsov et al.,2014; Bondy et al, 2008; Kaptein, 2004; Horak, 2018.
	Document Analysis	12	Kaikati et al., 2000; Pacini et al., 2002; Kaptein, 2004; Everett et al., 2006; Argandona, 2007; Nichols, 2012; George et al.,1998; Foster, 2015; Wenhao & Ahmad, 2011; Klaw, 2012; Laudone, 2016; Spalding, 2011.
	Contextual Analysis	5	Czinkota & Skuba, 2014; Keig et al., 2018; Rodriguez et al., 2005; Doh et al.,2003.
	Case Study	2	Blanc et al., 2019; Lambsdorff, 2013; Guo et al., 2018
Quantitative Analysis	Regression (OLS)	20	Jensen et al., 2010; Chen et al., 2010; Hung et al., 2018; Sanyal, 2005; Peng & Beamish, 2008; Baughn et al., 2010; Jimenez, 2010; Roy & Goll, 2014; Driffield et al., 2013; Gelbrich et al., 2016; Muellner et al., 2017; Meschi, 2009; Lee & Hong, 2012; Rose-ackerman, 2002; Mazar & Aggarwal, 2011; Zhu, 2017; Gao, 2011; Sanyal & Guvenli, 2009; Oesterle & Bjorn, 2017.
	Panel Regression	17	Boubakri et al.,2013; Brockman et al., 2013; Hung et al., 2018; Peng & Beamish, 2008; Driffield et al., 2013; Pantzalis et al., 2008; Uhlenbruck et al., 2006; Mornah & Macdermott, 2018; Sambharya & Rasheed, 2015; Jiménez, 2011; Lopatta et al, 2017; Mukherjee, 2018; Dikova et al., 2016; Kaczmarek & Newman, 2011; Sanyal & Samanta, 2017; Yim, Lu, & Choi, 2017; Cuervo-Cazurra, 2006; Cuervo-Cazurra, 2008.
	Probit Model	07	Hung et al., 2018; Driffield et al., 2013; Krammer et al., 2018; Perez et al., 2012; He, Xie, & Zhu, 2015; Brada, Drabek, & Perez, 2012.
	Logistic regression	1	Hearn, 2015.
	Multinomial Logit Regressions	3	Driffield et al., 2016; Tunyi & Ntim, 2016; Gomes et al., 2018; Jimenez et al., 2017
	Binomial Regression	1	Keig et al., 2015
	Tobit Model	1	He, Xie, & Zhu, 2015
	Hierarchical Regression Analysis	7	Roy & Goll, 2014; Petrou, 2015; Lewellyn & Rosey, 2017; Chen et al., 2015; Muethel et al., 2011; Lewellyn & Rosey, 2017; Tuliao & Chen, 2017
	Structural Equation Modeling	2	Luo, 2006; Roy & Oliver, 2009
	Fuzzy-set Analysis	1	Pajunen, 2008
	Bayesian Analysis	1	Franke et al., 2010/41
	Propensity Score Matching	1	Brockman et al., 2013
	ANOVA	1	Tsalikis & Latour, 1995
	ANCOVA	1	Wu & Huang, 2013
	MANOVA	1	Huang et al.,2015
	Meta-Analysis	1	Geleilate et al., 2016
	Delphi Method	1	Czinkota & Ronkainen, 2019

4.2.4 Data sources and measurement of corruption

Table 6 illustrates that 36 articles used a corruption index, which is a country-level variable, to measure corruption in international business. Of these 36 articles, 22 used the indexes of Transparency International, 9 used World Governance indicators, and 5 used The International Country Risk Guide as a proxy for corruption in international business. Very few researchers used the corruption indexes of Germany exporters (Hung et al., 2018), the GLOBAL survey (Mazar & Aggarwal, 2011), or the World Competitiveness Yearbook (Pajunen, 2008). Furthermore, Tuliao and Chen (2017) and Yim, Lu, and Choi (2017) used bribery surveys of firms from the World Bank as a proxy for corruption. Six articles utilized questionnaires or interviews to measure corruption at the firm level (Luo, 2006; Roy & Oliver, 2009; Gao, 2011; Muethel et al., 2011; Petrou, 2015; Zhu, 2017).

Table 6. Data sources and measurement of corruption in the literature

Measurement of Corruption	Date Source	Articles	Reference
Corruption Variable	Questionnaire/Interview/Survey	6	Luo, 2006; Roy & Oliver, 2009; Muethel et al., 2011; Petrou, 2015; Zhu, 2017; Gao, 2011.
Corruption Perception Index	Transparency International	22	Cuervo-Cazurra, 2008; Franke et al., 2010; Chen et al., 2010; Brockman et al., 2013; Sanyal, 2005; Peng & Beamish, 2008; Roy & Goll, 2014; Jimenez, 2010; Baughn et al., 2010; Gelbrich et al., 2016; Tunyi & Ntim, 2016; Muellner et al., 2017; Keig et al., 2015; Meschi, 2009; Gomes et al., 2018; Uhlenbruck et al., 2006; Mornah & Macdermott, 2018; Jiménez, 2011; Oesterle & Bjorn, 2017; Kaczmarek & Newman, 2011; Sanyal & Samanta, 2017; Brada, Drabek, & Perez, 2012.
Corruption Index	World Governance indicator	9	Jensen et al., 2010; Muethel et al., 2011; Lewellyn & Rosey, 2017; Tunyi & Ntim, 2016; Keig et al., 2015; Lee & Hong, 2012; Jimenez et al., 2017; Mornah & Macdermott, 2018; Cuervo-Cazurra, 2006.
Corruption Index	The International Country Risk Guide	5	Boubakri et al.,2013; Driffield et al., 2013; Driffield et al., 2016; Meschi, 2009; Mukherjee, 2018
Corruption Index	Corruption (German exporters index-Neumann, 1994)	1	Hung et al., 2018
Pervasiveness and Arbitrariness of Corruption	World Business Environment Survey	1	Uhlenbruck et al., 2006
Corruption Index	GLOBE-Survey	1	Mazar & Aggarwal, 2011

49

Bribery Survey of Firms	Productivity and Investment Climate Survey (PICS) of the World Bank Group	1	Tuliao & Chen, 2017
Bribery Survey of Firms	World Bank's Enterprise Survey	1	Yim, Lu, & Choi, 2017
Corruption Index	World Competitiveness Yearbook	1	Pajunen, 2008

Note: The table lists the data sources and measurements of corruption in the international business literature.

4.2.5 Theoretical underpinnings

Table 7 illustrates that we identified several theoretical frameworks in the literature. Of the 137 papers, only 39 (29%) examined and discussed any management theory. Of these 39 papers, 17 used institutional theory, 5 applied agency theory, and 3 papers examined the neo-institutional theory. The use of institutional theory is logical because researchers consider corruption a proxy for institutional quality at the country level. Furthermore, only a few papers used the resource-based view, transaction cost theory, or the resource dependence theory. Other theories that appeared referred to structuration (Luo, 2006), socialization (Muethel et al., 2011), diversification and portfolios (Jimenez, 2010), stakeholders (Roy & Goll, 2014), property rights (Driffield et al., 2016), self-selection (Gomes et al., 2018), anomie theory (Chen et al., 2015), and legitimacy theory (Blanc et al., 2019). Most papers did not specifically mention the theoretical framework the authors utilized. They may have failed to do so because corruption is a country-level indicator, and the measurement of corruption at the firm level is quite difficult and un-standardized. We also discuss the key theories in the literature in the next section.

Table 7. Theories used in the literature on corruption in IB

Theory	Articles	References
Institutional Theory	17	Roy & Oliver, 2009; Baughn et al., 2010; Roy & Goll, 2014; Yi et al., 2018; Krammer et al., 2018; Hearn, 2015; Lewellyn & Rosey, 2017; Tunyi & Ntim, 2016; Muellner et al., 2017; Keig et al., 2015; Lee & Hong, 2012; Rodriguez et al., 2005; Uhlenbruck et al., 2006; Oesterle & Bjorn, 2017; Dikova et al., 2016; Pantzalis et al., 2008.
Agency Theory	5	Boubakri et al., 2013; Yi et al., 2018; Cuervo-Cazurra, 2016; Chen et al., 2015; Tuliao & Chen, 2017.
Neo-Institutional Theory	3	Cuervo-Cazurra, 2016; Lambsdorff, 2013; Gao, 2011
Resource-Based View	2	Cuervo-Cazurra, 2016; Yim, Lu, & Choi, 2017
Transaction Cost Theory	2	Cuervo-Cazurra, 2016; Meschi, 2009
Resource Dependence Theory	2	Petrou, 2015; Cuervo-Cazurra, 2016
Theory of Structuration	1	Luo, 2006
Socialization Theory	1	Muethel et al., 2011
Legitimacy Theory	1	Blanc et al., 2019
Diversification and Portfolio Theory	1	Jimenez, 2010

Stakeholder Theory	1	Roy & Goll, 2014
Property Rights Theory	1	Driffield et al., 2016
Anomie Theory	1	Chen et al., 2015
Self-Selection Theory	1	Gomes et al., 2018

Note: The table lists the key theories used or tested by scholars in the literature on corruption in international business.

4.2.5.1 Institutional theory

The institutional theory deals with regulatory structures, government laws and regulations, courts, and professions (Oliver, 1991). These institutions establish the social, political, and legal norms that affect decision-making and actions (Meyer & Rowan, 1977). The institutional theory posits that there is social and legal pressure on firms to adopt the beliefs, values, and norms of their environment (Roy & Goll, 2014).

This theory also predicts the firm's behavior. The institutional framework affects the strategies of firms and grants them legitimacy (North, 1990; Scott, 1995). The power of the host country's institutional environment in terms of its control of corruption and the rule of law shapes and affects the firms' entry strategy (Uhlenbruck et al., 2006), decisions about engaging in international joint ventures (IJVs) (Roy & Oliver, 2009), the composition of the board of these joint ventures (Hearn, 2015), the appointment of national managers (Muellner, Klopf, & Nell, 2017), and bribery behavior (Baughn et al., 2010; Yi et al., 2018) in cross-national transactions. The institutional environment of host and home countries, of which the level of corruption is one factor, affects a firm's export performance (Krammer et al., 2018), management of earnings (Lewellyn & Rosey, 2017), merger and acquisition activities (Tunyi & Ntim, 2016), and location of foreign direct investment (Dikova et al., 2016).

Furthermore, the institutional theory raises concerns about how a corrupt institutional environment influences corporate social responsibility (Keig, Brouthers, & Marshall, 2015), profitability (Lee & Hong, 2012), values (Pantzalis et al., 2008), organizational legitimacy and strategic decision making (Rodriguez et al., 2005). This theory holds that the quality of institutions defines the level of corruption in the host and home country, which influences the nations and firms. The literature suggests that by improving the quality of institutions, the adverse effects of corruption can be minimized in international business.

4.2.5.2 Neo-institutional theory

Neo-institutional theory reflects the sociological view of institutions. It suggests that isomorphism, which is a process that forces one unit to resemble other units in the population because they face the same set of environments, plays a role in corruption (Hawley, 1968).

Isomorphism consists of three mechanisms: coercive, mimetic, and normative (DiMaggio & Powell, 1983). Currently, the neo-institutional perspective is quite popular in the organizational field and international business. It maintains that firms respond to the cognitive, normative, and regulatory pressures on other firms that are considered legitimate (DiMaggio & Powell, 1991).

Gao (2010) uses the neo-institutional framework to examine the effect of mimetic isomorphism on bribery by firms working in China. He confirms that the firms' bribery behavior reflects the habits of other companies in China. This theory explains the firms' choice about when to engage in corrupt practices themselves and when their subsidiaries do so as well (Lambsdorff, 2013). Cuervo-Cazurra (2016) also recommends extending the neo-institutional theory by considering corruption as a laboratory.

4.2.5.3 Agency theory

Jensen and Meckling (1976) developed agency theory, which maintains that managers try to divert corporate resources to maximize private benefits at the cost of shareholders because incentives are lacking. Agency theory explains that this behavior creates investment risks and produces the agency problem in international business. In addition to agency problems, Stulz (2005) argues that there is a potential link between political institutions and the managers' choice of investment risks. Political institutions are managed by governments, which play an important role in the firm managers' decision making through the strict rule of law, over-regulation, and level of corruption. Political institutions and the level of corruption affect corporate risk-taking decisions, and politically connected firms take more risks, which leads to agency problems (Boubakri et al., 2013). This theory explains the potential conflict between the firm's headquarters and its foreign subsidiaries in cases of offering bribes due to political connections (Yi, Teng, & Meng, 2017). Firms have two options: lobbying or bribery in the host country. The effect of lobbying in the host country is more positive than offering bribes (Yi et al., 2017). Agency theory suggests that manager-controlled firms offer more bribes than shareholder-controlled firms due to conflicting goals, a theory that Chen et al. (2015) confirmed empirically. There are associations between bribery and the corrupt behavior of firms and the characteristics of boards of governance such as CEO duality (Das-Gupta & Wu, 2008), manager, or shareholder-controlled firms (Chen et al., 2015), and gender (Tuliao & Chen, 2017). Studies have also used agency theory to analyze corruption at the country level.

4.2.5.4. Other theories

The resource-based view explores how a firm can create resources distinct from those of its competitors to satisfy customers or how firms can use competitive and institutional resources when operating aboard (Cuervo-Cazurra, 2016). Hillman (2005) argues that firms can create relationships with foreign government officials or politicians as their resource and can use them instead of bribes. Yim, Lu, and Choi (2017) confirm that lobbying adds more value to a firm than bribery.

The transaction cost theory provides details of a firm's behavior based on the cost of its economic transactions. Bribery and corruption are viewed as an additional cost of operating nationally and internationally because they result in uncertainty in the relationship between the firm and the government (Cuervo-Cazurra, 2016). Meschi (2009) examines the effect of corruption on international joint ventures through the transaction cost theory perspective. He documents that corruption adds more costs to such ventures, but the experience of foreign partners in the country moderates this relationship.

Resource dependence theory provides a benchmark to explain the power relationship between two parties in which one party can exercise power over the other (Pfeffer & Salancik, 1978). One study utilizes this theory to analyze how firm managers in host countries gain the support of government officials by providing them with bribes because a foreign company has less power than local firms (Cuervo-Cazurra, 2016). Petrou (2015) uses the resource dependence viewpoint to document that the arbitrariness of corruption in a host country has a negative impact on a subsidiary's performance.

The greatest limitation of most of the theories used to investigate corruption in international business is the lack of clarity in explaining the multidisciplinary and complex dynamics of corruption at the country and firm levels. Therefore, we call for the extension of these theories by considering corruption as a major factor.

A.1.Controls

A.1.Controls (Controls):

Firm- level Antecedents (Controls):
- Size, age, sales, volume, asset growth (Luo, 2006).
- Industry, international experience, ownership (Roy & Oliver, 2009).
- Leverage, loss frequency, length of operating cycle (Chen et al., 2010).
- Return on assets, market to book ratio, earning to volatility, accounting standards (Hung et al., 2018).
- Number of subsidiaries, profitability (Driffield et al., 2013).

C.1. Consequences– Politics and Corruption

Stream 5: *The Political Environment and Corruption in IB*
- Political connected firms-low level of ethics engages in bribe-giving (Luo, 2006).
- Political lobbying has positive than corruption-firm performance (Yim, Lu, & Choi, 2017).
- Political connected firms-low level of mergers & acquision (M &A) performance if corruption is low (Brockman, Rui, and Zou, 2013).
- Political connected firms-issue fewer earnings forecasts in corrupt countries (Hung, Kim, & Li, 2018).

D. Combating Corruption

Stream 3: Combating Corruption in IB
- Foreign Corrupt Practices Act of 1977 (Hotchkiss,1998).
- US extraterritorial intervention against corruption (Kaczmarek & Newman, 2011).
- OECD convention (Cuervo-Cazurra, 2008).
- Ethical standards, business codes (Rose-Ackeman, 2002; Kaptein, 2004).

C. Consequences

Firm/MNEs Level Factors:

Stream 4: *The Effect of Corruption on Firm in IB*
- International Joint Ventures (IJV) (Roy & Oliver, 2009; Heam, 2015; Meschi, 2009).
- Earning forecast and management (Chen et al., 2010; Levellyn & Rosey, 2017).
- Prosocial vahes of the firm (Muethel et al., 2011).
- Manager voluntary disclosure (Hung et al., 2018).
- Export performance of MNEs (Krammer et al., 2018).
- Foreign affiliates/subsidiary performance (Petrou, 2015; Muellner et al., 2017).
- Foreign affiliates ownership (Driffield et al., 2016).
- MNEs activities volume and performance (Tunyi & Ntim, 2016; Geleilate et al., 2016; Lee & Hong, 2012).
- Multinational enterprise social irresponsibility (CSiR) (Keig et al., 2015)
- Entry mode strategy of MNEs (Uhlenbruck et al., 2006).
- SMEs performance (Kouznetsov, Dass, & Schmidt, 2014).
- Corporate Risk -Taking (Boubakri et al.,2013).
- Performance of mergers & acquision (M&A) (Brockman et al., 2013).
- Organizational legitimacy and decision making (Rodriguez et al., 2005).

B. Corruption (Concepts)

Nature of Corruption:

Demand-Side of Corruption:
- financial and non-financial benefits to Public & Private Officials (Cuervo-Cazurra, 2016).

2. Supply-Side of Corruption:
- financial and non-financial benefits to individuals and firms/MNEs (Cuervo-Cazurra, 2016).

Categories of Corruption:
- **Public Corruption** Organized corruption & Unorganized corruption (Shleifer & Vishny, 1993).
- Petty corruption & Grand corruption (Elliot, 1997).
- Pervasive corruption & Arbitrary corruption (Rodriguez et al., 2005).
- **Private Corruption** (Argandona, 2003).

Measurement of Corruption

Primary Sources
- Survey or structured interviews (Petrou, 2015).

Secondary Sources
- Corruption perception index by Transparency international (Cuervo-Cazurra, 2008).
- World Bank Governance index (Jensen et al., 2010).
- The International Country Risk Guide (Boubakri et al.,2013).

A.2. Extension in Concepts of Corruption

Stream 6: *Corruption as a challenge to existing theories of management in IB*
- Extension of agency, transaction cost economics, resource dependence, resource-based view, and neo-institutional theories by considering corruption as a laboratory (Cuervo-Cazurra, 2016).

A. Antecedents

Country (macro) Level-Host and Home

Country Factors:

Stream 1: *The Legislation against corruption in IB*
- Lack of international laws (Nichols, 2012; Everett et al., 2006).
- Non-enforcement of OECD convention and FCPA law in non-member countries (Klaw, 2012; Kaikati et al. 2000).

Stream 2: *The determinants of corruption in IB*

Economic Factors:
- Higher taxes, Customs duties (Sanyal, 2005).
- income inequality (Chen et al., 2015).
- Financial Constraints (Lopatta et al., 2017).
- Economic freedom index (Sanyal & Samanta, 2017).

Cultural Factors:
- Power distance, individualism, masculinity, Uncertainty avoidance by Hofstede (Sanyal, 2009; Baughn et al., 2010)
- Individual culture, performance-based culture (PBC), socially supportive culture (SSC) and gender egalitarianism culture (GEC) (Roy & Goll, 2014).
- Culture discrepancy (Gelbrich et al., 2016)

Other Factors:
- Coercive isomorphism: (government intervention and government efficiency) and mimetic isomorphism (Other firms' bribery behaviors) (Gao, 2011).
- Corporate social responsibility index (Lopatta et al., 2017).
- Democracy index (Sanyal & Samanta, 2017).
- Human development index (Sanyal & Samanta, 2017).
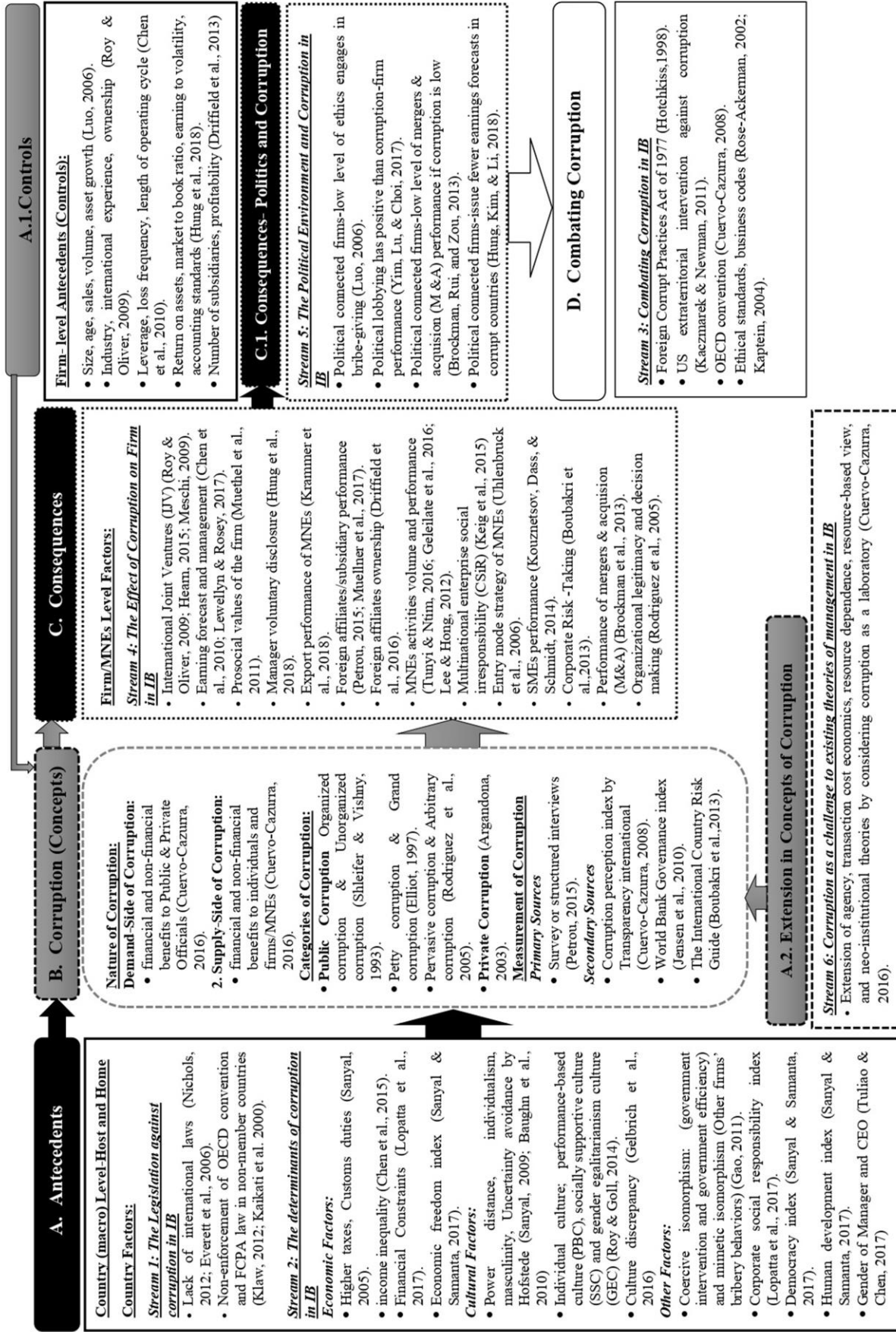- Gender of Manager and CEO (Tuliao & Chen, 2017).

Figure 4: A synthesis of the literature on corruption in IB.

5. A Synthesis of Corruption in International Business

In the 1990s, corruption emerged as one of the most serious global political issues affecting international business (Mijares, 2015). To this day, corruption and bribery remain persistent and perplexing problems in investment and trading (Nichols, 2012). Therefore, one of the central questions is: what are the antecedents and consequences of corruption in international business? Figure 4 illustrates our synthesis of the literature that we used to explore the answer to this question. We utilized our seven identified research streams to synthesize the antecedents and consequences of corruption in the international business literature.

5.1 Country (macro)level antecedents: Host and home country

Country-level antecedents play a crucial role as determinants of corruption in home and host countries. The key factors identified in research stream one (legislation against corruption in international business) are the lack of international laws (Everett et al., 2006; Nichols, 2012) and non-enforcement of the OECD convention and FCPA in non-member countries (Kaikati et al., 2000; Klaw, 2012). Therefore, it is essential to increase the bilateral implementation of anti-corruption laws through groups such as the WTO and the World Bank (Cuervo-Cazurra, 2008).

In research stream two, scholars identified three factors that influence corruption: economic factors (Sanyal, 2005; Chen et al., 2015; Lopatta et al, 2017; Sanyal & Samanta, 2017), cultural factors (Roy & Goll, 2014), and other factors (Gao, 2011; Sanyal & Samanta, 2017). Sanyal (2009) and Baughn et al. (2010) document the significant effect of economic and national cultural factors on the likelihood of individuals and firms to engage in bribery (see also Hofstede, 1980). Gelbrich et al. (2016) identify and resolve some discrepancies in the measurement of cultural factors and confirm them as determinants of corruption. Sanyal (2005), Sanyal and Guvenli (2009), and Frei and Muethel (2017) show that national cultural and economic factors lead to corrupt activities in both home and host countries.

5.2 Corruption

Country-level antecedents lead to a higher level of corruption. Corruption has two main causes: the demand side and the supply side (Everett, Nuh, & Rahaman, 2006). Corruption is also

divided into several types, such as public (Pontell & Geis, 2007), private (Argandon, 2003), pervasive, and arbitrary (Rodriguez et al., 2005). Public corruption is further divided into four subtypes: petty and grand (Elliot, 1997) and organized and unorganized (Shleifer & Vishny, 1993). Analysts and researchers measure corruption through structured interviews, surveys, and indexes such as those of the World Bank and Transparency International.

5.2.1 Controlling for firm-level antecedents

Scholars have explored the country-level antecedents of the firm-level consequences of corruption by controlling for firm-level antecedents (see Figure 4). Their goal is to determine how corruption impacts the firm, which is the main subject of discussion in international business. Therefore, the scholars control for multiple firm-level factors such as size, age, sales, volume, asset growth, industry, international experience, ownership, loss frequency, leverage, length of operating cycle, earnings volatility, profitability, and number of subsidiaries (Luo, 2006; Roy & Oliver, 2009; Chen et al., 2010; Driffield et al., 2013; Hung et al., 2018).

5.2.2 Extending the concepts of corruption

Cuervo-Cazurra (2016) proposes extending the five important firm theories—agency, transaction cost economics, the resource-based view, resource dependence, and the neo-institutional theory—by considering corruption as a laboratory. Doh et al. (2013) also present a framework for multinational enterprises that deal with corruption in international business.

5.3 Firm-level consequences

As the fourth stream of research indicates, on the macro-level, corruption affects the key players in international business with regard to their earnings forecasts and management (Chen et al., 2010; Lewellyn & Rosey, 2017), firm disclosures (Hung, Kim, & Li, 2018), risk-taking (Boubakri et al., 2013), corporate social responsibility (Luo, 2006), international joint ventures (Meschi, 2009; Roy & Oliver, 2009; Hearn, 2015), organizational legitimacy and decision making (Rodriguez et al., 2005), the prosocial values of the firm (Muethel et al., 2011), export performance (Krammer et al., 2018), the performance of foreign affiliates and subsidiaries (Petrou, 2015; Muellner et al., 2017), foreign affiliates' ownership (Driffield et al., 2016), the firms' volume of activities and performance (Lee & Hong, 2012; Geleilate et al., 2016; Tunyi & Ntim, 2016), social irresponsibility (CSR) (Keig et al., 2015), entry mode strategy (Uhlenbruck et al., 2006), SMEs' performance (Kouznetsov, Dass, & Schmidt, 2014), and the performance of mergers and acquisitions (M&A) (Brockman et al., 2013).

5.3.1 Firm-level consequences: Politics and corruption

As the fifth stream of research indicates, there is a connection between the political environment and corruption in international business. Luo (2006) argues that in very corrupt host countries, politically connected firms with few ethics engage in bribery. Similarly, politically connected firms reflect the weak performance of mergers and acquisitions (M&A), where the level of corruption is low in the host country. Politically connected firms in corrupt countries also issue fewer earnings forecasts (Hung, Kim, & Li, 2018). In contrast, Yim, Lu, and Choi (2017) maintain that political connections are suitable for firms because lobbying has a more positive effect than bribes.

5.4 Combating corruption

In the second research stream that explored combatting corruption in international business, scholars determined that corruption is an irregular tax and additional cost borne by society (Shleifer & Vishny, 1993; Mauro, 1995). The IMF, OECD, UN, World Bank, EU, WTO, and Transparency International all play a key role in combating corruption. The 1997 conventions of the UN, OECD, and EU are major guidelines for the formation of national laws and regulations against corruption (Gantz, 1998). The implementation of the US Foreign Corrupt Practices Act of 1977 and the OECD anti-bribery convention (Cuervo-Cazurra, 2008) is essential to overcome the issue of corruption in business transactions. Rose-Ackerman (2002) and Kaptein (2004) suggest that firms should establish ethical standards and business codes against corruption.

6. Research Agenda

The literature on corruption in international business is maturing rapidly and covers multiple research areas. Nevertheless, there are still aspects of corruption in international business that are essential to explore. To provide recommendations for the future research agenda, we utilized a four-step methodology. First, we identified 79 influential articles through bibliometric citation analysis. Second, we analyzed the content of these influential articles through content analysis to determine a future research agenda. Third, we converted the potential research agenda into research questions and propositions. Finally, we verified and excluded identified research questions that scholars have already addressed. The procedure resulted in 14 future research questions (see Table 8), and 6 gaps in our knowledge and propositions for addressing them.

6.1 Future research questions

6.1.1 Legislation against corruption in international business

This research stream builds on the papers about the EU, FCPA, and OECD conventions to formulate international and national laws against corruption in international business. Therefore, it is essential to explore the real effects of these conventions on corruption in bribe-demanding and bribe-supplying countries (Darrough, 2010). Furthermore, the scope of the analysis of anti-corruption legislation needs to be broadened to the country level to ascertain the role of national laws such as the 1999 Australian Criminal Act and the 1998 Canadian Corruption of Foreign Public Officials Act in combatting corruption in the host and home countries (Pedigo & Marshall, 2009; Mijares, 2015).

6.1.2 The determinants of corruption in international business

In this stream, the research focuses on the economic (Sanyal & Guvenli, 2009; Roy & Goll, 2014) and cultural factors (Armstrong, 1992; Tsalikis & Latour, 1995) that affect the level of corruption in international business. However, these factors are multi-faceted. Therefore, we must examine their link with the sustainability indicators of a country (including the avoidance of corruption) (Roy & Goll, 2014). Gender also affects a firm's behavior about bribery, but it is interesting to explore the role of gender in CEO-plurality firms (Tuliao & Chen, 2017). The existence of a prior colonial relationship (for example, between the United Kingdom and India) between bribe-demanding and bribe-supplying countries may affect the propensity to engage in bribery (Baughn et al., 2010).

6.1.3 Combating corruption in international business

This research stream focuses on a practical analysis of anti-corruption measures and methods. An empirical examination of the impact of the extensive extraterritorial powers of the US, EU, and OECD on corruption in home and host countries across several industries is essential (Pacini, Swingen, & Rogers, 2002; Kaczmarek & Newman, 2011). Cultural, economic, and individual factors might moderate this impact. Moreover, the interdependence between antecedents (at the national, firm, and individual levels) and consequences (at the national and firm levels) might affect the process of combating corruption in international business (Frei & Muethel, 2017).

6.1.4 The effect of corruption on firms in international business

This research area consists of studies on the challenges facing firms and the influence of corruption on them (Uhlenbruck et al., 2006; Cuervo-Cazurra, 2008; Roy & Oliver, 2009). Firms need to explore the cost and effect of corruption on their reputation, productivity, and export capabilities. Scholars must determine whether other variables such as entrepreneurship, innovation, and marketing capabilities mediate the relationship between corruption and a firm's reputation, productivity, and export capabilities (Cleveland et al., 2010; Gomes et al., 2018).

6.1.5 The political environment and corruption in international business

This stream focuses on the relationship between politics, corporate social responsibility, and corruption in international business (Luo, 2006; Galang, 2012).). Future research in the field could investigate the direct and indirect associations between these components. It could also examine the effect of political connections or political risks on the corporate responsibility activities of multinational enterprises and whether corruption moderates this association (Rodriguez et al., 2006). Furthermore, a comparison of the relative advantages of corporate political lobbying vs. bribery for a firm's performance and how financial crises moderate this relationship would help managers choose between the two approaches (Yim, Lu, & Choi, 2017).

6.1.6 Corruption as a challenge to existing theories of management in international business

This research stream is in its infancy. Given that corruption is a very complex problem, Cuervo-Cazurra (2016) recommends revisiting and confirming existing theories of the firm (agency, transaction cost economics, resource-based view, resource-dependence, and neo-institutional theory) by considering corruption as a laboratory.

6.1.7 The effect of corruption on foreign direct investment and trade in international business

This stream builds on studies that explore the effect of corruption on foreign direct investment (FDI) and trade in international business (Habib & Zurawicki, 2002). Future research could focus on the impact of political connections or political risks on inward and outward foreign

direct investment and the moderating effect of corruption in the home and host countries. We also suggest broadening this focus to explore the impact of corruption on inward and outward foreign direct investment and the moderating role of political connections or political risks in the home and host countries (Cuervo-Cazurra, 2006; Rodriguez et al., 2006).

6.2 Gaps in our knowledge and propositions for dealing with them

Our review also revealed a number of gaps in our knowledge about corruption in international business related to context, methods, theoretical frameworks, and measurements (Kedia & Lahiri, 2007; Terjesen et al., 2013; Gilal et al., 2019; Paul & Alexander Rosado-Serrano, 2019; Paul & Sanchez-Morcilio, 2019). We discuss these research gaps and our proposals for dealing with them below.

6.2.1 Context of key studies

The most cited articles examine the effect of corruption on the firm (e.g., Lee & Hong, 2012; Hearn, 2015; Keig et al., 2015; Tunyi & Ntim, 2016). Indeed, the firm is the main topic of interest in international business. However, we observed that, when analyzing the relationship between corruption and the firm, researchers control for firm-level factors such as performance, operations, earnings management, and profitability. We believe that researchers should examine the relationship between corruption and firm-level factors, which are controlled in the literature. Therefore, we propose that:

Proposition 1. Firm-level factors such as age, industry, size, international experience, ownership, sales, loss frequency, and length of the operating cycle prompt firms to engage in bribery when conducting international business.

6.2.2 Key methods

Table 5 reports that studies on corruption in international business usually use content analysis (Krueger, 2009; Cuervo-Cazurra, 2016), regressions (Jiménez, 2011; Boubakri et al., 2013), and document analysis (Pacini et al., 2002; Kaptein, 2004). However, a challenge for international business researchers is to confirm the effect of corruption on firms, their tendency to engage in bribery, and inward foreign direct investment. To accomplish these goals, other forms of analysis are needed. Therefore, we propose that:

Proposition 2. *Utilizing meta-analysis and network analysis will be useful in exploring the effect of corruption on firms, their tendency to engage in bribery, and inward foreign direct investment at the firm and country level.*

6.2.3 Measurement of corruption

Most studies used data about corruption from country-level indexes such as Transparency International, World Governance Indicators, and the International Country Risk Guide. As Table 6 indicates, only six papers used primary firm-level survey data. We believe that firm-level surveys and interviews about corruption will be useful in identifying anti-corruption measures in international business. Therefore, we propose that:

Proposition 3. *A firm-level survey to measure the level of corruption and identify the factors that lead to a firm to engage in bribery will be useful for initiating attempts to combat corruption in international business.*

6.2.4 Theoretical frameworks

The most frequently utilized framework to predict a firm's engagement in corruption in international business is an institutional theory (North, 1990; Scott, 1995; Dikova et al., 2016; Krammer et al., 2018). Based on this framework, the literature suggests that by improving the quality of institutions, the adverse effects of corruption can be minimized in international business. Therefore, we propose that:

Proposition 4. *Improving the quality of institutions in terms of the rule of law and the structure of government will reduce the level of corruption and tendency of a firm to engage in bribery when conducting international business.*

The second most frequently utilized theoretical framework is the neo-institutional perspective, which is quite popular in the organizational field and international business. It maintains that firms respond to the cognitive, normative, and regulatory pressures of the community and society where they operate (DiMaggio & Powell, 1991). Gao (2010) also confirmed the effect of mimetic isomorphism on the tendency of international firms operating in China to engage in bribery because they see other firms in the business community doing so. Consequently, we posit that:

Proposition 5. *Coercive, mimetic, and normative isomorphism affect the level of corruption at the country level as well.*

Finally, researchers utilize agency theory to explore corruption and international business (Stulz, 2005; Boubakri et al., 2013; Chen et al., 2015; Tuliao & Chen, 2017). Managers' decisions to engage in bribery and corrupt activities nationally and internationally result in agency problems. However, managers defend these actions on the grounds that they are beneficial for the firm. Therefore, we propose that:

Proposition 6. *The firm's managers' involvement in bribery and corrupt activities nationally and internationally is for their own self-interests rather than those of the firm, which leads to agency problems.*

Table 8. Future research questions

Research streams		Future research questions	Author (s)/Year
The Legislation Against Corruption in International Business	1	What is the effect of EU, FCPA, and OECD conventions on corruption, particularly in countries that demand and supply bribes?	Darrough (2010)
	2	How do the 1999 Australian Criminal Act and 1998 Canadian Corruption of Foreign Public Officials Act impact the propensity of Australian and Canadian individuals or MNEs to bribe foreign public officials in the home and host country?	Mijares (2015)
The Determinants of Corruption in International Business	3	Which combination of the gender of the principal (chair of the board) and manager (CEO) is more effective in reducing the firm's propensity to bribe in CEO plurality firms?	Tuliao and Chen (2017)
	4	What is the effect of cultural and economic factors on the country's sustainability indicators such as environmental performance, human development, and the avoidance of corruption around the world? Is there any interrelationship among the country's sustainability indicators as well?	Roy and Goll (2014)
	5	How do prior colonial relationships (for example, the United Kingdom and India) between bribery-supplying and bribery-receiving countries affect the propensity to bribe in international business?	Baughn et al. (2010)
Combating Corruption in International Business	6	How do the extensive extraterritorial powers of the United States and the EU, such as financial services, antitrust laws, and product scope combat corruption in the host country, particularly in a highly corrupt industry and country? How do economic and cultural factors mediate this relationship?	Kaczmarek and Newman (2011)
	7	Is there any interdependence between the antecedents (poor management, poor leadership, culture, economic factors, lack of the rule of law) and consequences (poverty, inflation, reduction in foreign direct investment, and trade) of corruption in international business? How does this interdependence impact the process of combating corruption?	Frei and Muethel (2017)
The Effect of Corruption on Firms in International Business	8	What is the actual cost of bribery such as fines, time and resources, and lawsuits for firms, and how does bribery affect the firm's reputation?	Cleveland et al. (2010)
	9	What is the effect of corruption on the firm's productivity and exports, and how do other variables such as levels of entrepreneurship, innovation, and marketing capabilities	Gomes et al. (2018)

		mediate this relationship, particularly in highly corrupt countries?	
The Political Environment and Corruption in International Business	10	What is the effect of political connections or political risk on the CSR activities of firms in the host and home country, and how does corruption play a moderating role?	Rodriguez et al. (2006)
	11	Which has a stronger impact on the financial performance of the firm-corporate political activities (firm's political connections or CEO's political connections) or bribery in the host country, and do financial crises play a moderating role?	Yim, Lu, and Choi (2017)
Corruption as a Challenge to Existing Theories of Management in International Business	12	How can we extend the existing theories of the firm (agency, transaction cost economics, resource-based view, resource-dependence, and neo-institutional theory) by considering corruption as a laboratory in international business?	Cuervo-Cazurra (2016)
The Effect of Corruption on Foreign Direct Investment and Trade in International Business	13	What is the effect of political connections or political risk on inward and outward foreign direct investment in the home and host country, and how does corruption moderate this link?	Rodriguez et al. (2006), Cuervo-Cazurra (2006)
	14	What is the effect of corruption on inward and outward foreign direct investment in the home and host country, and how do political connections or political risk moderate it?	Rodriguez et al. (2006), Cuervo-Cazurra (2006)

Note: The table lists 14 future research questions.

7. Conclusion

Based on our in-depth review of corruption in international business, we have several policy recommendations. First, strong international laws are needed to minimize the negative impact of corruption on foreign direct investment, trade, business, and firms. Second, firms are the key players in international business. Therefore, managers and policymakers need to consider corruption when formulating the firms' organizational structure and creating strategies to increase operational efficiency and performance. Third, the establishment of an organizational anti-corruption architecture system in firms is essential to overcome corruption in international business. Finally, corruption challenges some key assumptions of existing theories of management. Scholars need to test and expand these existing theories by considering corruption as an important issue in international business.

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Appendix A.

Table A. 1. The list of papers that creates the citation map.

No. on Map	Authors/Year	TLC	TGC	No. on Map	Authors/Year	TLC	TGC	No. on Map	Authors/Year	TLC	TGC
37 influential articles based on TLC ≥ 1											
1	Armstrong (1992)	1	16	26	Luo (2006)	6	98	47	Chen, Ding, and Kim (2010)	8	59
3	Tsalikis and Latour (1995)	1	29	29	Argandon (2007)	1	18	51	Mazar and Aggarwal (2011)	3	58
4	Hotchkiss (1998)	1	30	33	Sanyal and Guvenli (2009)	3	12	52	Osuji (2011)	1	26
8	George, Lacey, and Birmele (2000)	5	41	37	Roy and Oliver (2009)	1	49	56	Guvenli and Sanyal (2012)	1	1
9	Kaikati et al. (2000)	6	26	38	Krueger (2009)	1	6	58	Galang (2012)	1	30
11	Pacini, Swingen, and Rogers (2002)	6	26	39	Cleveland et al. (2010)	3	26	59	Nichols (2012)	1	12
14	Doh et al. (2003)	11	104	41	Baughn et al. (2010)	3	32	60	Klaw (2012)	1	5
15	Kaptein (2004)	1	197	42	Darrough (2010)	1	12	61	Antonakas, Giokas, and Konstantopoulos (2013)	2	2
17	Weber and Getz (2004)	3	13	45	Franke and Richey (2010)	1	41	62	Lawton, Mcguire, and Rajwani (2012)	1	75
20	Rodriguez, Uhlenbruck, and Eden (2005)	15	200	46	Jensen, Li, and Rahman (2010)	7	42	64	Boubakri, Mansi, and Saffar (2013)	1	43
21	Sanyal (2005)	14	66	47	Chen, Ding, and Kim (2010)	8	59	65	Lambsdorff (2013)	1	10
24	Uhlenbruck et al. (2006)	12	150	51	Mazar and Aggarwal (2011)	3	58	67	Brockman, Rui, and Zou (2013)	1	29
25	Rodriguez et al. (2006)	8	181	52	Osuji (2011)	1	26	82	Chen, Cullen, and Parboteeah (2015)	1	2
102	Lord and Levi (2017)	1	3								
The 39 articles that cited these 37 influential articles.											
23	Everett, Neu, and Rahaman (2006)	0	37	90	Gelbrich, Stedham, and Gathke (2016)	0	1	70	Kouznetsov, Dass, and Schmidt (2014)	0	3
75	Foster (2015)	0	1	101	Xie, Reddy, and Liang (2017)	0	11	104	Jime et al. (2017)	0	2
54	Spalding (2011)	0	9	107	Yi, Teng, and Meng (2018)	0	0	112	Hung, Kim, and Li (2018)	0	0
44	Gao (2010)	0	3	27	Cuervo-Cazurra (2006)	0	196	114	Mukherjee (2018)	0	0
80	Mijares (2015)	0	1	30	Cuervo-Cazurra (2008)	0	70	105	Lewellyn and Rosey (2017)	0	0

103	Frei and Muethel (2017)	0	0	55	Wenhao and Ahmad (2011)	0	1	115	Karhunen et al. (2018)	0	0
53	Kaczmarek and Newman (2011)	0	24	88	Cuervo-Cazurra (2016)	0	28	91	Laudone (2016)	0	1
50	Gao (2011)	0	3	100	Yim, Lu, and Choi (2017)	0	2	36	Pedigo and Marshall (2009)	0	6
81	Huang et al. (2015)	0	2	84	Petrou (2015)	0	1	19	Windsnor (2005)	0	0
99	Tuliao and Chen (2017)	0	3	72	Roy and Goll (2014)	0	10	12	Rose-Ackerman (2002)	0	39
98	Sanyal and Samanta (2017)	0	0	106	Gomes et al. (2018)	0	0	68	Antonakas, Konstantopoulos, and Seimenis (2014)	0	0
66	Wu and Huang (2013)	0	0	63	Driffield, Jones, and Crotty (2013)	0	21	113	Lord, Wingerde, and Campbell (2018)	0	2
92	Srivastava, Teo, and Devaraj (2016)	0	8	97	Oesterle and Bjorn (2017)	0	0				

Note: The table shows the details of the 76 articles that shape the citation map. They include the original 37 influential articles based on TLC ≥ 1 plus the 39 articles that cite these 37 influential articles.

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Essay/Paper 02

Corruption in Banks: A Bibliometric Review and Agenda

Corruption in Banks: A Bibliometric Review and Agenda[2]

Salman Bahoo[a,b]

[a]Department of Economics and Statistics, University of Udine
[b]School of Business & Law, University of Agder

Abstract

This paper is a bibliometric review of 819 articles, between 1969 and 2019, on corruption in banks. We identified six research streams: (1) the determinants of banks' lending corruption; (2) the impact of corruption on banks' lending and operational risk; (3) the impact of bank corruption on firms; (4) the impact of political connections on bank corruption; (5) the impact of corporate governance and regulations on bank corruption; and (6) the manipulation of the inter-bank offered rate. We recommend an anti-corruption architecture system and an extension in theoretical frameworks related to corruption in banks. We propose 20 future research questions.

Keywords: Corruption; banks, bibliometrics analysis; content analysis; corporate governance; bank regulations

JEL Code: D73, E50, E6

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1. Introduction

Corruption exists despite efforts by national and international controlling bodies (including central banks, agencies, OECD conventions, and the IMF). Corruption results in poverty, greed, unemployment, weak institutions, and non-enforcement of law. According to Global Witness Organization[1] corrupt businesspeople, government officials, dictators, warlords, and other criminals always need a bank to hide and lander their looted money. Consequently, banks and other financial institutions play a key role in hiding illegal money. Banks' poor corporate governance (Srivastav & Hagendorff, 2015; Nguyen, Hagendorff, & Eshraghi, 2017), incompetent bank officials (Nguyen, Hagendorff & Eshraghi, 2014), and the involvement of banks in corrupt activities has resulted in the bankruptcy of financial institutions in the past, such as Bear Stearns, Lehman Brothers, and Washington Mutual. Bank scandals have led to investigations and research into corruption in banks by regulatory bodies and academic researchers, respectively. As a result, a considerable amount of literature has been compiled on corruption related to banks or financial institutions over the last 50 years (see Figure 1). This literature is scattered across numerous areas and types of corruption (see Table 1 for synonyms of corruption) and needs to be analyzed through a systematic, in-depth, and quali-quantitative fashion.

To capture the richness of literature on corruption in banks, we employ bibliometric citation analysis (Zhang, Zhang, & Managi, 2019; Helbing, 2018; Bahoo, Alon, & Paltrinieri, 2019a) and content analysis (Vigne et al., 2017; Garner, Humphrey, & Simkins, 2016; Bahoo et al., 2018) to analyze 819 articles for the 50 years from 1969 to 2019. This review is unique and addresses the following questions: (1) What are the key research streams in the literature on corruption in banks? (2) What are the influential aspects of literature, such as journals, institutions, countries, authors, articles, and networks among them? (3) What are the relevant future research questions? Through this qualitative and quantitative review and analysis, we identified six research streams (see Figure 6) and summarized the data sources, methods, and content of key papers (Tables 4 and 5). In addition, we identified influential journals, countries, institutions, authors, key research areas, articles/topics, and networks among them (Tables 2 and 3 and Figures 2, 3, 4, and 5). Finally, Table 6 presents 20 thought-provoking future research questions.

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[1]Chairman Gooch— "gotten gains don't disappear by themselves, those with suspect money to hide, need a bank (financial institutions) that won't ask awkward questions; a lawyer to help them find loopholes and skirt laws (tax havens), and a legal smokescreen (offshore financial centers) so they can get it out of the country it came from (Corruption & Money Laundering, 2019).

2. Method

The method used in this paper consists of bibliometric citation analysis and content analysis. We performed the following tests under bibliometrics citation analysis (using HistCite and VOSviewer software): (1) citation analysis, (2) co-citation analysis, (3) citation network analysis, and (4) cartography analysis by following the Paltrinieri, Hassan, Bahoo, and Khan (2019) and Zamore et al. (2018).

Furthermore, we applied traditional content analysis to explore the content of articles (French & Vigne, 2019; Carter, Rogers, Simkins, & Treanor, 2017; Ahmed, Bahoo, & Ayub, 2019). The HistCite and VOSviewer software accepts bibliometric data as input and provides several key findings as output. The HistCite software only deals with the data of ISI Web of Knowledge (ISI WOK), and VOSviwer deals with ISI WOK and Scopus. The HistCite software only deals with the data of ISI Web of Knowledge (ISI WOK), and VOSviwer deals with ISI WOK and Scopus. Table 1 explains in detail the key terms of bibliometrics analysis, key software terms, the keywords selection process, and search techniques.

To conduct a bibliometric analysis of literature on corruption in banks, we selected a database of ISI WOK as high-quality journals are listed on it. In our search process, we used 17 keywords for corruption in combination with words like *banks, bank, banking, financial institutions,* and *financial institution* to cover the complete literature on the topic (see Table 1). This search produced 1106 articles. In the next step, we reviewed all article titles and abstracts to exclude irrelevant articles and eventually found a sample of 819 articles between 1969 and 2019. Figure 1 shows the number of articles published by year in the literature on corruption in banks. A sharp growth trend since 2008 indicates a substantial increase in research on corruption in banks due to the bankruptcy scandals of American banking companies, such as Bear Stearns, Lehman Brothers, and Washington Mutual. We explain the key findings in the next section.
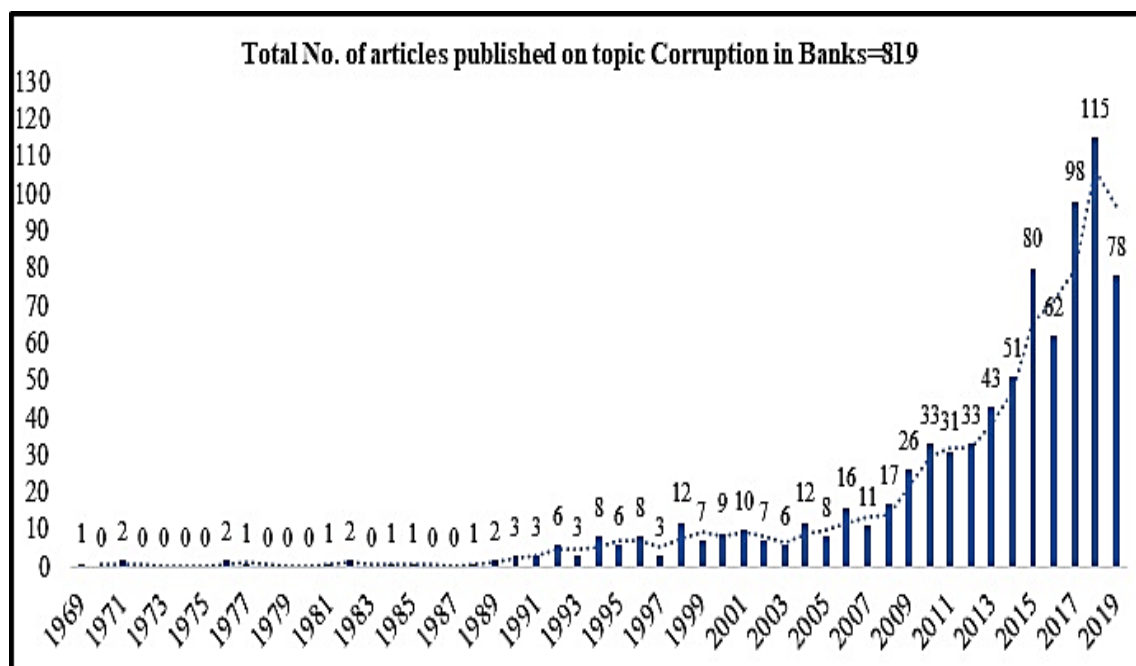
Figure 1. Growth of literature. The HistCite software is used to present per year publications.

Table 1. Key methodological terminologies

(i) Key Methodological Terms	
Terms	Explanation/Details
Co-Citation Analysis	Co-citation means that other articles cite an article because they belong to the same concept or topic.
Cartography Analysis	This analysis is based on the repetition of keywords in the articles.
HistCite Software	This software accepts only ISI WOS citation data as input and provides several types of results.
VOSviewer Software	This software accepts citation data of ISI WOS and Scopus as input files and provides several outputs.
(ii) Key Patterns of HistCite Software (HistCite - Glossary, 2018)	
P_{CORB}	Number of articles published on topic; corruption in banks
TLC	Total Local Citations mean how many times an article is cited by other articles in a sample of study; in our case sample of articles for bibliometrics analysis consists of 819 articles.
TGC	Total global citations represent how many times an article is cited by other articles, which are available on the entire ISI WOS database.
TLC/t	Total local citations per year means the average citations per year.
TGC/t	Total global citations per year means the average citations per year.

(iii) Sample Selection Process (article searched from ISI Web of Knowledge through a combination of words with corruption)

Keywords for Corruption	Search in combination with words		Keywords for Corruption	Search in combination with words	
	Bank or Banks or Banking	Financial Institutions or Financial Institutions		Bank or Banks or Banking	Financial Institutions or Financial Institutions
Corruption	276	32	Misconduct	33	10
Bribe	1	1	Misrepresentation	7	1
Bribery	43	6	Wrongdoing	11	0
Fraud	157	58	Falsification	7	0
Crime	82	39	Criminal	90	24
Manipulation	104	13	Manipulating	19	5
Extortion	7	5	Abuse	37	11

<u>**Initial Sample**</u> (Applied following filters: *(i) article category;* economics, business finance, business, management, law, and ethics, *(ii) search filters;* topic (search keywords in title, abstract or author keywords), *(iii) paper type and language***:** articles and English)	1106
<u>**Final Sample**</u> for Bibliometrics Analysis (Screening of irrelevant by reading titles and abstracts)	**819**

Note: The table shows details about key methodological terms, software's key terms, sample selection process, and searches technique.

3. Results

3.1 Influential aspects of literature

3.1.1 Key journals distribution and networks

The HistCite and VOSviwer software packages were used to identify the journal distribution and networks. We ranked the top 10- journals into two categories: first, those publishing a higher number of papers on the topic, and second, those having a higher number of citations, as given in Table 2. In both rankings, the finance journals have the highest number of citations and publications on the topic. Also, a few of the pertinent topics were found in law journals. Surprisingly, only one journal in the field of international business falls into the category of having the highest citations. It would seem that the phenomenon of corruption is a critical management issue in banks, which is overlooked by management and business journal. Furthermore, from what we have shown in our citation network among journals in Figure 2, citing articles largely from top finance journals and neglecting less prominent journals may lead to citation bias.

Figure 2. Citation network among journals. The VOSviewer software is used create network.

Table 2. Influential aspects of literature

Influential Journals					Influential Countries		Influential Institutions		Influential Authors	
Rank	Name of Journals[1]	TLC	Name of Journals[2]	P_CORB	Country[3]	P_CORB	Institutions[4]	P_CORB	Authors[5]	TGC
1	Journal of Financial Economics	71	American Criminal Law Review	29	USA	262	World Bank	17	Demirguc-Kunt Asli	811
2	Journal of Banking & Finance	22	Journal of Business Ethics	25	UK	109	New York University	11	Maksimovic Vojislav	752
3	Journal of Finance	21	Banking Law Journal	24	Peoples R China	50	NBER[6]	10	Beck Thorsten	617
4	Journal of Business Ethics	20	Journal of Banking & Finance	21	Australia	43	University of Chicago	8	Laeven Luc	405
5	Journal of Comparative Economics	16	Journal of Operational Risk	12	Canada	36	University of Essex	8	Claessens Stijn	360
6	Journal of International Business Studies	14	Journal of Financial Economics	11	France	30	University of Michigan	8	Feijen Erik	360
7	Journal of Operational Risk	13	Journal of Financial Stability	11	Germany	23	University of Sheffield	8	Dinc I.Sarder	268
8	Banking Law Journal	11	Journal of Comparative Economics	10	Italy	20	CEPR[7]	7	Graham John R	239
9	Journal of International Money and Finance	10	Bulletin of Indonesian Economic Studies	8	Spain	16	Indiana University	7	Li Si	239
10	Journal of Monetary Economics	9	Journal of Money Laundering Control	7	Taiwan	15	Australian National University	6	Qiu Jiaping	239

Note: The table shows the ranking of top 10 journals, countries, institutions, and authors. The HistCite software is used to create the rankings. 1 = ranking of journals sorted based on TLC. 2, 3,4 = rankings of journals, countries, and institutions sorted based on P_CORB. 5 = ranking of authors based on TGC. For details of TLC, TGC, and P_CORB, see Table 1. The abbreviations are 6 = National Bureau of Economic Research, USA, 7=Centre of Economic Policy Research, UK.

3.1.2 Influential authors, their countries of origin, institution affiliations, and networks

The influential authors and their countries of origin, institutional affiliations, and networks were identified using the HistCite and VOSviwer software. We ranked the authors, their countries of origin, and institutional affiliations in Table 2 and also presented networks among them in Figures 3 and 4. The ranking of authors based on highest citations during the last 50 years will be useful to start the future projects with them. Further, the ranking of top 10 countries shows that the first country (USA) explored and worked to eliminate the multiple

aspects of corruption related to banks or financial institutions more extensively than others; for example, the United States is one of pioneering countries in terms of formulating national-level laws against corruption and bribery. The Western world has produced several anti-corruption laws and world leader conventions with respect to this global issue. At the same time, China is an emerging economy that is focusing on combating corruption in banks as well. Although the contribution of the developing economies in the literature is rare due to insufficient resources, corruption is one of their main problems. Therefore, the controlling bodies and Western world should consider starting projects in the developing countries to eliminate corruption in banks, which will be effective at reducing money laundering and terrorism financing through banks.

3.1.3 Keyword network: analysis for identifying research areas

We conducted a keyword network analysis by using VOSviwer software to identify several areas and directions of research on corruption in banks. Figure 5 shows a network based on the repetition of keywords in the literature on corruption in banks. This network shows that *corruption, banking regulation, money laundering, corporate governance, bank lending, LIBOR,* and *monetary policy* are the main areas or concerns in the literature we have observed. We have found that the keywords *firm performance, growth,* and *earning management* do not often occur in the literature on corruption in banks. The results show that finance, management, and international business researchers have overlooked a critical and essential area of research *on how bank corruption affects the firms*. We would like to close this gap in the knowledge of academic researchers through our keyword analysis for future research.
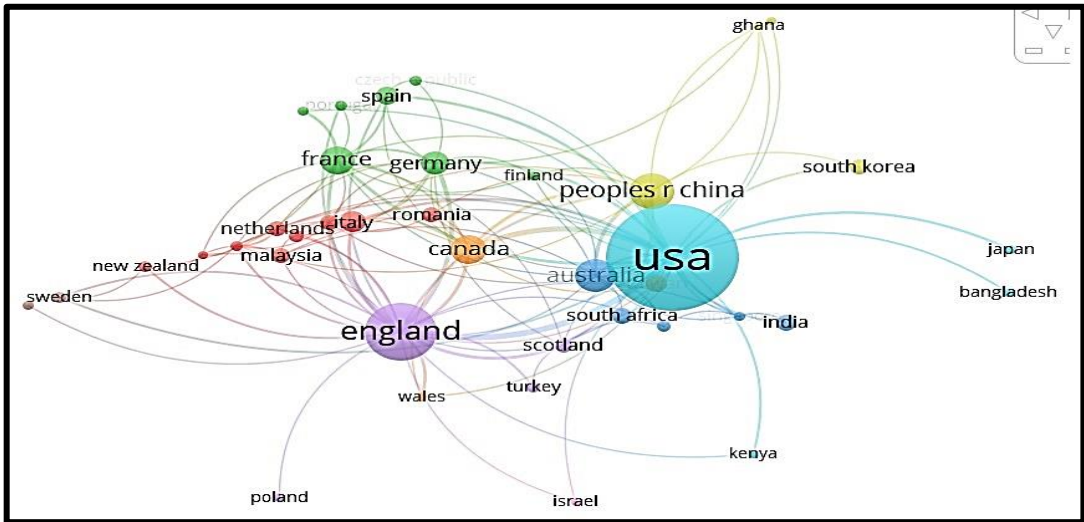
Figure 3. Citation network among author's countries of origin. The VOSviewer software is used create network.
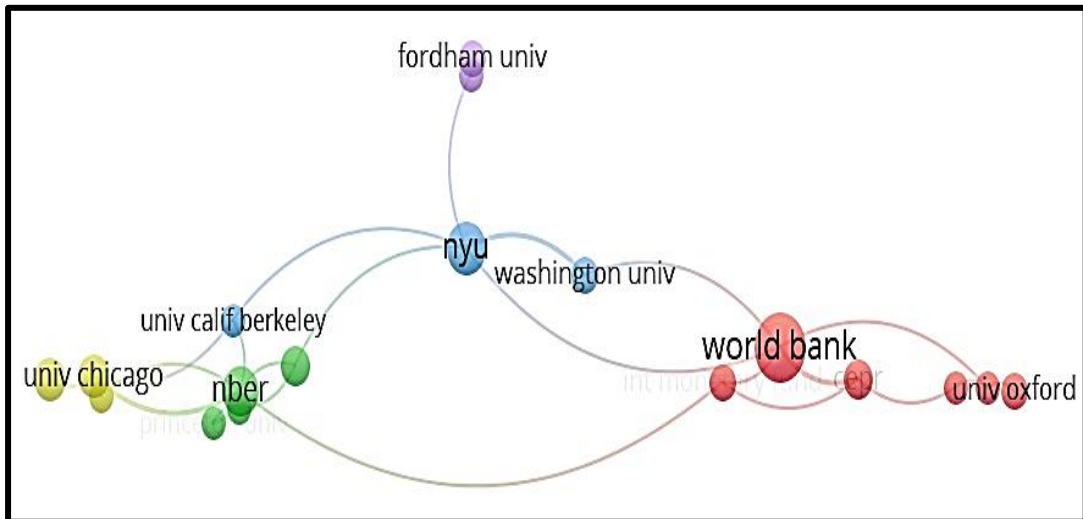

Figure 4. Citation network among author's institutional affiliations. The VOSviewer software is used create network.
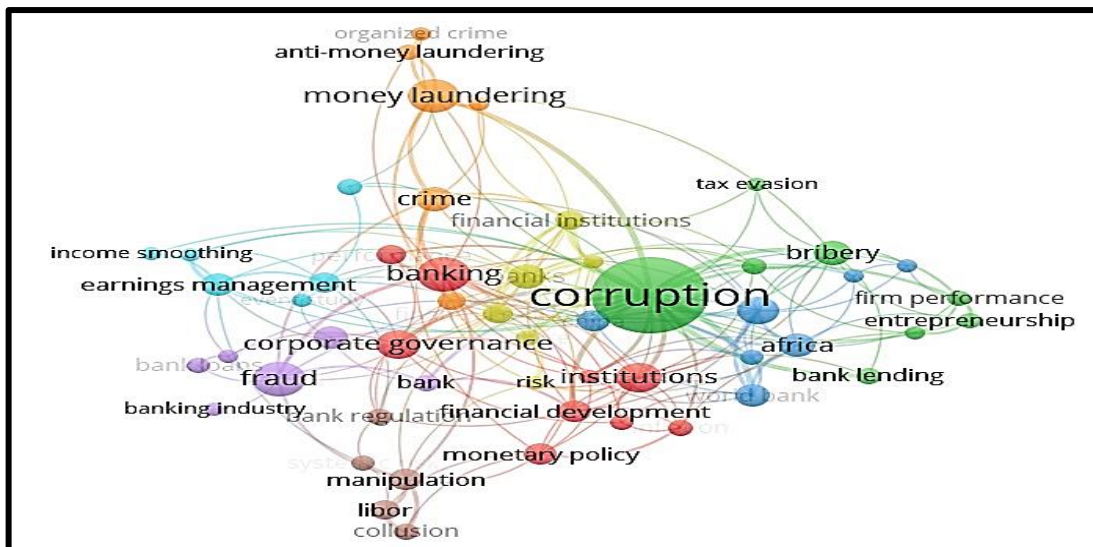

Figure 5. Keywords network analysis. The VOSviewer software is used create network.

3.1.4 Influential articles in the literature

Our sample examines 819 articles published by 391 journals that have 362 and 10,097 total local and global citations, respectively. We have divided our influential articles into two categories based on total local citation per year (TLC/t) and total global citation per year (TGC/t) by using HistCite software. Table 3 reports the top 10 articles in two categories. The top-ranked articles have been taken from finance journals only. As a result, we recommend that management and international business journals should consider publishing on the topic of corruption in banks while considering managerial challenges.

Table 3. Influential articles

Influential Articles/Topics[1] based on TLC/t			Influential Articles/Topics[2] based on TGC/t		
Rank	Author (s) and Year	TLC	TLC/t	Author (s) and Year	TGC	TGC/t
1	(Barth et al., 2009)	26	2.36	(Beck, Demirgüç-Kunt, & Maksimovic, 2005)	558	37.2
2	(Chen, Liu, & Su, 2013)	13	1.86	(Claessens, Feijen, & Laeven, 2008)	360	30
3	(Houston, Lin & Ma, 2011)	15	1.67	(Graham, Li, & Qiu, 2008)	239	19.92
4	(Beck, Demirgüç-Kunt, & Maksimovic, 2005)	20	1.33	(Ayyagari, Demirgüç-Kunt, & Maksimovic, 2010)	194	19.4
5	(Zheng et al., 2013)	8	1.14	(Dinç, 2005)	268	17.87
6	(Park, 2012)	8	1	(Barth et al., 2009)	116	10.55
7	(McConnell, 2013)	7	1	(Allen et al., 2012)	56	7
8	(Akins, Dou, & Ng, 2017)	3	1	(Abrantes-Metz et al., 2012)	56	6.63
9	(Fungáčová, Kochanova, & Weill, 2015)	4	0.8	(Cornett et al., 2010)	64	6.4
10	(Weill, 2011a)	6	0.67	(Zheng et al., 2013)	43	6.14

Note: This table represents the 10 most influential articles/topics. 1 = The influential articles/topics are sorted based on TLC/t. 2 = And based on criteria of minimum TGC/t. For details about TGC/t and TLC/t, see Table 1.

3.2 Co-citation mapping: Identification of research streams and synthesis

We identified research streams in literature by applying bibliometrics citation analysis and content analysis (Bahoo, Alon, & Paltrinieri, 2019b; Ahmed et al., 2019). We applied the following two steps in identifying streams. First, we used HistCite software to apply co-citation analysis that created citation mapping, as given in Figure 6. The mapping is the result of 56 top-cited articles in the relevant literature. Second, we conducted a traditional detailed content analysis of these 56 articles (Jia, Popova, Simkins, & Wang, 2019; Bahoo et al., 2019). As a result of our quali-qualitative analyses, we have identified the following six research streams in the literature: (1) the determinants of banks' lending corruption, (2) the impact of corruption on banks' lending and operational risk, (3) the impact of bank corruption on firms, (4) the impact of political connections on bank corruption, (5) the impact of corporate governance and regulations on bank corruption, and (6) the manipulation of the inter-bank offered rate (IBOR).

The six above identified streams are interlinked with each other. The key determinants of bank lending corruption are cultural factors (Zheng et al., 2013), state media ownership (Houston, Lin, & Ma, 2011), state ownership of banks (Laeven, 2001), and borrower and lender competition (Barth et al., 2009). The political connections also impact the bank lending decision and result in high corruption (Claessens et al., 2008; Chen et al., 2017). The bank lending corruption effects the credit and operational risk of banks and results in an increase in non-performing loans (Fiordelisi, Soana, & Schwizer, 2014; Chen et al., 2015). The negative effect of bank lending corruption is high in developing countries with weak institutions, poor governance, and weak democracy (Boudriga, Taktak, & Jellouli, 2009). Corruption in banks also impacts the firm's growth (Beck, Demirgüç-Kunt, & Maksimovic, 2005) and access to finance (Qi & Ongena, 2019) negatively in emerging and developing countries. Moreover, corruption and misconduct in banks leads to manipulation of the LIBOR rate by bank officials, which was even present in the case of the Lehman Brothers bankruptcy scandal (Fouquau & Spieser, 2015). Finally, the literature is concerned about the elimination of corruption and misconduct by bank officials through strong corporate governance (Nguyen, Nguyen, & Sila, 2019; Nguyen, Hagendorff, & Eshraghi, 2016) and supervision (Beck, Demirgüç-Kunt, & Levine, 2006).
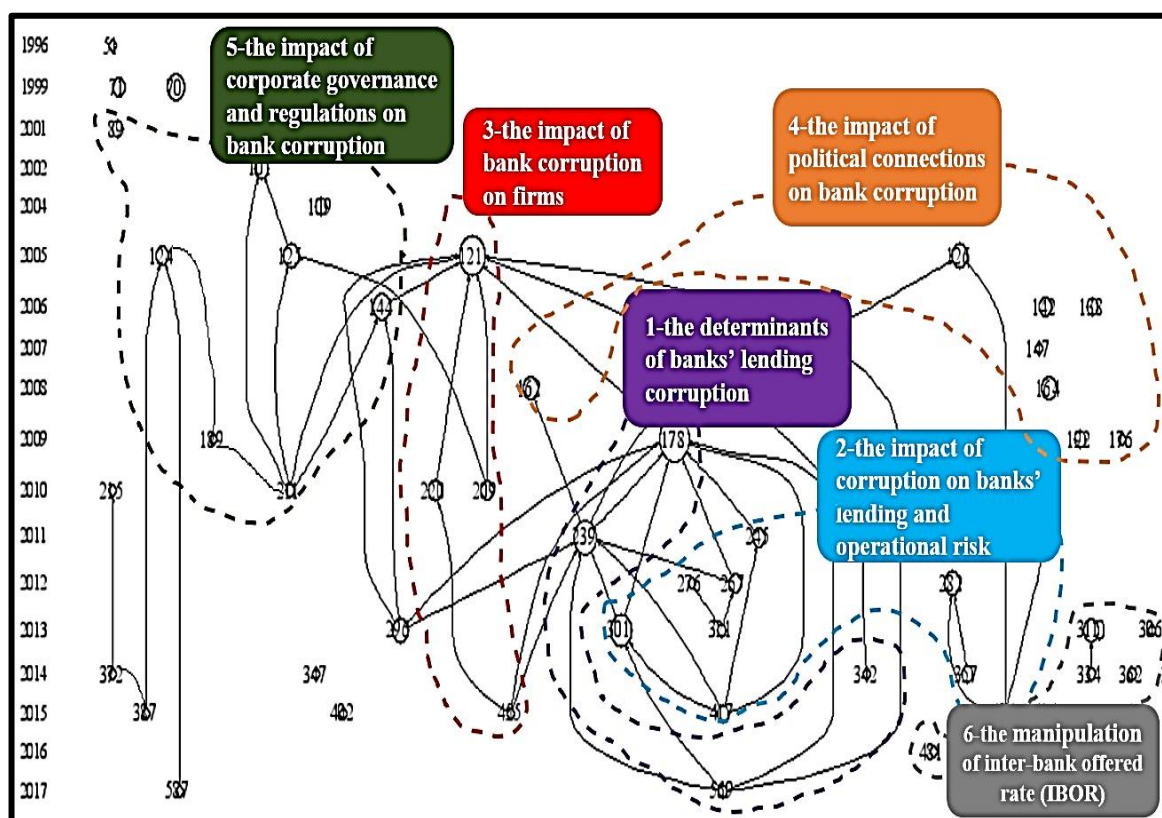

Figure 6. Identification of research streams. The streams are identified through co-citation analysis by using HistCite Software.

Beyond this, the data sources, methods, and content of these 56 key articles that create citation mapping are summarized in Tables 4 and 5, respectively. The summary of key articles shows that the literature on corruption in banks has developed in multiple directions. However, the third stream (*the effect of corruption on firms*) and fourth stream (*the effect of political connections on bank corruption*) have yet to be developed in the literature relating to emerging and developing countries. Based on the findings, we suggest that there is a need for more research on corruption with respect to the emerging and least developed countries.

4. Future research agenda

We adopted a four-step method to identify a future research agenda by using bibliometrics and content analyses (Bahoo, Alon, & Paltrinieri, 2019b). First, we reviewed 56 top-cited articles that create a citation map. Second, we reviewed all the trending and influential articles during the last seven years (2013 to 2019). Third, we reviewed the remaining articles in our sample of study to avoid top citation bias. Fourth, we converted the potential research agenda into research questions and excluded those questions that had already been investigated by researchers. This systematic process resulted in the 20 future research questions listed in Table 6. Through in-depth quali-quantitative review, we recommend a need to establish an anti-corruption architecture system and extension of existing management theoretical frameworks by considering corruption in banks as a managerial issue.

Table 4. Data sources and methods of key papers

(i) Data Sources		
Measurement of Corruption	Date Source	Reference
Bank Lending Corruption	World Bank Enterprise Survey on Corruption in 2000.	(Barth et al., 2009; Houston, Lin, & Ma, 2011; Beck, Demirgüç-Kunt, & Levine, 2006; Zheng et al., 2013; Weill, 2011a; Akins, Dou, & Ng, 2017; Beck, Demirgüç-Kunt, & Maksimovic, 2005)
Firm Offers Bribery to Banks Officials for lending	Hand-collected data on extra-expenses as a gift from firm reports.	(Chen, Liu, & Su, 2013)
Corruption Perception Index	Transparency International (TI)	(Park, 2012; Weill, 2011a; Petrou & Thanos, 2014; Chen et al., 2015)
Sub-Index of Corruption	World Economic Forum	(Park, 2012)
Corporate misreporting (fraud) data	U.S. General Accounting Office (GAO)	(Graham, Li, & Qiu, 2008)
Corruption Survey in 2000	Transparency International and Information for Democracy Foundation for Russia.	(Weill, 2011b)

Corruption Index of the World Bank	World Bank's Governance Indicators (WGI)	(Weill, 2011a; Chen et al., 2015)
Corruption Index	International Country Risk Guide (ICRG) Ratings	(Petrou & Thanos, 2014; Beck, Demirgüç-Kunt, & Maksimovic, 2005)
Corruption Freedom Score	Heritage Foundation's Corruption Freedom score	(Petrou & Thanos, 2014)
Bribery to Bank Official	BEEPS databases	(Fungáčová, Kochanova, & Weill, 2015)
Reputational Events About Banks	ALGO OpData™ database	(Fiordelisi, Soana, & Schwizer, 2014)
Bank Official Corruption in Lending	World Bank Investment Climate Survey in China	(Ayyagari, Demirgüç-Kunt, & Maksimovic, 2010)
Operational Risk Events (including fraud and others.)	FIRST Database	(Wang & Hsu, 2013)

(ii) Methods

Method	References
Regression Analysis (OLS)	(Barth et al., 2009; Houston, Lin, & Ma , 2011; Chen, Liu, & Su, 2013; Dinç, 2005; Park, 2012; Zheng et al., 2013; Graham, Li, & Qiu, 2008; Weill, 2011b; Weill, 2011a; Chen et al., 2015; Beck, Demirgüç-Kunt, & Maksimovic, 2005; Ayyagari, Demirgüç-Kunt, & Maksimovic, 2010)
Panel Regression Analysis	(Claessens, Feijen, & Laeven, 2008; Fungáčová, Kochanova, & Weill, 2015; Chen et al., 2015; Wang & Hsu, 2013; Qi & Ongena, 2019)
Probit Model	(Barth et al., 2009; Houston, Lin, & Ma, 2011)
Multiple Structural Breaks	(Monticini & Thornton, 2013)
Threshold Regression Mode	(Fouquau & Spieser, 2015)
Bivariate Probit Model Estimation	(Nguyen, Hagendorff, & Eshraghi, 2016)
Univariate analysis	(Chen et al., 2017)

Note: The table shows the data sources and methods applied by key papers that create citation mapping.

Table 6. Future research agenda

Sr. No	Reference	Research Questions/Explanation
1	(Weill, 2011a)	Is there any theoretical framework that exists to explain the relationship between corruption and bank lending? Is there any need to formulate a theoretical framework?
2	(Petrou & Thanos, 2014)	How does corruption impact bank entry in foreign markets? Is there any need to measure corruption through a survey at the firm and government level instead of using traditional indexes?
3	(Fungáčová, Kochanova, & Weill, 2015)	Is bribery for bank lending to firms beneficial for economic development through the channel of a higher bank debt ratio?
4	(Akins, Dou, & Ng, 2017)	What are the effects of bank and regulatory bodies' timely loan loss recognition on the efficiency of firms' investment strategies and how does it lead to economic development?
5	(Feng, Fu, & Kutan, 2019)	What is the effect of government intervention on bank lending in micro-finance institutions, and how does it impact the small browser and SMEs' access to finance and performance?
6	(Haß, Vergauwe, & Zhang, 2019)	What is the effect of state ownership of banks on banks' lending decisions and corruption?
7	(Haß, Vergauwe, & Zhang, 2019)	What is the effect of corruption in bank lending when the borrower and lender both are state-owned companies on economic growth and development?

8	(Azim & Kluvers, 2019)	How can organizational anti-corruption architecture system be applied to developing, emerging, and developed economies? Are multiple theoretical frameworks required for different economies?
9	(Azim & Kluvers, 2019)	Does the organizational anti-corruption architecture system moderate the effect of weak institutions and organizational environment on malfeasant organizational behavior?
10	(Sethi, Martell, & Demir, 2017)	What is the impact of the component business units in large financial institutions on the quality of CSR reporting, scope, and independence of assurance providers?
11	(Qi & Ongena, 2018)	What are the effects of the foreign bank entry on banking lending corruption and anti-corruption campaigns in developing, emerging, and developed countries?
12	(Dheera-Aumpon, 2019)	How can the institutional collectivism and teamwork cultural among national and foreign banks official be used to overcome corruption in banks?
13	(Alraheb, Nicolas, & Tarazi, 2019)	What is the effect on institutional environment and national level governance on corruption in the banking sector? Does a strong institution help overcome the problem of corruption?
14	(Toader et al., 2017).	Does strong corporate governance mediate the impact of national corruption on bank stability in developing countries?
15	(Chen et al., 2018)	How do the connected political CEOs of the private banks affect banks' lending decisions and bank stability in developing, emerging, and developed countries, and how does institutional quality moderate this relationship?
16	(Gozgor, 2018).	What is the effect of political risk components (that is, the rule of law, control on corruption) on domestic credit in developed countries?
17	(Köster & Pelster, 2017)	What are the motives of misconduct by management and board in banks, and what could be preventive measures other than financial penalties?
18	(Tajaddini & Gholipour, 2016)	What are the effects of national and individual cultural factors on the mortgage default rate in developing, emerging and developed countries?
19	(Venard & Hanafi, 2007)	What effect do financial intuitions (banks) have on economic development, and how does the level of corruption negatively moderate this effect?
20	(Repousis, Lois, & Veli, 2019)	What mechanisms and structures are needed in banks to eliminate the different fraud risk channels such as mobile banking, international banking, and online shopping?

Note: The table shows 20 future research questions.

Table 5. Summary of key papers

Author (s)	Sample	RQs/Purpose	Findings
Stream 1: The determinants of bank's lending corruption			
(Barth et al., 2009)	• 9000 large, medium and small size firms from 80 countries	• What is the effect of borrower and lender competition as well as information sharing via credit bureaus/registries on corruption in bank lending?	• Banking competition and information sharing both reduce lending corruption. • Information sharing also helps enhance the positive effect of competition in curtailing lending corruption.
(Houston, Lin, & Ma, 2011)	• 5000 firms across 59 countries	• What is the effect of state media ownership and concentration on corruption in bank lending?	• State ownership of media has a higher impact on bank lending corruption. • Media concentration also increases corruption directly and indirectly. • The links between media structure and corruption are more pronounced when the borrowing firm is privately owned.
(Zheng et al., 2013)	• 3835 firms across 3 countries	• What is the effect of the national culture, and collectivism on corruption in bank lending?	• Firms domiciled in collectivist countries perceive a higher level of lending corruption than firms domiciled in individual countries. • The link between collectivism a lending corruption cannot be explained by the role of the government in the economy, political connections, biased responses from disgruntled borrowers, or relationship lending.
(Akins, Dou, & Ng, 2017)	• 3600 firms from 44 countries.	• What is the effect of timely loan-loss recognition by banks on lending corruption?	• Timely loan loss recognition constrains lending corruption because it increases the likelihood of problem loans being uncovered earlier. • Timely loan loss recognition is less associated with reduced corruption in countries where there is significant government ownership in the banking system and deposit insurance scheme.
Stream 2: The impact of corruption on the bank's lending and operational risk			
(Chen, Liu, & Su, 2013)	• Chinese Banks' lending • 1082 firms from 31 Chinese provinces	• What is the effect of bribery on bank lending in China?	• Bribery enables large loans for firms, even with high performance. • Only four big banks offer loans to high-performing large firms. • Remaining, all banks offer loans to small firms after getting bribery.
(Park, 2012)	• 76 countries during the period of 2002–2004.	• What are the effects of corruption on the banking sector and economic growth?	• Corruption significantly aggravates the problems with bad loans in the banking sector. • Corruption lowers economic growth by allocating bank funds to bad projects instead of good ones.
(Graham, Li, & Qiu, 2008)	• 800 US public companies from 1997–2002.	• What is the effect of corporate restatement (fraud) on the bank loan spread? • How does the bank deal with these firms?	• Loans initiated after restatement have significantly higher spreads, shorter maturities, higher likelihood of being secured, and more covenant restrictions than loans initiated before reinstatement.
(Weill, 2011b)	• Country-level analysis of Russia	• How does corruption impact bank lending?	• Corruption impacts the bank lending to the households and firms, not to the government in Russia.

Reference	Sample	Research question	Findings
(Weill, 2011a)	• 80 countries analyzed	• What is the effect of corruption on bank lending?	• Bank-level estimations show that the detrimental effect of corruption is reduced when bank risk aversion increases, sometimes leading at times to situations wherein corruption fosters bank lending. • The overall effect of corruption is to hamper bank lending; it can alleviate a firm's financing obstacles.
(Petrou & Thanos, 2014)	• 131 bank entries in 40 host countries	• What is the effect of corruption on foreign bank market entries (capital invested and share of equity)?	• A U-shaped relationship has been found providing evidence that the "grabbing hand" view exists at low to moderate levels of corruption and supports the "helping hand" view at high levels of corruption. • Besides, market-seeking motives are found to have a positive moderating effect on this relationship.
(Fungáčová, Kochanova, & Weill, 2015)	• 665,000 companies from 14 Central and Eastern European countries	• What is the effect of bribery to bank officials on the bank debt of firms?	• Bribery is positively related to firms' total bank debt ratios, which provides evidence that bribing bank officials facilitates firms' access to bank loans. • This impact varies with the maturity of the bank debt, as bribery contributes to higher short-term bank debt ratios, but lower long-term bank debt ratios. • Institutional quality moderates the relation between bribery and firms' bank debt ratios.
(Fiordelisi, Soana, & Schwizer, 2014)	• USA and European 136 Bank from 1994–2008	• What is the impact of reputational loss (fraud, etc.) on operational risk for the bank?	• Substantial reputational losses occur following announcements of 'pure' operational losses. • The event of 'fraud' generates the greatest reputational damage. • The loss is higher in Europe than in North America.
(Chen et al., 2015)	• 1200 banks in 35 countries from 2000 to 2012	• What is the impact of corruption on bank risk-taking in emerging markets?	• Higher levels of corruption increase the risk-taking behavior of banks, in favor of the "sand the wheel" view in the corruption–development nexus. • The indirect effects of corruption with monetary policy on banks'' risk-taking behavior is more pronounced with the increasing severity of corruption.
(Laeven, 2001)	• Russian firms	• What is the effect of bank ownership on insider lending?	• The model explains why insider loans are often made to borrowing firms that are also large shareholders of the bank. • The Russian firms and banks engaged in insider lending based on loan volume.

Stream 3: The impact of bank corruption on firms

Reference	Sample	Research question	Findings
(Beck, Demirgüç-Kunt, & Maksimovic, 2005)	• 4000 firms from 54 countries	• What is the effect of financial, legal, and corruption problems on firm growth? • How does the corruption of financial intermediaries affect firms?	• Smallest firms face most constraints. • Financial and institutional development weakens the constraining effects of financial, legal, and corruption obstacles. • The corruption of bank officials constrains firm growth.
(Ayyagari, Demirgüç-Kunt, & Maksimovic, 2010)	• 2400 Chinese firms	• Which has more effect on firm growth: formal or informal finance in China? • How does bank corruption affect this relationship?	• A smaller number of firms utilize formal bank loans in China. • Bank financing has a positive effect on growth compared to informal financing. • However, the bank corruption in lending may have a different effect on firm performance.

Citation	Sample	Research Question	Findings
(Qi & Ongena, 2019)	• Multiple firms	• What is the effect of bank corruption (receiving bribery from firms) on firms' growth and access to finance?	• Bank corruption hinders firm access to finance and growth.

Stream 4: The impact of political connections on bank corruption

Citation	Sample	Research Question	Findings
(Claessens, Feijen, & Laeven, 2008)	• 216 Brazilians firms from 1998–2002.	• What effect does campaign finance on the return of the firms? • How does bank finance work during the election campaigns?	• Firms that provided contributions to (elected) federal deputies experienced higher stock returns than firms that did not provide contributions around the 1998 and 2002 elections. • Contributing firms increased their bank financing relative to others, indicating that access to bank finance is an important channel through which political connections operate.
(Dinç, 2005)	• 36 countries	• What effect does the ownership (government or private) of a bank have on the volume of lending during elections (politics) in emerging markets?	• Government-owned banks increase their lending in election years relative to private banks. • The increase is 11 percent in government-owned banks' portfolios during election days.
(Chen et al., 2017)	• Chinese initial public offerings (IPOs) from 2006 to 2011.	• How do politically connected banks behave in relation to IPOs in China?	• Politically connected banks receive approval from the Chinese Securities Regulatory Commission (CSRC) to act as underwriters more easily than politically unconnected ones. • Politically connected banks charge a high commission, but there is no difference between the under-pricing of IPOs.

Stream 5: The impact of corporate governance and regulations on bank corruption

Citation	Sample	Research Question	Findings
(Beck, Demirgüç-Kunt, & Levine, 2006)	• 2500 firms across 37 countries	• What is the effect of bank supervisory policy on bank lending?	• A traditional approach to bank supervision, which involves empowering official supervisory agencies to monitor, discipline, and influence banks directly, does not improve the integrity of bank lending. • Empowering private monitoring of banks by forcing banks to disclose accurate information to the private sector tends to lower the degree to which corruption of bank officials is an obstacle to firms raising external finance.
(Wang & Hsu, 2013)	• Banks between 1996 and 2010	• What is the impact of the board composition on the operational risk events of the bank, such as corruption, fraud, client, product, and business practices?	• Board composition is negatively related to banks' operational risk events. • More adverse boards hinder monitoring. • However, having a higher number of independent directors reduces the chance of fraud in the banks.
(Huang & Wei, 2006)	• Developing countries	• What is the effect of weak institutions (corruption) on formulating the monetary policymaking institutions?	• The pegged exchange rate, or dollarization, while sometimes prescribed as a solution to the credibility problem, is typically not appropriate for countries with poor institutions. • There is doubt regarding the notion that a low inflationary framework can induce governments to improve public institutions.

Reference	Context	Analysis / Question	Findings
(Bagus & Howden, 2009)	• American Banking system	• Analysis of mismatch between loan and deposit maturities.	• The mismatch between loan and deposit maturities is not fraud but is risky for banks.
(Nguyen, Hagendorff, & Eshraghi, 2016)	• US Banks	• Is the board able to prevent corruption in banks?	• Board monitoring increases the likelihood that misconduct is detected, increases the penalties imposed on the CEO, and alleviates shareholder wealth losses following the detection of misconduct by regulators.

Stream 6: The manipulation of the IBOR

Reference	Context	Analysis / Question	Findings
(McConnell, 2013)	• Analysis of three banks: Barclays, UBS, and Royal Bank of Scotland	• Analysis of manipulation of the London interbank offered rate (LIBOR) by a bank official.	• LIBOR submitters and brokers manipulate it for their benefits, which increases bank operational risk.
(Monticini & Thornton, 2013)	• Barclays and UBS Banks	• What is the effect of underreporting LIBOR?	• (i) Several banks were fined due to under-reporting of LIBOR rates. (ii) Barclays and UBS Banks are among these banks. (iii) LOBOR rate affects the bank default risk rate.
(Duffie & Stein, 2015)	• Analysis of LIBOR and IBOR	• How can the manipulation of LIBOR and other IBORs be controlled?	• The Financial Stability Board issued a report on how to control the manipulation of the LIBOR and other IBORs by the banks. • The authors discussed that report in detail.
(Fouquau & Spieser, 2015)	• Several bank and LIBOR	• Analysis of the LIBOR manipulation by banks and their relationship with economic events.	• The FSA published a report in September 2012 about bank LIBOR manipulation. • The author identified the events of manipulation of LIBOR during significant economic events, namely Lehman Brothers' bankruptcy or central banks' decisions.

Note: The table shows a summary of key papers that create citation mapping.

5. Conclusion

Corruption is one of the major challenges to the growth of the economic and financial system globally. It negatively impacts the world economy and societies when banks or financial institutions are involved in corrupt activities. Hence, corruption in banks is a managerial and business issue beyond the only subject of technical finance. There may be a need to consider establishing a better organizational anti-corruption architecture system within banks. The academic researchers and journals from finance, management, and international business should consider developing and publishing more on theoretical frameworks to explain the corruption in banks. Further, we propose a policy recommendation that developed economies and controlling bodies start funding research projects and anti-corruption conventions in developing countries to overcome the problem of money laundry and terrorism financing through banks. This paper is an attempt to summarize the literature on corruption in banks. A possible limitation of this study concerns the bibliometric analysis of only ISI WOK. We recommend applying bibliometric analysis on other databases, such as Scopus or Google Scholar, subject to the availability of software.

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Essay/Paper 03

Corruption, Foreign Aid and Foreign Direct Investment

Corruption, Foreign Aid and Foreign Direct Investment

Salman Bahoo[a,b], Ilan Alon[b], Josanco Floreani[a]

[a]Department of Economics and Statistics, University of Udine
[b]School of Business & Law, University of Agder

This paper examines the moderating effect of foreign aid on corruption and foreign direct investment (FDI) at two points: when companies consider investing abroad (FDI propensity) and when they increase their investments in corrupt countries in which they are already invested (FDI inflows). Corruption has an asymmetric relationship with FDI. We test an integrated framework in which foreign aid as a formal institution moderates the negative impact of corruption as an informal institution on FDI during these two investment phases. We present three findings. First, corruption has a negative effect on FDI propensity, confirming the "corruption as sand" theory. Second, corruption has a positive effect on FDI inflows, confirming the "corruption as grease" theory. Third, foreign aid negatively moderates the impact of corruption on FDI. This result suggests that for foreign investors, the formal institution of foreign aid negates the adverse outcomes of the informal institution of corruption. Countries that provide foreign aid contingent on reductions in corruption promote future economic activity, mitigate investment risks, and improve the corrupt country's governance and institutional quality. Therefore, foreign aid deserves more attention from companies and governments when formulating strategies and policies related to FDI and controlling corruption.

1. INTRODUCTION

Corruption is defined as an "illegal activity conducted through misuse of power by public or private officials or firms for personal benefits, financial or otherwise" (Bahoo, Alon, & Paltrinieri, 2019, p. 2). This broader definition represents the overall reported level of corruption in a country. It is blamed for reductions in operational efficiency, information asymmetry, limited distribution of income, and weak economic growth and development (Kouznetsov, Kim & Wright, 2019; Chen, Ding, & Kim, 2010; Bahoo, 2020; Bahoo, Alon, & Floreani, 2020). In the international business discipline, the study and analysis of corruption became more important as multinational enterprises (MNEs) from developed countries entered emerging and developing countries often having a high level of corruption and a poor institutional environment (Rodriguez et al., 2006). MNEs may exercise care when formulating their international business strategies related to foreign direct investment (FDI) decisions about entering very corrupt locations because managers are concerned about the additional costs, uncertainties, and investment risks (Kwok & Tadesse, 2006). Nevertheless, according to a 2014 Foreign Bribery Report published by the Organization for Economic Cooperation and Development (OECD), MNEs are still willing to pay bribes and invest in such locations to obtain a competitive advantage.

Despite the popularity of the subject among international business scholars, MNE managers, and policymakers, there are conflicting findings in the literature about the question of how corruption affects the attraction of FDI. On one hand, the dominant view sees "corruption as sand" with regard to FDI location decisions (Wei, 2000a; 2000b; Habib & Zurawicki, 2002; Lambsdorff, 2003; Voyer & Beamish, 2004). However, one ongoing stream of research sees "corruption as grease" with regard to these same decisions, contending that it does not impede the flow of FDI to them (Wheeler & Mody, 1992; Henisz, 2000; Egger & Winner, 2005; Cuervo-Cazurra, 2008a; Barassi & Zhou, 2012). More nuanced voices condend that corruption has an asymmetric effect on FDI. Yi, Meng, Macaulay, and Peng (2019) argued and confirmed that the asymmetric effect of corruption on FDI depends on the moderating effect of formal (FDI freedom) and informal institutions (freedom of the press) during two investment phases (FDI stocks and flows). However, it is still unclear how corruption can have a dual (positive and negative) effect on FDI.

Through the lens of transaction costs and neo institutional theory, we explain the asymmetric effect of corruption on FDI. We argue that foreign aid as a formal institution negates the negative impact of corruption as an informal institution on FDI. We extend the integrated

model proposed by Yi and colleagues (2019) by considering the moderating effect of foreign aid (a formal institution) between the relationship of corruption (an informal institution) and FDI during two investment phases (FDI propensity[1] and FDI flows[2]). We argue that bilateral foreign aid moderates negatively the association between corruption and FDI because managers of MNEs consider aid an indication of future economic activity, and a factor that will reduce investment risk and improve governance and institutional quality (Wheeler & Mody, 1992). Figure 1 shows our extended integrated framework of corruption (an informal institution), foreign aid (a formal institution), and FDI.

To test our framework, we analyzed bilateral FDI and foreign aid data from 18 European[3] countries, which are the signatories of the OECD, to 34 African[4] countries with a high level of corruption and a weak institutional environment. We created a pairwise (from home to the host country) and cross-time panel data set for 2001 through 2012. Our results show a direct negative effect of corruption as an informal institution on the propensity of FDI. However, corruption also has a positive impact on FDI inflows for MNEs that have already entered a host country. Thus, the two investment phases (FDI propensity and inflows) explain the seemingly contradictory results from before: corruption can act as either "sand or greese" with respect to FDI. The results show that the formal institution of foreign aid negatively moderates the impact of corruption as an informal institution on FDI inflows. As a result, the direct negative effects of corruption on FDI becomes positive.

This study adds to the literature in three ways. First, we contribute to the neo-institutional theory that foreign aid as a formal institution negates the adverse impact of corruption as an informal institution on foreign investors. As a formal institution, foreign aid affects the international business strategies of MNEs related to FDI. Thus, international business scholars should consider the role of foreign aid as a formal institution in explaining the institution-based view of the business strategies of firms. Second, we extend and confirm the integrated model proposing that the asymmetric effect of corruption on FDI depends on two investment phases (FDI propensity and inflows) (Yi et al., 2019). Therefore, international business scholars should consider the phases of the FDI when discussing corruption as sand or grease. Third, we introduce a new line of research by adding the consideration of the combined nexus among corruption, foreign aid, and FDI to explain the international business strategies of firms. We argue and confirm that foreign aid moderates the negative effect of corruption on FDI during two investment phases.

Based on our framework, analysis, and findings, we can also make several policy recommendations for MNE managers, governments, and controlling bodies. First, our findings underscore how bilateral foreign aid from the MNEs' home government shapes the internationalization of firms and their FDI decisions. Therefore, MNE managers should observe and critically analyze foreign aid commitments and the government policies of their home countries when considering potential countries in which to invest. Second, countries that are victims of a high level of corruption should concentrate on attracting bilateral foreign aid contracts to increase the level of FDI. The need to fulfill the requirements and conditions attached to foreign aid contracts will build the confidence of foreign investors. Thus, foreign aid policies influence a country's FDI. Finally, controlling bodies such as the OECD, World Bank, and IMF can utilize foreign aid policies to influence and control corruption and weak institutional environments through strict sanctions and conditions.

2. THEORY AND HYPOTHESES

We combine both neo institutional and transaction cost theories to develop our hypotheses. Transaction cost theory suggests that the foreign direct investment decision depends on the economic, business, and social costs of different categories (Driffield et al., 2013). The business and economic costs include markets, efficiency, geographical distance (tariffs and transport), strategic assets, and resources (Dunning, 1998; Peng, 2003; 2017; Jiménez et al., 2017; Jiménez & Alon, 2018). The social costs arise from the institutional environment (e.g., bribes, corruption, bureaucratic inefficiency, weak parliaments, dictatorships, and non-implementation of the rule of law) (Habib & Zurawicki, 2002; Cuervo-Cazurra, 2006; Alon & Herbert, 2009). MNE managers use modern IT and globalization as international business strategies to control economic costs (Calhoun, 2002). However, the social costs associated with FDI decisions are more complicated. Using insights of neo-institutional theory, social costs include corruption, transparency, governance, and the rule of law as formal and informal institutions (Cuervo-Cazurra, 2006; Peng, Wang, Yi, 2008; Estrin, & Prevezer, 2010; Godinaz & Liu, 2015; Alon, Li, & Wu, 2016; Li, Alon, & Wu, 2017; Yi et al., 2019;).

Corruption affects the attractiveness of FDI and may result in increased costs (Wheeler & Mody, 1992; Habib & Zurawicki, 2002; Cuervo-Cazurra, 2008a). Corruption is one of several informal institutional factors. Researchers consider corruption as a result of a country's political, legal, cultural, business, and economic institutions (Svensson, 2005). By applying the concepts of transaction costs and neo institutional theory, the FDI decisions of MNEs to any corrupt location depends on assessments on the comparison between the potential costs and

benefits of the transaction (Rose-Ackerman, 2008). Therefore, prior literature on corruption and FDI is divided into two competing strands. The first stream of research considers "corruption as sand" for FDI because it results in high cost and uncertainty (Wei, 2000a). The second stream of research accepts "corruption as grease" for FDI because it improves efficiency and reduces costs in the corrupt host locations with poor formal institutions (Wheeler & Mody, 1992).

Following Yi et al. (2019), we maintain two phases involved in FDI. The first is pre-entry, called FDI propensity, where MNEs have yet to decide about investing. The second is post-entry, referred to as FDI inflows, where MNEs have already invested in a host country (location). Thus, this study proposes that the asymmetric impact of corruption as an informal institutional factor affecting FDI is due to foreign aid's moderating role as a formal institutional factor during the two investment phases: FDI propensity and FDI inflows.

2.1 Corruption as Sand

In the prior literature, the dominant and negative view is that "Corruption is a sand" for business and commerce wheels and reduce FDI (Habib & Zurawicki, 2001; Habib & Zurawicki, 2002). Corruption is considered and proven as an additional tax for commerce, business, and investors (Wei, 2000a; Shleifer & Vishny, 1993; Cuervo-Cazurra, 2008; Karhunen, & Ledyaeva, 2012). It increases the costs of doing business (Murphy, Shleifer, & Vishny, 1993; Jain, Kuvvet, & Pagano,2017), and firms need to devote extra financial and human resources to managing the corrupt environment (Kaufmann, 1997). Corruption also results in additional contract-related costs and risks (Boycko et al., 2017).

The researchers confirm through empirical research that corruption harms FDI. We summarize the key empirical research in Table 1. For example, in a critical study of Wei (2000a), he investigated the impact of corruption on bilateral FDI from 12 home countries to 45 host countries and confirmed that corruption hampers FDI negatively. In another study considering government policies towards FDI, Wei (2000b) also corroborated that corruption negatively impacts such investments. Lambsdorff (2003) demonstrates the negative impact of corruption on FDI by analyzing FDI in 54 countries. In another study, Voyer and Beamish (2004) examined Japanese investment and found that corruption affects FDI per capita negatively in developing countries. Similarly, the association between corruption and bilateral FDI for 106 countries is investigated by Cuervo-Cazurra (2006). He reports that different corruption types, such as pervasive corruption, have a more detrimental effect on FDI than arbitrary (Cuervo-

Cazurra, 2008b). Furthermore, the association between corruption distance and FDI is investigated by Habib and Zurawicki (20002) on a sample of bilateral FDI inflows from 7 home countries to 89 host countries. They confirm that corruption distance hurts FDI.

Building on previous researchers, we argue that, as an informal institution, corruption negatively affects potential new entrants into the host country. Thus, corruption as an additional tax and cost discourse MNEs decision to enter (FDI propensity) in a new corrupt location (Yi et al., 2019). Thus, corruption is a significant barrier to new investors. Therefore, we hypothesize that:

Hypothesis 1a: Corruption has a negative impact on the propensity of FDI during the pre-entry phase.

2.2 Corruption as Grease

In the second view, some scholars consider *"corruption as grease to the wheels of commerce"* (Egger & Winner, 2005). They highlight that corruption facilitates transactions by speeding up the process (Huntington, 1968) and introducing a market procedure into environments that are corrupt, monopolistic, and have misguided regulations (Leff, 1989). In developing countries, corruption serves as grease for firms when the revenues outweigh the costs of their business transactions (Cuervo-Cazurra, 2008a). MNEs can leverage the advantages of corruption where government and bureaucratic systems have failed to speed up the process (Boddewyn & Brewer, 1994) by avoiding complicated regulations (Tanzi, 1998) and having internal information and access to government projects (Duanmu, 2011; Tanzi & Davoodi, 2000). Although corruption is an imperfect mechanism for promoting efficiency, MNEs prefer corruption and bribery as an alternative to misguided or weak institutional environments.

Indeed, as Table 1 indicates, few studies have not found corruption hurts FDI. Wheeler and Mody (1992) confirm that there is no association between corruption and FDI. Similiary, Hines (1995) affirms that corruption has no adverse effect on inward FDI. Henisz (2000) also documented that host country corruption does not affect US MNEs' investment decisions. Furthermore, Barassi and Zhou (2012) found that corruption has a positive association with FDI after controlling for firms' host-country selection mechanisms.

Building on this research, we argue that corruption as an informal institution has a positive impact on FDI inflows. In other words, once an MNE has entered a corrupt host country and learned how to deal with the situation, its managers may invest more if the benefits outweigh

the costs. MNEs that do not want to become involved in such countries will pause at the pre-entry stage. Therefore, we posit that:

Hypothesis 1b: Corruption has a positive impact on decisions about FDI inflows of MNEs that have already entered a host country.

2.3 Corruption, Foreign Aid, and FDI

Institutions, "the humanly devised constraints that structure human interaction," are defined by North (1990, p.3). Similarly, the institutions are considered "regulative, normative, and cognitive structures and activities that provide stability and meaning to social behavior" (Scott, 1995, p.33). Keeping in mind these institutions' concepts, they are classified as formal and informal (Peng, Want, and Jiang, 2008). The formal and informal institutions influence transactions in the area of law (e.g., economic and trade liberalization), politics (e.g., transparency, governance, and government structure), society (e.g., attitudes, behavior, ethics, norms, and culture), and international business (FDI and trade) (North, 1990; Peng et al., 2008; Bevan, Estrin, & Meyer, 2004). MNE managers must consider the quality of and differences between institutions because they operate in multiple, varied locations (Meyer & Peng, 2016). Thus, the institutions' quality influences MNEs' foreign investment decisions by reducing the information asymmetry about the host country's market and economic conditions (Meyer et al., 2009).

The institutions' quality determines the FDI by moderating the cost of economic activity in the foreign markets (Blonigen, 2005; Stevens et al., 2016). The institutional conditions and boundaries determine the economic benefits and costs of business transactions, which influence the international business strategies of MNEs (Zhou & Peng, 2010). MNE managers formulate strategies to overcome the problem of high costs in foreign markets with weak institutions (Stevens et al., 2016). Previous literature discusses two types of institutions: formal (e.g., the rule of law, government, bureaucracy, competition, legal, and information institutions) and informal institutions (e.g., norms, corruption, religion, media, culture) (Zhou & Peng, 2010; Sartor & Beamish, 2014; Mudambi, Navarra, & Delios, 2013). Corruption, as an informal institution, reduces FDI (Badinger & Nindl, 2014). Thus, it is valuable to explore the association of corruption on FDI by considering different institutions' types. Recently, Yi et al. (2019) presented and confirmed an integrated model that FDI freedom (a formal institution) and press freedom (an informal institution) have a moderating effect between corruption and FDI. We extend this integrated framework by arguing that foreign aid as a formal institution

moderates corruption's negative impact as an informal institution on FDI. In other words, foreign aid (as a formal institution) negates the negative effect of corruption (as an informal institution) on the FDI decisions of MNEs.

We argue that MNEs consider foreign aid to developing countries with weak institutional environments to mitigate and reduce investment risks in such countries. Research findings have supported this theory in several ways. First, bilateral foreign aid flow in the developing country indicates an increase in future economic activity (Ear, 2007). Second, such aid contains several conditions and sanctions, resulting in improving the corrupt country's governance, institutions, democratic systems, and law rule (Ear, 2007; Okada & Samreth, 2012). Third, in the event of bilateral foreign aid, the donor country may ask about the recipient country's internal information about business scenario, environment, and economic position that can be transmitted exclusively to the donor's MNEs (Kimura & Todo, 2010). Fourth, the donor country can make the aid contingent on implementing their specific business practices, rules, and quality requirements (Kimura & Todo, 2010). Fifth, the aid also helps reduce petty corruption by government officials in developing countries because it helps pay their salaries (Knack, 2011).

The prior empirical literature is divided into three strands: corruption and FDI, foreign aid and corruption, and foreign aid and FDI. We summarize the critical papers in Table 1. Despite the importance of the nexus between foreign aid and corruption, existing research is limited. The dominant view is that foreign aid reduces corruption and increases economic activity (Knack, 2001; Tavares, 2003; Okada & Samreth, 2012; Charron, 2011; Mohamed et al., 2015). Okada and Samreth (2012) investigated the association between foreign aid and corruption in the recipient country. They confirm that foreign aid improves the institutional environment and reduce corruption. Mohamed et al. (2015) examined the association between bilateral foreign assistance and corruption in a sample of 42 Sub-Saharan African (SSF) countries between 2000-2010. They confirmed that foreign aid reduces corruption. Similarly, Knack (2001) empirically confirms that foreign aid improves governance and reduce corruption in a sample of 86 countries data between 1975 to 1995. Nevertheless, a few scholars found no association between foreign aid and corruption (Menard & Weill, 2016; Efobi, Beecroft, & Asongu, 2019).

In the literature, the third strands have also explored foreign aid and FDI nexus. Most of the studies confirm the positive effect of foreign aid in attracting FDI (Karakaplan, Neyapti, & Sayek, 2005; Rao et al., 2020; Harms & Lutz, 2003; Kimura & Todo, 2010; Selaya & Sunesen, 2012; Garriga & Phillips, 2013; Aluko, 2020) (see Table 1).

Foreign aid attracts FDI by improving aid recipient countries' institutional quality and governance (Karakaplan, Neyapti, & Sayek, 2005). Kimura and Todo (2010) confirmed that foreign aid positively impacts FDI inflow from the same donor country. They examined this association in a sample of 5 homes and 98 host countries from 1985 to 1989. Harms and Lutz (2003) investigated and confirmed the positive effect of aid on FDI inflows of the recipient country. Similarly, Selaya and Sunesen (2012) documented a noteworthy link between foreign aid and capital investment. They discovered that foreign aid attracts investment (physical transfer of capital) by improving the capital's marginal productivity. Notably, foreign aid is also a positive signal for foreign investors in low-income countries (Garriga & Phillips, 2013). On the other hand, a few scholars argued that there is no relationship between foreign aid and FDI (Asiedu, Jin, & Nandwa, 2009; Rao et al., 2020).

Taken together, we highlight a joint nexus among corruption (an informal institution), foreign aid (a formal institution), and foreign direct investment. We present a new line of research that foreign aid as a formal institution impacts the international business strategies of MNEs related to FDI. We argue that MNEs decide to invest in a corrupt location because of bilateral foreign aid (a formal institution). Foreign aid increases economic activity, mitigates investment risk, and reduces FDI in the pre-entry phase (Wheeler & Mody, 1992). Thus,

Hypothesis 2a: Foreign aid negatively moderates the relationship between corruption and the propensity of FDI.

As a formal institution, foreign aid improves the governance, institutional quality, and investment circumstances in corrupt host countries through the sanctions attached to aid contracts with aid recipient countries (OECD, 2016). In the post-entry phase, firms increase their investment in a corrupt host country if they receive foreign aid. The incumbent firms also have experience in dealing with corruption in the host country. Thus,

112

Hypothesis 2b: Foreign aid negatively moderates the relationship between corruption and FDI inflows.

a) Pre-entry Investment Phase

Host Country Corruption — **H1a (-)** → FDI Propensity

**H2a (-)
(Moderation)**

Foreign Aid

b) Post-entry Investment Phase

Host Country Corruption — **H1b (+)** → FDI Inflow

**H2b (-)
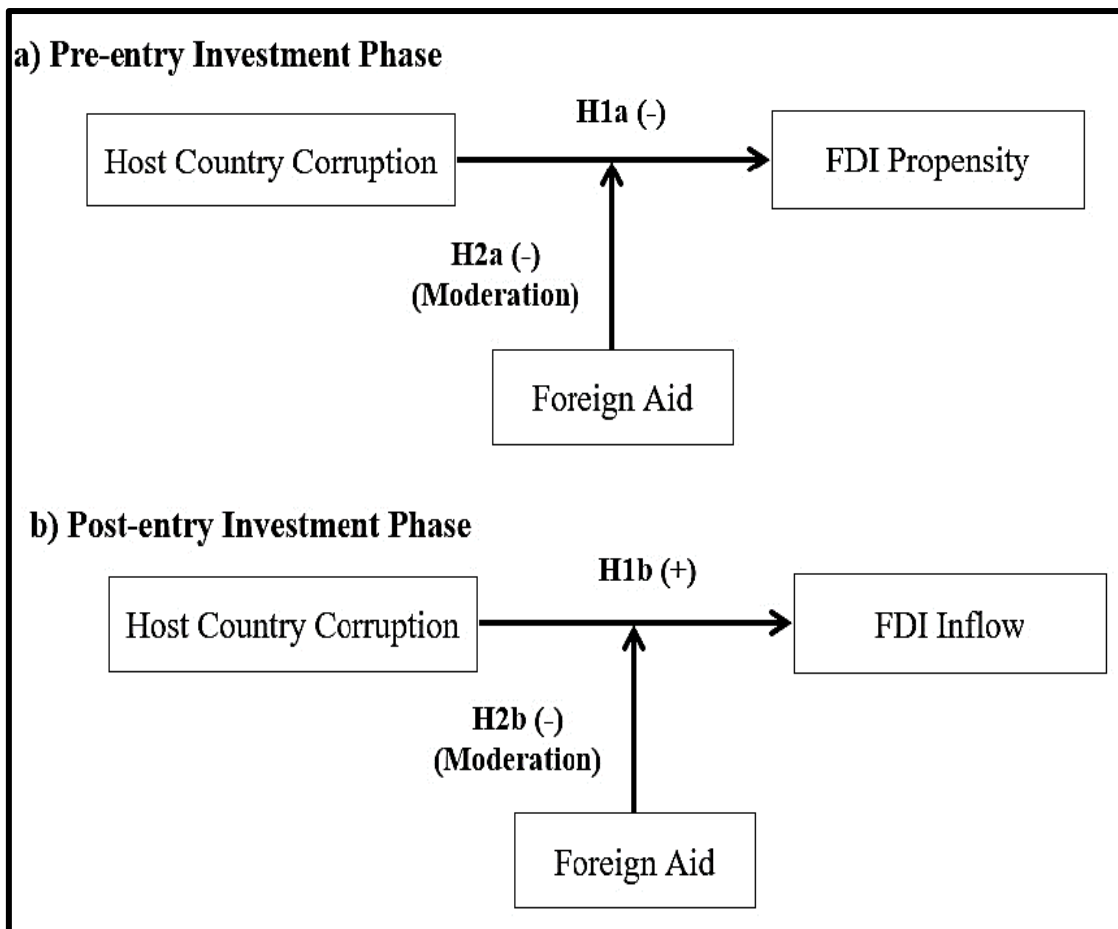(Moderation)**

Foreign Aid

Figure 1: Theoretical Framework

Table 1 Summary of key papers

Article	Research Question/Objective	Sample and Scope	Dependent Variable	Independent Variable	Findings
Nexus: Corruption as Sand and FDI					
(Habib & Zurawicki, 2002)	What is the impact of corruption on FDI?	i.1996-1998 ii.Between 7 home and 89 host countries	i. Bilateral FDI flow	i. Level of corruption ii.Corruption Distance	i. Corruption and corruption distance hurts FDI. ii. Foreign investor aid corruption due to extra cost.
(Wei, 2000a)	What is the impact of corruption on FDI?	i. 12 home and 45 host countries ii. during 1989	i. Bilateral FDI stocks	i. Corruption perception index	i. Increase in corruption reduce inward FDI of MNEs in the host country. ii. American investors are opposed to corruption.
(Wei, 2000b)	What is the impact of corruption on FDI?	i. 1994-1996 ii. Case of China	i. Bilateral FDI inflows ii. Composition of capital flow	i. Corruption index (ICRG)	i. Corruption hurts the volume and composition of capital importing countries' flow.
(Lambsdorff, 2003)	What is the impact of corruption on FDI?	i. during 1998	i. Domestic saving ii. Net capital inflow	i. Corruption perception index	i. Corruption has a significant impact on net capital inflows.
(Voyer, Beamish, 2004)	Relationship between corruption and Japanese FDI	i. Japan as home country ii. 1973-1995 iii. 59 hosts	i. Bilateral FDI flow	i. Corruption perception index	i. Corruption reduces FDI in countries where a strong legal framework does not exist.
(Cuervo-Cazurra, 2006)	Effect of corruption on FDI.	i. 183 home and 106 host countries	i. Bilateral FDI flow	i. Corruption perception index	i. The FDI from signatories of the OECD convention on anti-bribery is lower to corrupt locations. ii. Laws against bribery serve as a deterrent. iii. Highly corrupt countries invest in corrupt locations
(Cuervo-Cazurra, 2008a).	Effect of laws to overcome corruption's impact on FDI	i. 103 host countries ii. 1996-2002	i. Bilateral FDI flow	i. Implementation of laws against corruption ii. Corruption perception index	i. Laws need to be implemented to overcome the cost of corruption; otherwise, the foreign investor will bypass the rules and offer bribes during FDI.
(Cuervo-Cazurra, 2008b).	Effect of different types of corruption on FDI	i. 103 host countries ii. 1998-2000	i. Bilateral FDI flow	i. Corruption perception index ii. Pervasive corruption iii. Arbitrary corruption	i. Pervasive corruption is a deterrent to FDI ii. Effect of arbitrary corruption in uncertain.

114

Nexus: *Corruption as Grease and FDI*

Author (year)	Objective	Sample	Dependent variable	Independent variable	Findings
(Wheeler & Mody, 1992)	Effect of rent-seeking (corruption) on FDI location decisions	i. US MNEs in 1980	i. Capital expenditure by foreign US MNEs	i. Corruption (actual payments made by MNEs, survey data).	i. Short-term incentives (corruption) have a limited impact on FDI location decisions.
(Henisz, 2000)	Effect of corruption on entry mode choices	i. 461 US manufacturing MNEs.	i. Entry mode choices	i. Level of corruption (ICRG)	i. Political hazards and corruption have no effect on FDI decisions.
(Barassi, Zhou, 2012)	Effect of corruption on MNEs' decisions about FDI	i. 20 OECD home and 52 host countries.	i. FDI stocks	i. Corruption perception index	i. The effect of corruption is positive on FDI.
(Yi et al., 2019)	Effect of corruption on FDI during phases	i. 34 OECD home and 159 host countries.	i. FDI stocks ii. FDI propensity	i. Corruption perception index	i. Corruption has a negative effect on the propensity of FDI (pre-entry phase). ii. Corruption has a positive effect on FDI

Nexus: *Foreign Aid and Corruption*

Author (year)	Objective	Sample	Dependent variable	Independent variable	Findings
(Okada & Samreth, 2012)	What is the role of foreign aid on corruption?	i. 120 developing countries receiving aid ii. 1995-2009	i. Level of corruption (WGI)	i. Bilateral ODA disbursement i. Multilateral aid	i. Aid has a reduction effect on corruption, which is more vigorous in less corrupt countries.
(Mohamed et al., 2015)	What is the impact of foreign aid on corruption?	i. 42 African aid recipient countries ii. 2000 to 2010	i. Corruption perception index	i. Bilateral ODA disbursement	i. Foreign aid reduces corruption in African countries.
(Efobi, Beecroft, & Asongu, 2019).	What is the impact of foreign aid by sector on corruption?	i. 101 countries and African sub-sample	i. Level of corruption (WGI)	i. Bilateral ODA disbursement by sector	i. Aid for economic development, infrastructure, multi-sector, and program assistance has a reduction effect on corruption.
(Knack, 2001)	How foreign aid impacts the quality of governance, including corruption?	i. 1975-1995 ii. 80 countries	i. Level of corruption (ICRG)	i. Bilateral ODA disbursement	i. Aid improves the quality of governance by reducing corruption.

Nexus: *Foreign Aid and Foreign Direct Investment*

Author (year)	Objective	Sample	Dependent variable	Independent variable	Findings
(Kimura & Todo, 2010)	How foreign aid impacts FDI?	i. 5 donor and 98 recipient countries ii. 1985- 1989	i. Bilateral ODA disbursement	i. Bilateral FDI	i. Foreign aid from the same home country to the host country has a vanguard effect on FDI. ii. In general, aid has no relationship with FDI.

Study	Research Question	Data	Independent Variable	Dependent Variable	Findings
(Selaya & Sunesen, 2012)	What is the impact of foreign aid on FDI?	i. 1970-2001 ii. 99 countries	i. ODA commitment	i. FDI inflows	i. Foreign aid in complementary inputs sectors increase FDI. ii. Foreign aid in physical capital also attracts FDI.
(Garriga & Phillips, 2013)	What is the impact of foreign aid on	i. aid from the US to other countries	i. ODA (aid)	i. FDI inflows	i. Aid attracts FDI. ii. Firms take foreign assistance to the recipient country to signal macroeconomic conditions and make an investment decision.
(Aluko, 2020)	Is institutional quality play a mediating role between foreign aid and FDI?	i. 47 countries ii. 1996–2016	i. ODA (aid) ii. Institutional quality (mediating variable)	i. FDI flows	i. Aid attracts FDI. ii. The effect of foreign aid on FDI attractiveness is strong in countries with good quality institutions.

Note: The table presents a summary of the key papers and nexuses among corruption, foreign aid, and foreign direct investment.

116

3. METHODOLOGY

3.1 Sample and Data Sources

To test this study's framework, we choose bilateral aid, and FDI flows of 18 OECD European to 34 African countries from 2001 to 2012 (Bartels et al. 2014). The European countries are the signatories of the OECD conventions against bribery (OECD, 1997) and foreign aid and corruption (OECD, 2016). The OECD member countries are committed to providing official development aid to achieve sustainable goals. The developing countries from Africa receive significant aid from OECD. The sample is limited to European OECD countries for which bilateral FDI and aid flows to Africa available.

The bilateral FDI data come from the United Nations Conference on Trade and Development (UNCTAD) (UNCTAD, 2019), which are extensively used in related literature on corruption and FDI (Cuervo-Cazurra, 2006; Barassi & Zhou, 2012). We used bilateral aid data from the OECD database (Alesina & Weder, 2002; Schudel, 2008; Asiedu, Jin, & Nandwa, 2009; Kimura & Todo, 2010). The host country's level of corruption index scores is collected from two sources: (i) the International Country Risk Guide (ICRG) and (ii) Transparency International (TI). The data on control variables come from multiples sources such as World Development Indicators, Heritage Foundation, Freedom House, and CEPII (2019) (Cuervo-Cazurra, 2006; Yi et al., 2019). We created a pairwise (home country to the host country) and cross-time panel data set for 2001-2012. Table 2 summarizes the key variables and data sources.

3.2 Variables and Measures

3.2.1 Dependent Variables

We used two dependent variables (see Table 1): *FDI propensity* and *FDI inflows*. FDI propensity (dummy variable, 1 or 0) reflects an investor's tendency to invest in a host country (Barassi & Zhou, 2012; Yi et al., 2019). FDI inflows represent an investment from home to host in US million dollars (Lambsdorff, 2003; Cuervo-Cazurra, 2006; Wei, 2000b). We treated negative or missing values as zero and add 1000 before taking the natural logarithm (Aisbett, 2009; Kimura, & Todo, 2010; Hattari and Rajan, 2009). Zero means there are no FDI inflows, whereas a positive number indicates investments between home and corrupt host countries (Qian & Sandoval-Hernandez, 2016).

117

3.2.2 Independent Variables

In this study, the host country's corruption is an independent variable. We used the corruption index score of ICRG, which is rescaled to simplify the interpretation of the coefficients (Hayakawa, Kimura, & Lee, 2013; Osabutey, Okoro, 2015; Hakimi & Hamdi, 2017). Then, to assess the robustness test, we use the TI corruption index after rescaling (Habib & Zurawicki, 2002; Cuervo-Cazurra, 2006, 2008a, 2008b; Javorcik & Wei, 2009). See Table 2 for details.

3.2.3 Moderators

To test our hypothesis that bilateral foreign aid moderates the association between corruption and FDI, we used three foreign aid types. Our first moderator is the *official development assistant (ODA)-disbursement: net total*[5] meaning the aid disbursement from the home to the host country in US million dollars priced as a constant of 2017. The second moderator is *official development assistance (ODA)- total commitment*[6,] meaning the home's commitment to the host country in US million dollars. The final moderating variable is *total official inflows (TOF)-disbursement: net total*[7] meaning the disbursement from the home to the host country in US million dollars priced as a constant of 2017. The data of foreign aid is collected from the OECD database (Kimura & Todo, 2010; Selaya & Sunesen, 2012) (see Table 1 for details).

3.2.4 Control Variables

We used the gravity model of FDI, which is based on the proximity-concentration hypothesis (Bevan & Estrin, 2004). Thus, MNEs face challenges during expansion across the border due to ownership, locations, and international paradigm (Dunning, 1988). We controlled for the three types of variables for this study: (i) host country's factors, (ii) home country's factors, and (iii) the bilateral factors. The first type of control is the host country's factors.

We controlled for their market-seeking and natural resource-seeking motivations for *host country GDP* and *host country oil rents*. (Wei, 2000a; Buckley et al., 2007; Cuervo-Cazurra, 2006). We also controlled for any potential agglomeration effects of FDI through *host country net FDI inflows* (Wei, 2000a) because MNEs favor investing in countries with a large number of foreign firms (Disdier & Mayer, 2004). Furthermore, we controlled for investment policy and for formal and informal institutions such as the *host country's openness to FDI* and *the host country's openness to the press* that might affect decisions about FDI (Yi et al., 2019).

Second, we controlled for the market size of the home country through the *home country's GDP*. Even companies in a large economy might tend to invest in corrupt locations to achieve economies of scale (Selaya & Sunesen, 2012).

Finally, it is essential to control bilateral factors. Thus, we control the geographical *distance* representing tariffs and freights and might impact FDI and trade decisions (Linneman, 1966). We also control *common language* as a proxy of cultural and political similarity (Johanson & Vahlne, 1977). Finally, we controlled for administrative commonalities through the *common colony*, meaning whether the host country had been a home country colony. Traditionally, colonies have received their administrative traditions, such as their legal systems, from the colonial powers that once ruled them (La Porta et al., 1998). See Table 2 for details.

3.3 Estimation Strategy

We applied the two-stage Heckman model analysis to investigate the presented framework by following previous literature (see Figure 1) (Yi et al., 2019; Hakkala et al., 2008; Qian & Sandoval-Hernandez, 2016). The two-stage Heckman model is the best option to control the endogeneity of the data's zero-censored structure (Qian & Sandoval-Hernandez, 2016; Shaver, 1998).

In the first stage, we examined the investor's *FDI propensity* to invest in a specific country. We assessed the moderating role of foreign aid in the relationship between corruption and FDI decisions. We used a probit regression with random effects (Wooldridge, 1995).

We calculated inverse Mills ratios and included them in the second-stage Heckman regression to control for selection bias. To meet the exclusion restrictions and control the problem of collinearity between the Mills ratios and the independent variables, we excluded the *host country's openness to the press*, which represents the effect of informal institutions on FDI decisions, from the second-stage Heckman regression (Angrist & Pischke, 2008; Yi et al., 2019). However, the host country's institutions likely have no effect on FDI inflows once a firm already entered a corrupt host country. Thus, the following are the model specifications at the first stage.

FDI Propensity$_{ij,t}$= $\alpha_{ij,t}$ +β_1Host Country Corruption$_{ij,t-1}$ + β_2Aid$_{ij,t}$ +β_3Host-Country Corruption$_{ij,t-1}$ X Aid$_{ij,t}$ + γ X$_{ij,\,t-1}$ + $\varepsilon_{ij,t}$. ……..**Equation 1.**

Where FDI Propensity$_{ij,t}$ is a bilateral FDI decision (dummy zero or 1) from home country i to host country j at time t. Aid$_{ij,t}$ represents the bilateral aid inflows from home country i to host country j at time t. Host Country Corruption$_{ij,t-1}$ X Aid$_{ij,t}$ is the interaction term (moderators) generated by multiplying the independent variable (corruption) by the moderator (aid) (Aiken, West, & Reno, 1991). The change in the independent variable (corruption) due to the dependent variable (FDI) is contingent on the interaction term of the moderating variable (aid) (Jaccard, Wan, & Turrisi, 1990). X$_{ij, t-1}$ is the vector of the control variables, and ε$_{ij,t}$ is the error term. We lagged all independent variables to avoid the problem of reverse causality (Qian & Sandoval-Hernandez, 2016), and considering aid as a formal institution may take time to effect FDI decision. We also applied year effects.

Further, we assessed the association between FDI inflows, explanatory, moderating, and control variables during the second stage of the Heckman model analysis. In the second stage, we investigate foreign aid's moderating role on the negative impact of corruption on FDI amounts to be invested after a favorable decision to enter in the host country in the first stage. The pooled OLS regression is applied to our panel in the second stage. The Mils ratios retrieved from Equation 1 ae included in Equation 2 and analysis in the second stage. Thus, our model specification for the second stage is the following.

LnFDI inflow$_{ij,t}$= α$_{ij,t}$ +β$_1$Host Country Corruption$_{ij,t-1}$ + β$_2$Aid$_{ij,t}$ +β$_3$Host-Contry Corruption$_{ij,t-1}$ X Aid$_{ij,t}$ + β$_4$ IMR$_{ij,t}$+ γ X$_{ij, t-1}$ + ε$_{ij,t}$. ……...**Equation 2.**

Where LnFDI inflow$_{ij,t}$ is the amount of bilateral FDI from the home to the host country. The log of dependent and independent variables is used to ensure the homoscedasticity of the error term (Wei, 2000a p.4). The term IMR$_{ij,t}$ is the inverse Mills ratio retrieved in stage one and included in stage two of the Heckman procedure. Further, the year effect is also included in the second stage.

Table 2 Key Variables and Data Sources

	Variables	Measurement	Sources (References)
Dependent variables	Ln FDI Inflows	It is a natural log of FDI inflows from home to host country in a year in US million dollars	UNCTAD (2019)
	FDI propensity	It is a dummy variable that equals 1 if FDI inflows are positive, 0 otherwise.	UNCTAD (2019)
Independent variables	Host country corruption (ICRG)	A corruption index score of host country from 0 (low) and 6 (high) (6 minus the original score)	It is constructed using data of ICRG (2019) on corruption.
	Host country corruption (TI)[1]	A corruption index score of the host country from 0 (low) and 10 (high) (10 minus the original score).	Constructed using data of TI. (2019) on corruption.
Moderators	Aid-Official development assistance (ODA)-disbursement: net total	Natural log of ODA disbursement-net total from home to host country in US million dollars measured as a constant of 2017.	OECD (2019a)
	Aid-Total official inflows (TOF)-disbursement: net total	It is a natural log of TOF disbursement-net total from home to host country in US million dollars measured as a constant of 2017.	OECD (2019a)
	Aid-Official development assistance (ODA)-total commitments	Natural log of ODA commitments- total commitments from home to host country in US million dollars measured as a constant of 2017.	OECD (2019a)
Control variables	Host country's GDP	It is a natural log of gross domestic product in US million dollars measured as a constant of 2010.	WDI (2019)
	Host country's oil rents	Oil rents as a percentage of GDP	WDI (2019)
	Host country's total net FDI	The net FDI inflows to the host country as a percentage of GDP	WDI (2019)
	Host country's openness to FDI	It represents the investment freedom in the host country, from 1 (high barrier) and 100 (low barrier)	Heritage Foundation (2019)
	Host country's press freedom	The indicator of the level of press freedom in the host country, from 1 (high barrier) and 100 (low barrier)	Freedom House (2019)
	Home country's GDP	It is a natural log of gross domestic product in US million dollars measured as the constant year 2010.	WDI (2019)
	Distance	It is a natural log of the greater circle distance between home and host countries	CePII database by Mayer and Zignago (2011)
	Common language	Dummy indicator of the existence of a common language between the home and host country, 1 or 0	CePII database by Mayer and Zignago (2011)
	Common colony	If the home and host country ever had a colonial link, dummy indicator 1 or 0.	CePII database by Mayer and Zignago (2011)

4. RESULTS

Table 3 shows the pairwise correlations, summary statistics, and variance inflation factors (VIF). The correlations do not indicate any multicollinearity problem because they are all below the suggested threshold of 0.7 (Kennedy, 2008). Another alternative approach to detecting the problem of multicollinearity between explanatory variables is the VIF score (Studenmund, 2011). Our VIF score for all variables is less than 5 from the suggested rule of thumb (Studenmund, 2011).

Table 3 also indicates how corruption, foreign aid, and FDI correlate in African countries. A high correlation level is expected because several country-level indicators are correlated (Cuervo-Cazurra, 2006; Uhlenbruck et al., 2006). The correlation matrix results show a statistically significant negative association between FDI propensity and FDI inflows, and level of corruption (ICRG and TI) at $p < 0.01$. Thus, we can conclude host country corruption hurts bilateral FDI from Europe to Africa. The results support Hypothesis 1a and are in line with previous literature (Habib & Zurawicki, 2002; Cuervo-Cazurra, 2008a). We infer that corruption reduces bilateral FDI from Europe to Africa because it increases costs and uncertainty. All three bilateral foreign aid indicators-ODA-disbursement: net total, TOF-disbursement: net total, and ODA-total commitment-have a significant positive correlation at $p < 0.01$, with FDI propensity, FDI inflows, and level of corruption (ICRG and TI). The findings confirm our direction of hypothesis, theoretical argument, and also in line with the past empirical literature. We also conclude that bilateral foreign aid attracts bilateral FDI from the same home investors and donors to host countries and reduces corruption through the strict conditions and sanctions under the OECD convention's guidelines on foreign aid (OECD, 2016).

Table 4 presents the two-stage Heckman regression analysis results, the first with FDI propensity and the second with FDI inflows. In the first stage, we used probit regressions with random effects to assess Models 1-4. In the second stage, we used pooled OLS regressions to assess Models 5-8. Models 1 and 5 are basic models that the host country's corruption hurts FDI propensity and FDI inflows. Models 2-4 and 6-8 are models that explore the moderating role of foreign aid between corruption and FDI propensity and FDI inflows.

Model 1 analyzes Hypothesis 1a that the host country's corruption impacts FDI propensity negatively during the pre-entry phase. The pre-entry phase is the time when European MNEs consider investing in Africa. We accept Hypothesis 1a. Furthermore, in Model 5, we test Hypothesis 1b that corruption has a positive association on FDI inflow during the post-entry phase. In the post-entry phase, European MNEs are ready to increase investment in Africa. The coefficient of host country corruption (ICRG) is significantly positive, confirming Hypothesis 1b.

Models 2-4 test Hypothesis 2a that bilateral foreign aid from Europe to Africa negatively moderates the negative impact of host country's corruption on FDI's propensity during the pre-entry phase.

It is expected that if foreign aid moderates the association between corruption and FDI, the original negative impact of corruption on FDI will become positive. This result would suggest that as foreign aid increases, the negative impact of corruption on FDI weakens. In Models 2, 3, and 4, we included three different types of bilateral foreign aid indicators (ODA-disbursement: net total, TOF- disbursement: net total, and ODA-total commitment) and interaction terms separately to avoid the problem of multicollinearity.

In Model 2, the aid indicator's interaction term (ODA-disbursement: net total X host country corruption) has a significant and negative coefficient. But the original association between corruption and FDI propensity remains significantly negative and confirms foreign aid has no moderating effect.

Model 3 also shows that the interaction term for aid (TOF- disbursement: net total X host country corruption) has a negative but non-significant effect. And direct effect also remains negative, confirming no moderation effect of aid. Similarly, Model 4 presents the same results. Thus, we conclude that European MNEs are reluctant to make foreign direct investments in corrupt developing African countries even when they are bilateral foreign aid recipients from the MNEs' home governments. Hence, we reject Hypothesis 2a.

We posit in Hypothesis 2b that bilateral foreign aid negatively moderates the effect of the host country's corruption on bilateral FDI inflows during the post-entry phase. Hypothesis 2b is tested in Model 6-8 by considering bilateral foreign aid three indicators and their interaction terms individually to avoid the problem of multicollinearity.

Model 6 shows a negative coefficient of foreign aid's interaction term (ODA-disbursement: net total X host country corruption) and, as a result, a positive coefficient of the direct effect of corruption on FDI inflows. The results show that foreign aid moderates the negative impact of corruption on FDI inflows. Similarly, in Models 7 and 8, the results confirm the moderating role of foreign aid's interaction terms (TOF- disbursement: net total X host country corruption, and ODA-total commitment X host country corruption). Hence, Models 6-8 confirms the moderating role of bilateral foreign aid on the relationship between the host country's corruption and bilateral FDI inflows during the post-entry phase of investment. Thus, we conclude that European MNEs that have already invested in corrupt developing African countries are willing to invest more if the benefits outweigh the costs.

Furthermore, as Figure 2 illustrates, the average marginal effect of corruption on the entire range of the three types of foreign aid confirms foreign aid's moderating role. We argue that these MNEs have the experience to deal with corrupt institutional environments. They also consider foreign aid an indication of future economic activity and a reduction in investment risks due to the bilateral aid from home governments to host countries.

4.1 Robustness Test

We also apply a robustness check to confirm our framework. We used another indicator of corruption index by TI widely used in literature (Cuervo-Cazurra, 2006; 2008a; 2008b; Yi et al., 2019). Here again, we conducted a two-stage Heckman regression analysis, the results of which we present in Table A1 in the appendix.

Models A1-A4 utilized probit regressions with random effects, where FDI propensity is the dependent variable in the first stage. In the second stage, Models A5-A8 used pooled OLS regressions, where FDI inflows are the dependent variable. Models A1 and A5 are baseline models to test Hypothesis 1a and 1b. Furthermore, Models A2-A4 test Hypothesis 2a that bilateral foreign aid has a moderating effect on the negative impact of corruption and FDI's propensity. Finally, Models A6-A8 explores Hypothesis 2b, positing bilateral foreign aid moderates between corruption and FDI inflows. Overall, our main results remain mostly unchanged.

Table 3 Summary statistics, correlation matrix, and VIF values

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Mean	0.517	3.881	3.881	6.981	18.974	18.581	23.812	9.619	7.437	5.73	43.45	42.086	12.897	8.541	0.152	0.056
S. D	1.381	0.373	0.733	1.096	56.88	91.992	67.823	1.519	14.151	10.516	21.066	17.422	1.365	0.477	0.359	0.229
VIF		1.54	1.27	1.59	4.52	1.76	3.98	1.91	1.54	1.10	1.19	1.56	1.20	1.58	1.41	1.62
(1) FDI inflows	1															
(2) FDI propensity	0.833***	1														
(3) Host country's corruption (ICRG)	-0.056***	-0.063***	1													
(4) Host country's corruption (TI)	-0.139***	-0.138***	0.361***	1												
(5) Aid-ODA-disbursement: net total	0.178***	0.132***	0.041***	0.065***	1											
(6) Aid-TOF-disbursement: net total	0.141***	0.099***	0.040***	0.037***	0.472***	1										
(7) Aid-ODA-total commitment	0.239***	0.174***	0.029***	0.041***	0.888***	0.422***	1									
(8) Host country's GDP	0.335***	0.307***	0.148***	0.071***	0.108***	0.110***	0.121***	1								
(9) Host country's oil rents	0.027**	0.012	0.309***	0.323***	-0.023	-0.013	-0.019	0.337***	1							
(10) Host country's total net FDI	0.044***	0.032***	-0.081***	0.045***	-0.023*	-0.026*	-0.031**	-0.300***	-0.106***	1.000						
(11) Host country's openness to FDI	0.021	0.050***	-0.241***	0.228***	0.058***	0.032**	0.061***	0.016	-0.181***	0.085***	1					
(12) Host country's press freedom	-0.053***	-0.044***	-0.183***	0.518***	-0.002	0.017	-0.017	-0.240***	-0.484***	-0.038***	0.315***	1				
(13) Home country's GDP	0.227***	0.188***	0.005	-0.006	0.230***	0.155***	0.252***	0.019	0.015	0.017	-0.014	0.001	1			
(14) Distance	-0.278***	-0.295***	-0.192***	0.132***	-0.014	-0.026**	0.045***	-0.278***	-0.306***	0.083***	0.040***	0.333***	-0.139***	1.000		
(15) Common language	0.128***	0.124***	-0.068***	-0.013	0.181***	0.081***	0.190***	-0.044***	-0.024*	0.010	0.027**	-0.014	0.001	-0.050***	1	
(16) Common colony	0.278***	0.218***	-0.007	-0.017	0.327***	0.186***	0.354***	-0.003	-0.001	0.007	-0.006	-0.004	0.249***	-0.034***	0.434***	1

The table lists the summary statistics, correlation matrix, and VIF values of all dependent, independent, moderating, and control variables. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 4 Two-stage analysis of FDI

Independent Variables	FDI Propensity (Stage one)				FDI Inflows (Stage two)			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model7	Model 8
Host country's corruption (ICRG)	-0.2533***	-0.3164***	-0.2684***	-0.3424***	2.1097**	3.2379***	2.0760**	3.1843**
	(0.0740)	(0.0950)	(0.0783)	(0.0876)	(1.0045)	(1.2155)	(1.0044)	(1.2867)
Host country's GDP	0.7475***	0.7435***	0.7517***	0.8095***	0.3809***	0.3695***	0.3821***	0.4265***
	(0.0713)	(0.0786)	(0.0715)	(0.0821)	(0.0352)	(0.0391)	(0.0350)	(0.0406)
Host country's oil rents	-0.0179***	-0.0137**	-0.0180***	-0.0149**	-0.0066**	-0.0056	-0.0067***	-0.0068*
	(0.0060)	(0.0067)	(0.0060)	(0.0067)	(0.0032)	(0.0039)	(0.0031)	(0.0040)
Host country's total net FDI	0.0155***	0.0104*	0.0156***	0.0120**	0.0031	0.0029	0.0032	0.0034
	(0.0047)	(0.0054)	(0.0047)	(0.0054)	(0.0020)	(0.0024)	(0.0020)	(0.0024)
Host country's openness to FDI	0.0089***	0.0069***	0.0088***	0.0079***	-0.2286**	-0.3504***	-0.2248**	-0.3475**
	(0.0023)	(0.0025)	(0.0023)	(0.0026)	(0.1068)	(0.1291)	(0.1068)	(0.1366)
Host country's press freedom	0.0015	0.0002	0.0016	0.0003				
	(0.0047)	(0.0051)	(0.0047)	(0.0051)				
Home country's GDP	0.3457***	0.2810***	0.3510***	0.2727***	0.1836***	0.1637***	0.1850***	0.1791***
	(0.0680)	(0.0827)	(0.0684)	(0.0806)	(0.0355)	(0.0449)	(0.0353)	(0.0450)
Distance	-0.9641***	-1.0465***	-0.9680***	-1.0231***	-0.5646***	-0.7008***	-0.5650***	-0.6420***
	(0.1621)	(0.1730)	(0.1622)	(0.1732)	(0.0968)	(0.1063)	(0.0959)	(0.1081)
Common language	0.5204**	0.5442**	0.5285**	0.4625*	0.1218	0.0620	0.1225	0.0845
	(0.2478)	(0.2739)	(0.2479)	(0.2712)	(0.1501)	(0.1675)	(0.1487)	(0.1698)
Common colony	1.2853***	1.2880***	1.3219***	1.3116***	1.4454***	1.2799***	1.4559***	1.4521***
	(0.3633)	(0.3826)	(0.3650)	(0.3850)	(0.2362)	(0.2540)	(0.2350)	(0.2582)
Inverse Mills ratio					-26.1472**	-39.7844***	-25.7195**	-39.4723**
					(12.0057)	(14.5192)	(12.0069)	(15.3573)

|	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Aid-ODA-disbursement: net total	-0.0087 (0.0054)				-0.0022 (0.0024)			
Aid-ODA-disbursement: net total X Host-country corruption (ICRG)	-0.0024* (0.0014)				-0.0006 (0.0006)			
Aid-TOF- disbursement: net total		-0.0025 (0.0035)				0.0004 (0.0018)		
Aid-TOF- disbursement: net total X Host-country corruption (ICRG)		-0.0005 (0.0010)				-0.0001 (0.0005)		
Aid-ODA-total commitment			-0.0092** (0.0037)				-0.0039** (0.0019)	
Aid-ODA-total commitment X Host-country corruption (ICRG)			0.0024*** (0.0010)				-0.0011** (0.0005)	
Constant	-5.5645*** (2.0502)	-3.7562 (2.3024)	-5.5841*** (2.0597)	-4.4119* (2.3235)	63.7274** (29.5924)	98.9218*** (35.7962)	62.6450** (29.5965)	97.0073** (37.8557)
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4135	3136	4135	3104	4122	3123	4122	3093
Wald χ^2	249.11	200.56	249.96	215.96				
R^2					0.287	0.299	0.287	0.314

Note: The table presents the results of the two-stage Heckman analysis. Models 1, 2, 3, and 4 show the results of the probit regressions and Models 5, 6, 7, and 8 show the results of the pooled OLS regressions. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

FDI Propensity: Marginal Effect of Corruption on FDI Propensity Over Entire Range of Foreign Aid
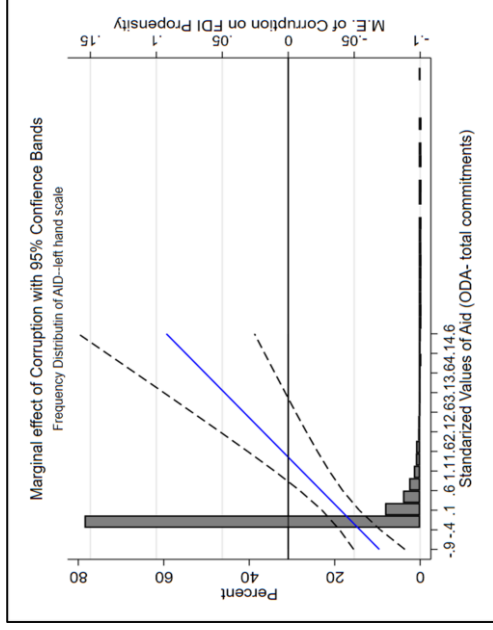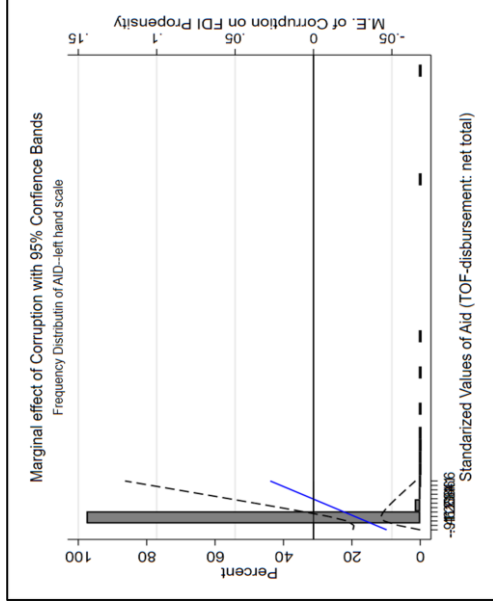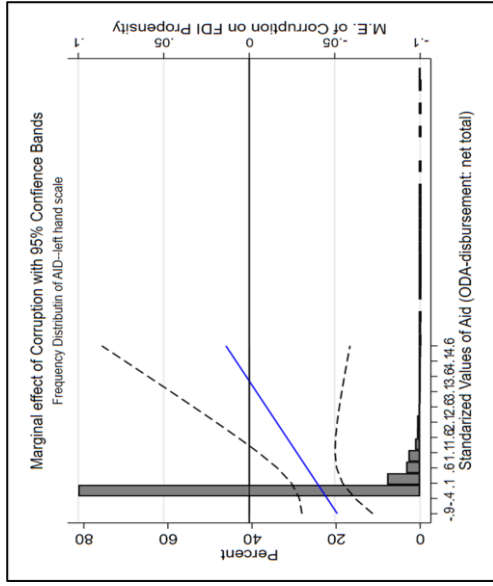
FDI Flow: Marginal Effect of Corruption on FDI Flow Over Entire Range of Foreign Aid
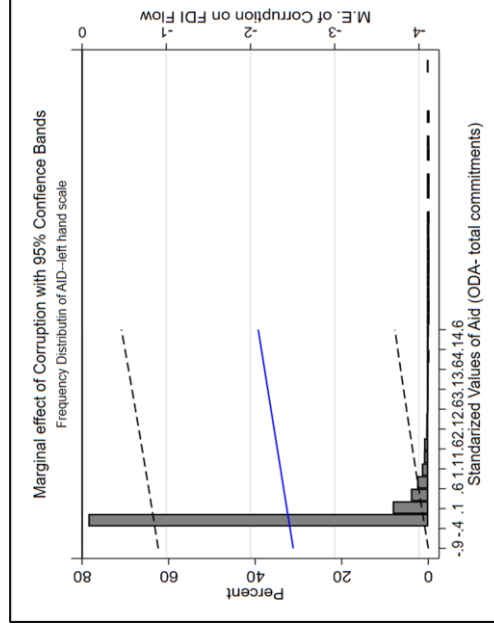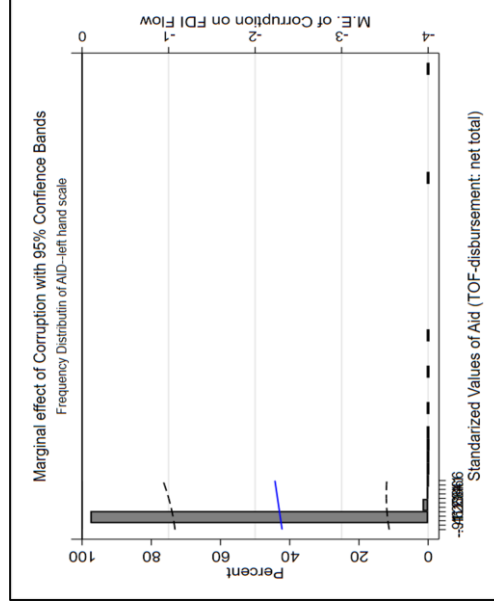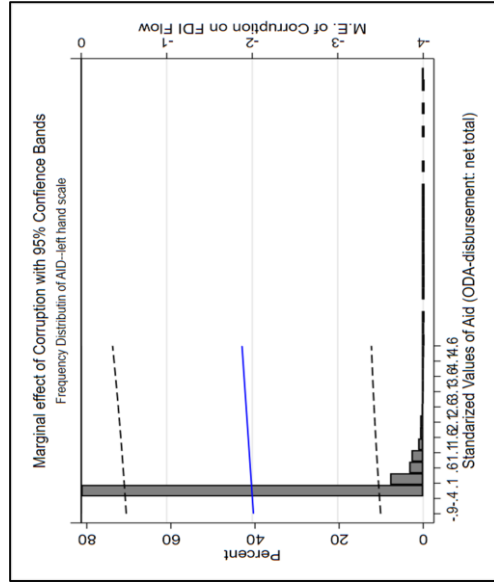
5. DISCUSSION

5.1 Contributions in Literature

In this paper, we proposed and tested an extended integrated framework to examine foreign aid's moderating effect (a formal institution) on corruption (an informal institution) and FDI during two investment phases. We explained the asymmetric impact of corruption on FDI through our extended framework. In doing so, we make the following contributions to the international business literature.

First, we enrich the existing literature and confirm that foreign aid as a formal institution negates corruption's negative impact as an informal institution on FDI. We introduced and established foreign aid's importance as a formal institution that impacts the corrupt host country's governance and institutional quality through conditions attached to the aid. Second, we extend and confirm the integrated framework presented by Yi et al. (2019) that the overall effect of corruption (an informal institution) on FDI is asymmetric and depends on two investment phases: (i) the propensity of FDI and (ii) FDI inflows. Therefore, it is essential to consider the phases of FDI when investigating whether corruption is sand or grease for foreign investors.

Third, Yi et al. (2019) proposed and confirmed the moderating effect of FDI freedom (formal institution) and press freedom (an informal institution) on the relationship between corruption and FDI during two investment phases (FDI propensity and FDI stocks). We extended this integrated framework by proposing and confirming foreign aid's moderating role (a formal institution) on the impact of corruption (an informal institution) on FDI. We also controlled for FDI freedom and press freedom to confirm our framework and model. We underscored the importance of understanding how bilateral foreign aid as a formal institution shapes firms' internationalization, particularly concerning MNEs' choices about where and whether to invest. Thus, foreign aid impacts firms' international business strategies related to FDI because it reduces transitions costs, uncertainty, and investment risks. We conclude that bilateral foreign aid is an essential factor in explaining the institution-based view of firms. Finally, this study contributes to literature related to corruption, foreign aid, and foreign direct investment. Previous studies have established the nexus between corruption and FDI (Habib & Zurawicki, 2002; Cuervo-Cazurra, 2008a), foreign aid, and corruption (Knack, 2001; Tavares, 2003), and foreign aid and FDI (Harms & Lutz, 2003; Kimura & Todo, 2010). However, this is the first

study that proposed and examined the nexus among corruption, foreign aid, and FDI by considering foreign aid's moderating role.

5.2 Policy and Managerial Implications

The following are the managerial and policy implications for governments and managers. First, governments or controlling bodies can help reduce corruption in host countries by adding strict conditions and sanctions to the foreign aid they offer. Doing so will encourage MNEs to make FDI in these corrupt host countries. Therefore, policymakers should establish proper mechanisms for providing aid to corrupt countries that require them to take active steps to reduce their corruption or face sanctions. A "carrot and stick" approach could promise them increased FDI as a reward.

For managers of MNEs, our framework suggests that they should consider their home country's foreign aid when deciding whether to invest in corrupt foreign countries. This consideration is particularly important in the stage before they choose to invest. However, having made initial investments in such countries, they can be reasonably assured that continued investments will bring more benefits with fewer risks.

5.3 Limitations and Future Research Directions

The following are the limitations of this study that suggests a future research agenda. First, we analyzed data from 2001-2012 because that was the period for which we had information. Therefore, we recommend that future studies cover more recent periods. Second, in accordance with earlier studies, we used bilateral foreign aid and FDI data at the country level (Habib & Zurawicki, 2002; Cuervo-Cazurra, 2008a; 2008b). Future research can use firm-level or industry-level datasets to confirm the framework and demonstrate how corruption affects FDI. Third, we did not account for other types of corruption, such as pervasive or arbitrary corruption (Cuervo-Cazurra, 2006). Considering these forms of corruption would help validate our framework.

Fourth, we considered bilateral foreign aid only as a moderator between corruption and FDI. We did not consider the role of multilateral foreign aid, which future research should do. Fifth, we examined foreign aid's moderating role in the relationship between corruption and FDI during two investment phases (FDI propensity and inflows). Future research can investigate multiple phases of the investment cycle to examine the nexus among corruption, foreign aid, and FDI. Sixth, we did not consider the impact of corruption (heterogeneous) on low-income

130

developing and developed countries (Bailey, 2018). Future research can examine this effect by considering the effect of corruption distance on FDI. Finally, we investigated investments from European OECD members in African countries. Future research studies can examine such connections between other regions such as Europe and Asia, India and Africa, and China and Africa. Despite these limitations, our new framework helps explain when and how corruption functions as sand or grease for prospective MNE investors.

Foot Notes:

1. The propensity of FDI represents the pre-entry phase of an MNE in a host country.
2. The FDI inflows represent the decision of MNEs to make additional investments in a host country in which they have already invested.
3. List of 18 European home countries that are investors (FDI) and also provide foreign aid.

>"Austria, (2) Belgium, (3) Denmark, (4) Finland, (5) France, (6) Germany, (7) Iceland, (8) Ireland, (9) Italy, (10) Luxembourg, (11) the Netherlands, (12) Norway, (13) Poland, (14) Portugal, (15) Spain, (16) Sweden, (17) Switzerland, (18) the United Kingdom."

4. List of 34 African host countries that are receivers of investments (FDI) and receivers of foreign aid.

>"(1) Algeria, (2) Angola, (3) Botswana, (4) Cote d Ivoire, (5) Cameroon, (6) Cape Verde, (7) Chad, (8) Djibouti, (9) Egypt, (10) Ethiopia, (11) Equatorial Guinea, (12) Gabon, (13) Ghana, (14) Guinea, (15) Guinea-Bissau, (16) Kenya, (17) Liberia, (18) Libya, (19) Morocco, (20) Madagascar, (21) Mali, (22) Mozambique, (23) Mauritania, (24) Mauritius, (25) Malawi, (26) Namibia, (27) Niger, (28) Nigeria, (29) Sudan, (30) Senegal, (31) Seychelles, (32) South Africa, (33) Tunisia, (34) Zambia."

5. Official Development Assistance-Disbursement: Net total

>"Aid for development and welfare purposes. It may be provided bilaterally, from donor to recipient, or channeled through a multilateral development agency such as the United Nations or the World Bank. The aid includes grants, "soft" loans (where the grant element is at least 25% of the total), and the provision of technical assistance. It does not include credit for military purposes. For this study, we considered only bilateral aid (OECD, 2019)."

6. Official Development Assistance-Total Commitments

>"Total commitments under ODA, which are expected to be disbursed on a pre-defined date as per the contract (OECD, 2019)."

7. Total Official Flows-Disbursement: Net total

>"The combination of official development assistance (ODA) and other official inflows (OOF) by official sectors to recipient countries. The value is actual expenditure (disbursement) (OECD, 2019)."

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Appendix A

Table A1: Two-stage analysis of FDI (Robustness check)

Independent Variables	FDI Propensity (Stage one)				FDI Inflows (Stage two)			
	Model A1	Model A2	Model A3	Model A4	Model A5	Model A6	Model A7	Model A8
Host country's corruption (TI)	-0.1967*** (0.0645)	-0.2872*** (0.0756)	-0.1950*** (0.0654)	-0.3067*** (0.0752)	3.8135*** (0.9177)	5.1035*** (1.2634)	3.8048*** (0.9170)	5.1659*** (1.3699)
Host country's GDP	0.6903*** (0.0626)	0.6828*** (0.0703)	0.6941*** (0.0629)	0.7275*** (0.0722)	0.3148*** (0.0268)	0.3270*** (0.0316)	0.3153*** (0.0262)	0.3784*** (0.0329)
Host country's oil rents	-0.0132** (0.0054)	-0.0080 (0.0062)	-0.0133** (0.0054)	-0.0079 (0.0062)	-0.0044* (0.0022)	-0.0033 (0.0030)	-0.0045** (0.0022)	-0.0038 (0.0031)
Host country's total net FDI	0.0144*** (0.0043)	0.0076 (0.0051)	0.0144*** (0.0043)	0.0089* (0.0051)	0.0024 (0.0016)	0.0021 (0.0020)	0.0025 (0.0016)	0.0024 (0.0021)
Host country's openness to FDI	0.0098*** (0.0021)	0.0085*** (0.0024)	0.0098*** (0.0021)	0.0097*** (0.0024)	-0.2076*** (0.0499)	-0.2787*** (0.0686)	-0.2071*** (0.0498)	-0.2828*** (0.0744)
Host country's press freedom	0.0015 (0.0045)	0.0013 (0.0049)	0.0017 (0.0045)	0.0010 (0.0050)				
Home country's GDP	0.3391*** (0.0640)	0.2969*** (0.0785)	0.3439*** (0.0644)	0.2805*** (0.0762)	0.1529*** (0.0293)	0.1551*** (0.0386)	0.1535*** (0.0286)	0.1690*** (0.0389)
Distance	-0.9203*** (0.1602)	-0.9928*** (0.1724)	-0.9222*** (0.1606)	-0.9583*** (0.1725)	-0.5409*** (0.0849)	-0.6659*** (0.0943)	-0.5397*** (0.0826)	-0.5935*** (0.0965)
Common language	0.7687*** (0.2254)	0.6932*** (0.2599)	0.7746*** (0.2258)	0.5992** (0.2559)	0.1421 (0.1185)	0.0956 (0.1395)	0.1421 (0.1152)	0.1222 (0.1408)
Common colony	1.0594*** (0.3355)	1.1738*** (0.3597)	1.0875*** (0.3375)	1.1469*** (0.3579)	1.1899*** (0.1911)	1.0528*** (0.2089)	1.1908*** (0.1867)	1.1484*** (0.2119)
Inverse Mills ratio					-24.3676*** (5.7366)	-32.5343*** (7.8846)	-24.3015*** (5.7323)	-33.0270*** (8.5528)
Aid-ODA-disbursement: net total		-0.0179* (0.0104)				-0.0003 (0.0038)		

140

Aid-ODA-disbursement: net total X Host-country corruption (TI)		0.0024* (0.0014)				-0.0001 (0.0005)		
Aid-TOF- disbursement: net total			-0.0004 (0.0055)				0.0029 (0.0024)	
Aid-TOF- disbursement: net total X Host-country corruption (TI)			-0.0000 (0.0008)				-0.0004 (0.0003)	
Aid-ODA-total commitment				-0.0116* (0.0069)				0.0017 (0.0030)
Aid-ODA-total commitment X Host-country corruption (TI)				0.0015* (0.0009)				-0.0002 (0.0004)
Constant	-4.9661** (1.9727)	-3.1251 (2.2091)	-5.0601** (1.9802)	-3.4935 (2.2078)	47.7409*** (11.1949)	64.5779*** (15.3588)	47.5799*** (11.1837)	64.3590*** (16.6508)
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5198	3712	5198	3646	5181	3695	5181	3631
Wald χ^2	271.48	216.82	271.71	229.57				
R^2					0.286	0.304	0.288	0.320

Note: The table shows the robustness of the two-stage Heckman analysis with the independent variable, host-country corruption from Transparency International. Models A1, A 2, A 3, and A4 show results of the probit regressions and Models A5, A6, A7, and A8 show the results of the pooled OLS regressions. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

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Essay/Paper 04

Impact of Corruption on International Trade Flows of OECD Countries: The Moderating Role of Aid and Aid for Trade

Impact of Corruption on International Trade Flows of OECD Countries: The Moderating Role of Aid and Aid for Trade

Salman Bahoo[a,b] ,Josanco Floreani[a], Ilan Alon[b]

[a]Department of Economics and Statistics, University of Udine
[b]School of Business & Law, University of Agder

Abstract

This paper examines the moderating role of bilateral foreign aid (as a formal institution) on the impact of trading partners' corruption (as an informal institution) on OECD countries' international trade flows. This study considers two main categories of bilateral foreign aid: Official Development Assistance (ODA) and Aid for Trade (AfT) as moderator. We investigate the proposed framework using the gravity model of bilateral trade flows between 29 OECD countries and their 150 trading partners from 1995 to 2018. We present three main findings. First, trading partner's corruption hurts OECD country's imports and exports. The results confirm that OECD countries follow the guidelines of the Anti-Bribery Convention 1997 and avoid business transactions with corrupt trading partners. Second, bilateral aid (ODA) has no moderating effect on corruption's negative impact on imports of OECD countries. However, only AfT has a moderating effect on OECD imports. The findings show that the OECD member avoids importing from corrupt trading partners, and even AfT boosts aid recipient countries' trade. Finally, bilateral foreign aid (ODA and AfT) moderates the negative impact of trading partner' corruption on OECD exports. The results confirm the role of foreign aid as formal institutions on OECD member exports. Therefore, foreign aid (as a formal institution) deserve more attention from OCED policymakers and manager of MNEs to boost international trade flows.

1. INTRODUCTION

International trade size is significantly less, which leads to the "mystery of missing trade" (Trefler, 1995). According to Eaton and Kortum (2002), it should be five times higher than the current recorded volume. International trade researchers have highlighted institutional quality, corruption, and weak governance as the key factors shaping trade and production patterns (Andersson & Marcouiller, 2002; Levchenko, 2007). Corruption interprets the international trade volumes in corrupt low-income countries where government and customs officials reduce trade and revenue by taking bribes against imports and export contracts (Jong & Bogmans, 2011).

Broadly, corruption is defined as an "illegal activity conducted through misuse of power by public or private officials or firms for personal benefits, financial or otherwise" (Bahoo, Alon, & Paltrinieri, 2019, p.2). Corruption impacts international trade through three main channels: transaction cost or high price, efficiency channel, and contract-awarding (Musila & Sigué, 2010). An ongoing stream of research has explored the effect of corruption (as an informal institution) on the international business transaction (FDI and trade) (Badinger & Nindl, 2014; Karhunen & Ledyaeva, 2012; Narayan & Bui, 2019; Worku, Mendoza & Wielhouwer, 2016).

In particular, corruption negatively impacts developing countries' trade volume, and trade liberalization is insufficient to improve development and trade flows (Narayan, & Bui, 2019; United Nations, 2007). Thus, developing countries repeatedly called for help to improve their ability and capacity to contribute to Multilateral Trading Systems (MTS) (Gnangnon, 2018). Consequently, in the wake of the "anti-corruption movement" in mid-1990, the official aid assistance initiative called Official Development Assistance (ODA) was started to support economic development, increase in trade flows, and reduction in the level of corruption through conditions attached with aid contracts (Charron, 2011). Thus, researchers are exploring this stream of research that how foreign aid affects the level of corruption in a recipient country (Okada & Samreth, 2012; Charron, 2011; Mohamed et al., 2015; Isaksson & Kotsadam, 2018; Dalgaard & Olsson, 2008; Tavares, 2003; Kangoye, 2013).

Furthermore, the low-income aid recipient countries also need a specific type of aid to reduce transaction costs associated with trade activity, other than technical assistance (Suwa-Eisenmann and Verdier, 2007). Against this backdrop, the Ministerial Conference of the World Trade Organization (WTO) launched another type of aid called; Aid for Trade (AfT) in 2005 to support international trade (Hühne, Meyer, & Nunnenkamp, 2014a). The OECD issued

guidelines for member countries to reduce corruption in the development sector to boost economic development and trade (OECD, 2016). OECD policymakers also investigating that is AfT fulfills its objective of increasing the trade volume of the recipient. Therefore, academic researchers are also exploring the association between foreign aid (ODA and AfT) and trade (imports and exports) (Hoekman, & Shingal, 2020; Hühne, Meyer & Nunnenkamp, 2014b; Martínez-Zarzoso, Nowak-Lehmann, & Rehwald, 2017).

The literature on corruption, foreign aid, and international trade is divided into three strands: the association between corruption and trade (corruption and trade nexus), the impact of foreign aid on corruption (foreign aid and corruption), and the role of foreign aid on trade (foreign aid and trade nexus). Taken together, we propose a joint nexus among corruption, foreign aid, and international trade flows. By utilities the concepts of neo institutional economics and transaction costs theory, we theoretically propose that foreign aid (as a formal institution) moderates the negative impact of corruption (as an informal institution) on international trade flows (imports and exports) (See Figure 1).

We investigate our framework empirically using the gravity model of bilateral trade from 29 OECD countries with their 150 trading partners from 1995-2018. We create a pairwise between the OECD member and trading partner and a cross-time panel data set to investigate Model-A & B. The selection of OECD countries as a sample to evaluate our framework depends on the following factors. First, OECD member countries have a low level of corruption on average. Second, OECD members avoid business transactions with corrupt trading partners as a signatory of the Anti-Bribery Convention 1997 to combat corruption in international business transactions (FDI and trade). Third, OECD members a key donor of bilateral foreign aid (ODA and AfT). Thus, it is valuable to explore the moderating role of bilateral foreign aid on the negative impact of trading partners' corruption on ODEC members' imports and exports.

This study has three main and unique findings. First, trading partner's corruption hurts OECD country's imports and exports. The results confirm the OECD member follow the guidelines of the Anti-Bribery Convention 1997 to combat corruption in international business transactions. Second, bilateral aid (ODA) has no moderating effect on corruption's negative impact on imports of OECD countries. However, only AfT having a moderating impact on OECD imports. The findings show that the OECD member avoids importing from corrupt trading partners and AfT boost trade of aid recipient country. Finally, bilateral foreign aid (ODA and AfT) moderates the negative impact of trading partners' corruption on OECD exports. The results confirm the role of foreign aid as formal institutions on OECD member

146

exports. Further, we explain contributions in literature and policy and managerial implications in the discussion and conclusion section.

2. THEORETICAL BACKGROUND AND HYPOTHESIS

According to neo-institutional economics, institutions are the game rules in a society that incentivizes or constrain business and economic activities (Coase, 1937; Davis & North, 1971; North, 1990). Institutions have a significant role in neo-institutional economics as they avoid uncertainty and provide to any business and economic exchange by reducing transaction costs (Williamson, 1975, 1985; North, 1990). The economic players, such as firms and countries, consider transaction costs and institutions while conducting any business and economic activity (Noth, 1990; Peng et al., 2009). According to North (1991), institutions are designed by humans, which provide a mechanism for economic interaction. The institutions have formal and informal rules that are created to reduce uncertainty in exchange (North, 1991). Formally, Peng, Want, and Jiang (2008) classified institutions as formal (e.g., the rule of law, government, bureaucracy, competition, legal, and information institutions) and informal institutions (e.g., norms, corruption, religion, media, culture). Formal and informal institutions play a crucial role in supporting or distorting transactions in international business activities (FDI and trade) (Peng et al., 2009; North, 1990; Bevan, Estrin, & Meyer, 2004). An ongoing stream of research has sought to explore the impact of corruption as an informal institution on the international business transaction (FDI and trade) (Badinger & Nindl, 2014; Karhunen & Ledyaeva, 2012; Narayan & Bui, 2019; Worku, Mendoza, & Wielhouwer, 2016).

Hence, recognizing both formal and informal institutions is an essential breakthrough in neo-institutional economics. Accordingly, foreign aid's formal and centralized nature makes it a formal institution, which impacts economic exchange and transaction costs of economic activity. Foreign aid as a formal institution has specific standard norms, rules & regulations defined by the Development Assistance Committee (DAC) of the Organization of Economic Development (OECD) in 1969 (OECD, 1972). Foreign aid as formal institutions has different types and structures to influence the overall economic activities (official development assistance) (OECD, 1972) and international business transactions such as trade through Aid for Trade (OECD, 2005b). An ongoing stream of research has explored the association between foreign aid on international business transactions (trade) (Hühne, Meyer & Nunnenkamp, 2014b; Hoekman, & Shingal, 2020).

Therefore, we combine neo-institutional economics and transaction costs theory to explore how corruption and foreign aid impact international trade flows (imports and exports)? We argue that corruption and foreign aid as informal and formal institutions impact global trade flows (import and exports) by increasing or decreasing the transaction costs if other things remain constant. Prior literature explores the following three strands related to corruption, foreign aid, and international trade flows.

The first strand, the effect of corruption on international trade (imports and exports) *(corruption and trade nexus),* is controversial. The high level of corruption in a country reduces economic development and discourages international trade (Kaufmann & Wei 1999; D'agostina, Dunne, & Pieroni 2016; De Groot et al., 2004).

On the other hand, corruption could be socially beneficial (Leff, 1964). Some studies found a positive effect of corruption on efficiency and growth of the economic system, capital formation, foreign direct investment, and trade (Méon & Weill, 2008; Mironov, 2005; Egger & Winner, 2005). Specifically, corruption is a limitation for international trade (imports and exports) (De Groot et al., 2004). The high level of corruption in institutions and customs discourse international trade as results deprive government revenues (Jong & Bogmans, 2011).

Corruption has a reduction effect on trade through three main channels: transaction cost or high price mark-up, low efficiency, and contract-awarding (Musila & Sigué, 2010). First, it may reduce economic activity efficiency, such as trade, because of corrupt bureaucratic systems and cumbersome rules & regulations in a country (Musila & Sigué, 2010). However, Leff (1964) argues that corruption could positively affect the efficiency of economic activity by paying bribes to government officials (customs) to conduct a transaction. Second, corruption may increase (decrease) transaction cost or price mark-up depends on the type of corruption with theft (pay bribe to government officials and less tax payment) and without theft (pay bribe plus full tax payments) (Sheliefer & Vishny, 1993). The corruption with theft (without theft) results in low (high) cost or price mark-up for a firm that was importing or exporting from corrupt locations (Anderson & Marcouiller, 1999). Finally, in the contract-awarding channel, the bribe and corruption in a country negatively impact the trade (import or exports) if the firm that will provide the particular commodity or service is unwilling to pay bribes to government officials (Lambsdorff, 1998). Hence, as a theoretical argument, the effect of corruption on trade (imports and export) is diverse.

Prior empirical research has dominantly founded that corruption hampers the trade (imports and exports) (see Table 1). Jong and Bogmans (2011) explored the effect of corruption on export on a sample of 100 business firms from 1999-2002 and found that corruption hurts exports. Similarly, Thede and Gustafson (2012) confirm that corruption impacts imports negatively. Further, Narayan and Bui (2019) analyzed the effect of Vietnam corruption on their bilateral imports. They found that, in general, corruption hampers the trade. But Vietnam's corruption impacts bilateral imports more than exports, and its effect is high when trading with developing countries.

In a new direction, Lambsdorff (1998) explored the impact of corruption on import and export. He studied the effect of importing the country's corruption on the exporting trading partner's trade structure. He found that Sweden and Malaysian exports have a negative impact due to trading with corrupt counterparts. But some countries like Luxembourg, Italy, France, Belgium, and South Korea exports are positively related to trade partner's corruption. Similarly, Musila and Sigue (2010) found that high corruption in Africa adversely affects their exports. They studied the bilateral trade of 47 African countries with 180 trading partners and found that corruption in African countries adversely affects their exports. Worku, Mendoza, and Wielhouwer (2016) also explored the impact of corruption on Sub-Saharan Africa's bilateral trade. They found the corruption of African countries negatively affects their trade with trading partners. Hence, the association between corruption and trade also depends on importing and exporting countries' characteristics and institutional quality.

Thus, in this study, we investigate a new research line related to corruption and international trade. This study explores the impact of trading partners' corruption on the imports and exports of OECD countries. The trade structure of OECD countries is the key element of analysis as they are a signatory of the Anti-Bribery Convention, 1997, and provider of bilateral foreign aid (ODA and AfT). Hence, we posit that.

H1a: Trading partner's corruption has a negative impact on OECD countries' bilateral trade flows (imports).

H1b: Trading partner's corruption has a negative impact on OECD countries' bilateral trade flows (exports).

The second strand of literature investigates foreign aid's impact on corruption *(foreign aid and corruption nexus)*. Researchers dominantly confirm that foreign aid reduces corruption (Schudel, 2008; Menard & Weill, 2016; Okada & Samreth, 2012; Charron, 2011; Mohamed et

al., 2015; Isaksson & Kotsadam, 2018; Dalgaard & Olsson, 2008; Tavares, 2003; Kangoye, 2013). Okada and Samreth (2012), on data of 1995-2009 by applying OLS and quantile regression, confirmed that foreign aid reduces corruption. They also found that partially, aid reduces corruption when provided by multilateral agencies. Charron (2011) also explored the association between aid and corruption in a sample of 140 countries on data from 1984-2006. He concluded that aid reduces corruption, and ODA also has an anti-corruption movement effect. Similarly, Mohamed et al. (2015) studied the impact of aid on corruption for 42 African countries on data of 2000-2010 by applying the gravity model. They found that aid has a reduction effect on corruption, and the effect of multilateral and bilateral aid is different and unique.

Further, Kangoye (2013) examined the effect of aid on governance (including corruption) for 80 developing countries from 1984 to 2004. He confirms that conditions attached to the aid help to reduce corruption and increase governance. Dalgaard and Olsson (2008) also explored the relationship between foreign aid and corruption on data of 2002. They found that the impact of aid is nonlinear that low levels of aid may reduce corruption, but this not valid for a high level of aid and corruption. Contrarly, Isaksson, and Kotsadam (2018) also found no effect of foreign aid on corruption. Overall, the view that aid has a reduction effect on corruption is dominant empirically and theoretical in literature. The empirical research also confirms the policy objective of the Development Assistance Committee (DA) of OECD. The Development Assistance Committee (DAC) of OECD implements several conditions on the recipient of bilateral aid to increase their governance, institutions, and economic development (OECD, 1972). In 2016, the OECD also issued recommendations adopted by all member countries to reduce corruption in development sectors to increase the positive effect of aid on recipient countries' governance and economic development (OECD, 2016).

The final strand in the literature investigates the impact of foreign aid on international trade flows (imports and exports) (*foreign aid and trade nexus)* (Pettersson & Johansson, 2013; Martinez-Zarzoso, 2019; Hoekman & Shingal, 2020; Calì & Velde, 2011). Pettersson and Johansson (2013) examined bilateral trade aid's effect by applying the gravity model on 184 countries on data from 1990-2005. They confirmed the Official Development Assistance (ODA) positive impact and the Aid for Trade (AfT) on the donor's trade structure and volume as well recipient. Martinez-Zarzoso (2019) also confirms the direct and indirect effect of ODA on international trade and income. He applied the gravity model on 33 donors and 125 recipient countries and found that ODA positively impacts donor and recipient's exports.

Similiary, Calì, and Velde (2011) also examined the association between AfT and trade performance for 124 countries from 1995 to 2001. He concluded that AfT reduces the cost of trade and increase exports. Recently, Hoekman and Shingal (2020) explored the impact of aid (AfT) on trade and the trade of goods and services for 28 donors and 162 recipient countries by applying the gravity model. They found that AfT has a weak effect on aggregate trade but a substantial effect on the bilateral trade of services. Thus, theoretically and empirically, the ODA and AfT positively impact exporter and importer's trade and income (Gnangnon,2018; Martínez-Zarzoso, Nowak-Lehmann, & Rehwald, 2017; Hühne, Meyer & Nunnenkamp, 2014a; Hühne, Meyer & Nunnenkamp, 2014b). From the point of policy, the empirical literature also supports the OECD recommendations and objectives that the purpose of ODA and AfT is to support and help recipient countries to achieve economic development and increase trade volume (OECD, 2005).

Take together; we propose a joint nexus among corruption (an informal institution), foreign aid (as a formal institution), and international trade flows (import and export). We argue that foreign aid as a formal institution plays a moderating role between corruption and international trade. Therefore, our objective is to explore the moderating role of bilateral foreign aid on the impact of trading partners' corruption on OECD countries' international trade flows (imports and exports). Thus, we posit that;

H2a: Bilateral foreign aid negatively moderates the impact of trading partners' corruption on OECD countries' bilateral trade flows (imports).

H2b: Bilateral foreign aid negatively moderates the impact of trading partners' corruption on OECD countries' bilateral trade flows (exports).

We present two separate models to understand the impact of corruption and foreign aid on OECD countries' imports and exports, individually. The Model-A consists of H1a, and H2a presents a framework that explores OECD countries' imports. And Model-B, based on H1b and H2b, represents a framework to examine OECD countries' exports. Figure 1 summarizes both models.
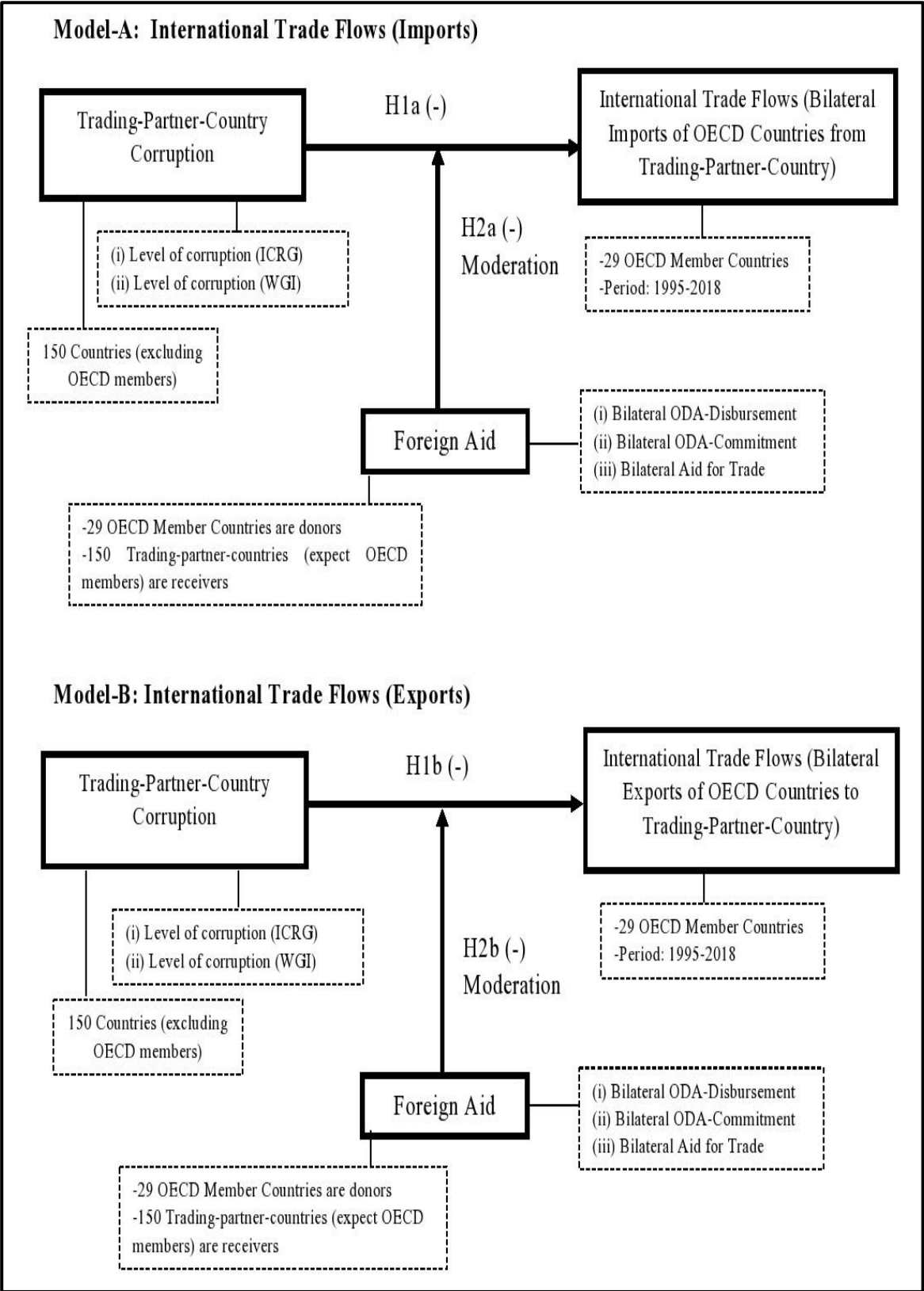
Figure 1. Framework

Table 1. Summary of Key papers

Article	Research Question/Objective	Sample/Scope/Method	Dependent Variable	Independent Variable	Findings
Nexus: Corruption and Trade					
(Jong & Bogmans, 2011)	How corruption affects international trade?	i. 100 business firms ii. Gravity model iii. 1999 to 2002	i. Trade (Export)	i. Corruption in general ii. Trade-related corruption	i. corruption hurts international trade. ii. Bribe paying to customs officials increase imports.
(Musila & Sigué, 2010)	How corruption affects international trade?	i. 47 African countries ii. 180 trading partners iii. Gravity model iv. 1998-2007	i. Trade (bilateral export)	i. Corruption (TI)	i. Corruption affects adversely to the trade flow of African countries from their trading partners.
(Thede & Gustafson, 2012)	How corruption affects international trade?	i. 47 African countries ii. 180 trading partners iii. Gravity model iv. 1999	i. Trade (bilateral import)	i. Corruption (Survey)	i. Corruption hurts international trade flow.
(Worku, Mendoza, & Wielhouwer, 2016)	What is the effect of corruption on trade tariff evasion in importing and exporting?	i. 31 Sub-Saharan Africa (SSA) ii. Gravity model iii. 2008-2014	i. Trade performance	i. Corruption (survey)	i. Corruption level in both sides (SSA and trading partner) impacts trade value, tariff evasion, and quantity gap.
(Narayan & Bui, 2019)	How corruption affects international trade (imports and exports)?	i. Vietnam Country ii. 46 trading partners iii. Gravity model iv. 2000-2014	i. Trade (bilateral import)	i. Corruption (TI)	i. In the long-run, corruption hurts exports. ii. Vietnam's corruption negatively affects its exports as compared to imports. iii. Corruption discourse more developing countries as compared to developed countries.
Nexus: Foreign Aid and Corruption					
(Okada & Samreth, 2012)	How aid affects corruption?	i. QR approach ii. 1995-2009	i. Corruption (WGI)	ii. Foreign Aid	i. Foreign Aid discourse corruption, and this effect is high in less corrupt countries.

153

Citation	Research Question	Study Characteristics	Variable	Variable	Findings
(Charron, 2011)	How aid affects corruption?	i. 140 countries ii. 1986-2006	i. Corruption (ICRG)	i. Foreign Aid (Multilateral) ii. Foreign Aid (Bilateral)	i. Foreign aid has a reducing effect on corruption. ii. ODA has an anti-corruption movement effect.
(Schudel, 2008)	How corruption affects aid?	i. 22 donor countries ii. 147 recipient countries iii. Gravity model iv. 1990 to 2003	i. Foreign Aid (Bilateral ODA)	ii. Corruption (ICRG)	i. Corruption harms foreign aid in the recipient countries. ii. Corruption impact also related to the donor level of corruption.
(Isaksson & Kotsadam, 2018)	What is the effect of Chines aid on local corruption?	i. China as Donor ii. 29 African countries iii. Gravity model iv. 1990 to 2003	i. Corruption (Interview with local people)	i. Chines Aid projects	i. Chinese aid increases local corruption, where the project is implemented. ii. Chinese aid does not add to economic activity in the short-run.
(Menard & Weill, 2016)	How aid affects corruption and vice versa?	i. 71 developing countries ii. 1996-2009	i. Corruption	i. Foreign Aid (Bilateral and multilateral)	i. There is no significant relationship between corruption and aid in either way.
(Mohamed et al., 2015)	How aid affects corruption?	i. 42 Sub-Saharan African (SSA) ii. Quantile regression (QR) iii. 2000-2010	i. Corruption (CPI)	i. Foreign Aid (ODA)	i. Foreign aid discourse corruption in countries that have a high level of corruption. ii. the aid from multilateral and bilateral sources has a different impacts on corruption.
(Dalgaard & Olsson, 2008)	How aid affects corruption?	i. Year of study 2002	i. Corruption (ICRG)	i. Foreign Aid (ODA)	i. The low level of aid may reduce foreign aid but not valid for a high level of corruption.
(Kangoye, 2013)	What is the effect of foreign aid on governance (including corruption)?	i. Year: 1984-2004 ii. 80 developing countries	i. Corruption (ICRG)	i. Foreign Aid (ODA)	i. Foreign aid increases governance and reduction in corruption level.
(Tavares, 2003)	How aid affects corruption?	i. 11 OECD countries	i. Corruption (ICRG)	i. Foreign Aid (ODA)	i. Aid decreases corruption.

Author	Research Question	Data/Method	Trade (Bilateral export and imports)	Corruption (TI)	Findings
(Lambsdorff, (1998)	What is the effect of the corruption of importing countries on the export structure of exporting countries?	i. 19 exporting countries ii. 1992-1995 iii. 87 importing countries			i. Corruption of importing country harms the export structure of exporting countries.

Nexus: Foreign Aid and Trade

Author	Research Question	Data/Method	Trade (Bilateral export and imports)	Corruption (TI)	Findings
(Pettersson & Johansson, 2013)	What is the effect of aid on bilateral trade?	i. 184 countries ii. 1990-2005 iii. Gravity model	i. Bilateral trade (Export)	i. Aid for technical assistance ii. Aid for Trade	i. Bilateral aid encourages bilateral trade (export of donor and recipient) ii. Aid for trade has a small effect overall but high on donor export to Africa.
(Gnangnon,2018)	How AfT affects the trade policy of the recipient country?	i. 123 countries ii. 2002-2015 iii. Gravity model	i. Trade Policy (freedom to trade)	i. Aid for trade	i. AfT positively affects to trade policy liberalization of recipient countries.
(Martinez-Zarzoso, 2019)	How aid affects international trade and income?	i. 33 donor countries ii. 125 recipient countries iii. Gravity model iv. 1995-2016	i. Bilateral trade (Recipient and Export)	i. Foreign Aid	i. Aid directly affects a donor's export and income. It also indirectly affects the recipient's exports and income.
(Hoekman & Shingal, 2020)	How aid affect the trade of goods and services?	i. 28 donor countries ii. 162 recipient countries iii. Gravity model iv. 2002-2015	i. Bilateral trade ii. Aggregate trade	i. Aid for trade	i. AfT has a weak effect on aggregate trade ii. AfT positively affect bilateral trade of services.
(Martinez-Zarzoso, Nowak-Lehmann, & Rehwald, 2017)	How Aft affects exports of the recipient country?	i. 124 countries ii. Quantile regression iii. 2000-2011	i. Trade (Export)	i. Aid for trade	i. AfT positively impacts the export of recipient countries. ii. The effect of AfT is higher on the export of services as compared to goods.

Reference	Research question	Methodology	Dependent variable	Independent variable	Findings
(Hühne, Meyer & Nunnenkamp, 2014a)	How Aft affects trade?	i. 22 donor countries ii. 125 recipient countries iii. Gravity model iv. 1990 to 2012 v. Relationship between North and South countries	i. Trade (bilateral export and import between developing countries)	i. Aid for trade (from OECD donors)	i. Aft from developed (North) to developing (South) ease the trade relationship between developing countries (South-South).
(Hühne, Meyer & Nunnenkamp, 2014b)	How Aft affects the trade of donor and recipient country?	i. 29 donor countries ii. 158 recipient countries iii. Gravity model iv. 1990 to 2010	i. Trade (bilateral export and import between donor and recipient)	i. Aid for trade (from OECD donors)	i. Aft increase recipient country's imports and exports with donor countries. ii. This is neglect the view the donors only give AfT for their own benefit.
(Cali, & Velde, 2011)	What is the effect of aid for trade on trade performance?	i. 124 countries ii. Gravity model iii. 1995-2001	i. Cost of Trade ii. Trade (exports)	i. Aid for trade	i. AfT reduces the cost of trade and increases exports. ii.

Note: The table presents the summary of key papers.

156

3. METHODOLOGY

3.1 Sample Selection and Data Sources

We test our model related to corruption, foreign aid, and international trade flows on a sample of 29 OECD countries and their 150 trading partners. These OECD countries are also donors of bilateral foreign aid to these 150 trading partners (recipient). We selected OECD countries' international trade flows to examine our framework due to the following reasons. First, they signify the Anti-Bribery Convention, 1997, to combat corruption in international business transactions (FDI and trade) (OECD, 1997). As a result, they avoid business transactions with corrupt trading partners. Second, OECD countries are the prominent donors of ODA and AfT to boost economic development and trade of low-income aid recipient countries (OECD, 1972, 2005. Third, together, OECD and WTO established a monitoring framework to monitor that ODA and AfT fulfill the required policy objectives (OECD, 1972). In 2016, OECD also issued recommendations for member countries to reduce corruption in the development sector in aid recipient low-income countries (OECD, 2016). Finally, the level of corruption in OECD member countries is low on average compared to their trading partners, making them a perfect sample to examine the framework.

The bilateral trade flows (imports and exports) data of 29 OECD countries are collected from IMF Directions of Trade Statistics (IMF, 2020) (Musila & Sigué, 2010). The bilateral foreign aid (ODA and AfT) data of OECD countries is collected from the OECD database on development aid (Okada & Samreth, 2012; Schudel, 2008). Further, country-level corruption data for 150 trading partners came from two sources; (i) World Governance Indicator (Okada, & Samreth, 2012) and (ii) International Country Risk Guide (Charron, 2011). We also controlled for multiple factors, and data came from several sources, such as World Development Indicators, Heritage Foundation, and CePII (Cuervo-Cazurra, 2006; Pettersson & Johansson, 2013). We investigate this framework by applying the gravity model that bilateral trade flows between 29 OECD countries and their 150 trading partners (excluding OECD members) from 1995 to 2018. The list of 29 OECD and their 150 trading partners is given in Appendix Table A3. Further, Table 2 summarizes the key variables, data sources, and measurements.

3.2 Variables and Measurements

3.2.1 Dependent Variable

In this study, two dependent variables are used to examine the association between corruption, aid, and international trade. First, *Bilateral Imports[1]*, which is the total volume of imports in US dollars to the importing country (OECD country (i)) from the exporting country (trading partner, (j)) (Narayan, & Bui, 2019). The second dependent variable is *Bilateral Exports[2]* that represents the total volume of exports in US dollars from the exporting country (OECD country (i)) to the importing country (trading partner (j)) (Jong & Bogmans, 2011). We present two separate models to understand the impact of corruption and foreign aid on OECD countries' imports and exports individually (See Figure 1).

3.2.2 Independent Variable

The independent variable is trading partner corruption at the country level. We used two proxies for corruption at the country level: (i) corruption index by the International Country Risk Guide (ICRG), and (ii) corruption index by World Governance Indicators (WGI) (Hayakawa, Kimura, & Lee, 2013; Osabutey, Okoro, 2015; Hakimi & Hamdi, 2017; Habib & Zurawicki, 2002; Schudel, 2008; Okada, & Samreth, 2012). We rescaled both indicators to simplify the interpretation of coefficients (See Table 2 for details).

3.2.3 Moderating Variables

Foreign aid is a moderating variable in our framework (Figure 1). We used two main categories of aid: (i) Official Development Assistance (ODA) and (ii) Aid for Trade (AfT). *Official Development Assistance (ODA)* is a government aid for promoting overall economic welfare and development in developing countries. We used two types of ODA. First, *Official Development Assistance-Disbursement: net total[3]* represents bilateral aid disbursement from OECD country (i) (donor) to trading partner (j) (recipient) in US million dollars. And *Official Development Assistance-Commitment: net total[4]* is the bilateral aid commitment from OECD member country (i) (donor) to trading partner (j) (recipient) in US million dollars. Further, *Aid-for-Trade (AfT)[5]* is defined as an aid for the specific development of trade in developing countries. And *Aid for Trade-Disbursement: net total* represents bilateral aid disbursement for promoting trade from OECD country (i) (donor) to trading partner (j) (recipient) in US million dollars (see Table 2 for details).

3.2.4 Controlling Variables

We use the gravity model of trade and control for two sets of variables; (i) trading partner factors and (ii) bilateral border factors (Hühne, Meyer & Nunnenkamp, 2014a; Calì & Velde, 2011; Schudel, 2008; Hoekman & Shingal, 2020; Jong & Bogmans, 2011; Tinbergen, 1962; Anderson & Van Wincoop, 2003). We controlled the following trading partner factors; First, *GDP* and *Population*, to control the economic conditions and consumer market size (Cali & Velde, 2011). Second, *Openness to Trade* as a proxy for a country's trade policy (Gnangnon, 2018). Finally, we controlled for the investment policy through two proxies; *Net FDI Inflows* and *Openness to FDI* (Cali & Velde, 2011; Chenery & Strout, 1966).

Further, we controlled for the following bilateral border factors (Anderson & Van Wincoop, 2003; Jong & Bogmans, 2011): (i) *Distance* between OECD country and trading partner; (ii) *Common Language* between OECD country and trading partner; (iii) *Colonial Link* between OECD country and trading partner; and (iv) *Common Border* between OECD country and trading partner (see Table 2 for details).

Table 2. Variables, Measurements, and Data Sources

Variable		Measures	Data Source
Dependent Variable:	Bilateral Exports[1]	The natural log of export is the total volume of exports in US dollars by exporting country (ODCD) (i) to importing country (trading partners) (j)	(IMF, 2020)
International Trade Flows	Bilateral Imports[2]	The natural log of import represents the total volume of imports in US dollars to the importing country (OECD) (i) from the exporting country (trading partners) (j).	(IMF, 2020)
Independent Variable:	Trading partner's corruption (WGI[*])	Corruption index of a trading partner from 0 (low) and 5 (high) (index is rescaled 2.5 minus original score)	(WGI, 2020)
Corruption	Trading partner's corruption (ICRG[*])	Corruption index of trading partners from 0 (low) and 6 (high) (index is rescaled 6 minus original score)	(ICRG, 2020)
Moderators:	Aid-Official development assistance (ODA)-disbursement: net total[3]	The aid, ODA disbursement-net total represents bilateral aid from OECD country (i) to trading partner (j) in US million dollars.	(OECD, 2020)
Foreign Aid	Aid-Official development assistance (ODA)-	The aid, ODA commitments-net total represents bilateral aid from OECD country (i) to trading partner (j) in US million dollars.	(OECD 2020)

total
commitments4

	Aid- for -Trade-Official development assistance (ODA)-disbursement: Net total[5]	Aid for Trade ODA disbursement-net total represents bilateral AfT from OECD country (i) to trading partners (j) in US million dollars.	(OECD, 2005a)
Control Variables	Trading partner GDP	The natural log of gross domestic product in US dollars represents the OECD's trading partner's national income.	WDI (2020)
	Trading partner Population	The natural log of the total population of OECD's trading partner.	WDI (2020)
	Trading partner Openness to FDI	The indicator of the level of investment freedom in the OECD country's trading partner, from 1 (high barrier) and 100 (low barrier).	Heritage Foundation (2020)
	Trading partner NET FDI Inflow	The FDI net inflows (BoP, current US$) are investment inflows in the OECD's trading partner.	WDI (2020)
	Trading partner Openness to Trade	The indicator of the level of trade freedom in the OECD country's trading partner, from 1 (high barrier) and 100 (low barrier)	Heritage Foundation (2020)
	Distance	It is the natural log of the greater circle distance between the OECD country and trading partner centers.	CePII database by Mayer and Zignago (2011)
	Common Language	It is the common language between OECD country and their trading partners. Dummy indicator, 1 (common language), or 0 (not common language).	CePII database by Mayer and Zignago (2011)
	Colonel link	Dummy indicator that OECD country and trading partner ever had a colonial relationship, 1 (colonial relationship) or 0 (not colonial relationship).	CePII database by Mayer and Zignago (2011)
	Common Border	Dummy indicator that OECD member country and trading partner share a common border, 1 (sharing) OR 0 (not sharing)	CePII database by Mayer and Zignago (2011)

Note: This table shows the details of variables, measurements, and data sources. *WGI=World Governance Indicator, and ICRG=International Country Risk Guide.

3.3 Estimation Strategy

Researcher widely used the gravity model in the literature to investigate the association between corruption, foreign aid, and international trade (Gnangnon,2018; Calì & Velde, 2011; Thede & Gustafson, 2012; Musila & Sigué, 2010; Jong & Bogmans, 2011; Schudel, 2008; Isaksson, & Kotsadam, 2018). Thus, we use the gravity model of a trade by aggregating bilateral components (See Figure 1) (Anderson & Van Wincoop, 2003; Tinbergen, 1962). We employ a fixed-effect model for our panel data. The first model specification that explores the impact of corruption and foreign aid on the OECD country's imports is the following.

Model-A:

Ln $Imports_{ijt}$= β_{0ijt} +β_1Trading partner's corruption $_{ij, t-1}$ + β_2Foreign aid$_{ij,t}$ +β_3Trading partner's corruption$_{ij, t-1}$ X Foreign aid$_{ij,t}$ + γ Xij, t-1 + $\varepsilon_{ij,t}$ ………………**Equation 1.**

Where Ln $Imports_{ijt}$ is a bilateral import of OECD country (i) from a trading partner (j) in the year (t). β_{0ijt} is the mean of unobserved heterogeneity. β_1Trading partner's corruption$_{ij, t-1}$ is the level of corruption in a trading partner. β_2 Foreign aid$_{ij,t}$ represents two categories of foreign aid (ODA & AfT) from OECD countries (i) (donor) to the trading partner. β_3Trading partner's corruption$_{ij, t-1}$ X Foreign aid$_{ij,t}$ is an interaction term (moderator) that is generated by multiplying the independent variable (corruption) with the moderator (foreign aid) (Akien, West, & Reno, 2018). Thus, the impact of the independent variable (corruption) on the dependent (trade) is contingent on the moderator (foreign aid) (Jaccard, Wan, & Turrisi, 1990). γ Xij, t-1 is the Xij, t-1 is the vector of the control variables, and εij,t is the error term. We lagged all independent variables to avoid the problem of reverse causality (Qian & Sandoval-Hernandez, 2016) and consider that foreign aid and institutions (corruption) may take time to affect the trade decision.

Model-B:

In the second model, we analyzed the impact of corruption and foreign aid on OECD countries' exports to trading partners. The international trade flows are the bilateral exports of OECD countries (i) to trading partner (j) in the year (t). The other specification is the same as explained above in Model-A. The specification of Model-B is given below.

Ln $Exports_{ijt}$= β_{0ijt} +β_1Trading partner's corruption $_{ij, t-1}$ + β_2Foreign aid$_{ij,t}$ +β_3Trading partner's corruption$_{ij, t-1}$ X Foreign aid$_{ij,t}$ + γ Xij, t-1 + $\varepsilon_{ij,t}$ ………………**Equation 2.**

We applied Breusch-Pagan test[6] to check that our panel technique's application is appropriate for this data compared to ordinary least squares (OLS) by following past literature (Greene, 2003). Tables 4 and 5 show the test results for Models A and B that panel analysis is appropriate for this data. Furthermore, we also applied Hausman's (1978)[7] test to decide which random-effect or fixed-effect model is suitable for this data. The results confirm that the fixed-model is suitable for the framework (See Tables 4 & 5). Figure 1 presents both Models A and B.

4. RESULTS

Table 3 presents the descriptive statistics, variance inflationary factors (VIF), and pairwise correlations. The correlation matrix shows no multicollinearity problem as the correlations among variables are less than defined thresholds of 0.7 (Kennedy, 2008). However, the correlation coefficients between imports and exports and ODE-Disbursement: net total and ODE- Commitment are 0.769 and 0.723. They are positively correlated because they represent the same elements, trade, and foreign aid, respectively. Thus, we do not include these variables together in the same model. Further, the results show our VIF values are less than 5, a suggested rule of thumb (Studenmund, 2011). Therefore, we confirm that there is no problem with multicollinearity among variables.

The high correlation among variables is expected because of prior literature due to several country-level indicators in the model (Uhlenbruck et al., 2006; Hoekman & Shingal, 2020). The correlation matrix presents a statistically negative relationship between trading partner's corruption (ICRG & WGI) and the OECD countries' trade, bilateral imports, and exports at $p < 0.01$. Thus, it confirms the direction and formation of our hypotheses H1a and H1b that corruption negatively and significantly impacts the OECD countries' imports and exports. Further, all three indicators of bilateral foreign aid, ODA-Disbursements, ODA-Commitment, and Aid for Trade, have a positive and significant impact on OECD countries' trade and trading partners' corruption $p < 0.01$. The findings confirm our theoretical argument that bilateral foreign aid from OECD countries to their trading partner has a reduction effect on trading partner's corruption and promotes bilateral trade with OECD countries. Thus, it confirms the directions of our hypothesis H2a and H2b in Model A and B.

Table 4 shows the results of fixed-effect panel regression analysis related to Model-A (See Figure 1). In the Model-A, we analyzed the moderating role of bilateral foreign aid on the negative impact of trading partners' corruption on OECD countries' bilateral imports. We used the corruption index of ICRG for the primary analysis. Table 4, Model 1 is the baseline model,

162

which includes dependent (imports), independents (corruption), and control variables. It confirms hypothesis H1a that trading partner's corruption has a negative and significant impact on OECD countries' trade at $p < 0.01$. Models 2 to 4 investigate the hypothesis H2a (Model-A) that bilateral foreign aid has a moderating role in the impact of trading partner's corruption on OECD countries' bilateral imports. The empirical results show that in Model 2 and 3, ODA-Disbursement and ODA-Commitment have no moderating effect on the relationship between corruption and imports. However, in Model 4, the AfT negatively moderates the negative impact of corruption on imports, and as a result, the original relationship becomes positive and significant at $p < 0.01$. The results confirm that only AfT has a moderating effect on the relationship between trading partners' corruption and OECD countries' imports. Still, overall, we conclude that bilateral foreign aid plays no moderating role. Thus, we reject H2a, and overall, the Model-A is not confirmed.

Table 5 shows the fixed-effect panel regression analysis related to Model-B (See Figure 1). In Model-B, we examined the moderating role of bilateral foreign aid on the negative impact of trading partners' corruption on the OECD country's bilateral exports. In Table 5, Model 5 is the baseline model representing our hypothesis H1b that trading partner's corruption hurts OECD countries' exports. The results show that corruption has a negative and significant effect on OECD countries' bilateral exports at $p < 0.01$. Thus, we accept our hypothesis H1b in Model-B.

Further, Models 6 to 8 examine bilateral foreign aid's moderating role between corruption and OECD countries' bilateral exports. The empirical results show that bilateral foreign aid (ODA-Disbursement, ODA-Commitment, and AfT) negatively moderate the negative impact of trading partner's corruption on OECD countries' bilateral exports. As a result, the original negative impact of corruption on exports becomes positive. Therefore, we accept hypothesis H2b in Model-B. And we conclude that bilateral foreign aid moderates the negative impact of corruption on OECD countries' bilateral exports.

Summing up, based on the results presented in Tables 4 and 5, we rejected the framework in Model-A, but we accept Model-B. We conclude that bilateral foreign aid plays a moderating role in the negative impact of corruption and OECD countries' exports, but not on imports. However, AfT individually plays a moderating role in imports.

4.1 Robustness Test

We confirm our framework in the Model-A and B and empirical results by using another measure of the level of corruption of trading partners. We used the corruption index provided by WGI for the robustness test (Okada, & Samreth, 2012; Musila & Sigué, 2010). In Appendix A, Table A1, and A2, we present the fixed-effect panel regression analysis results for Model A and B by using the corruption index of WGI. In the Tabla A1, the Models i to iv show that corruption has a negative impact on imports, but foreign aid has no moderating effect between corruption and OECD countries' imports. As a result, we accept H1a and rejects H2a. Overall, the Model-A is not confirmed. Further, in Table A2, the Models v to viii show that corruption negatively impacts OECD countries' exports, and foreign aid has a moderating effect between corruption and OECD countries' exports. We accept H1b and H2b, and overall Model-B is confirmed.

Table 3. Descriptive Statistics, VIF values and correlation matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Mean	5.468	6.111	3.721	2.857	8.198	17.69	37.455	21.318	14.522	65.455	48.36	1.343	0.003	0.114	0.034	8.81
S.D	2.993	2.657	0.951	0.766	51.182	114.058	229.952	6.651	4.329	15.264	20.214	4.966	0.052	0.318	0.18	0.654
VIF			1.76	1.76	2.44	2.34	1.08	3.57	3.58	1.09	1.09	1.00	1.00	1.10	1.10	1.01
(1) Bilateral Import	1.000															
(2) Bilateral Export	0.769***	1.000														
(3) Trading partner's corruption (ICRG)	-0.139***	-0.110***	1.000													
(4) Trading partner's corruption (WGI)	-0.011***	-0.014***	0.668***	1.000												
(5) Aid-ODA-disbursement: net total	0.102***	0.103***	0.031***	0.056***	1.000											
(6) Aid-ODA- total commitments	0.114***	0.114***	0.024***	0.054***	0.723***	1.000										
(7) Aid for Trade-disbursement: net total	0.073***	0.078***	0.047***	0.077***	0.287***	0.289***	1.000									
(8) Trading partner GDP	0.009***	0.017***	0.008**	-0.006*	-0.003	-0.001	0.017***	1.000								
(9) Trading partner Population	0.002	0.006*	0.002	0.000	-0.006	-0.004	0.013***	0.839***	1.000							
(10) Trading partner Trade Freedom	0.024***	0.051***	0.048***	-0.002	0.010**	0.004	0.003	0.025***	0.009	1.000						
(11) Trading-partner FDI Freedom	0.009*	0.009*	-0.020***	0.001	0.006	0.007	0.000	0.012***	0.030***	0.260***	1.000					
(12) Trading-partner Net FDI Inflow	0.066***	0.073***	-0.033***	-0.043***	-0.010***	-0.006*	-0.014***	0.001	0.003	0.016***	0.011***	1.000				
(13) Common Boarder	-0.007*	0.001	0.016***	0.002	-0.004	-0.005	0.001	-0.005*	-0.010***	0.017***	-0.005	0.003	1.000			
(14) Common Language	-0.017***	-0.020***	0.001	-0.010***	-0.006*	-0.014***	0.005	-0.007*	-0.014***	-0.023***	0.007*	-0.001	-0.004	1.000		
(15) Colonial Link	-0.013***	-0.011***	-0.014***	-0.006*	-0.008**	-0.013***	0.020***	-0.012***	-0.022***	-0.001	0.000	0.001	0.017***	0.357***	1.000	
(16) Distance	0.038***	0.033***	-0.010**	-0.028***	-0.002	-0.004	0.008***	-0.053***	-0.083***	-0.019***	-0.010***	0.009***	0.019***	0.035***	-0.002	1.000

Note: The table shows the descriptive statistics and correlation matrix among variables. ***VIF=Variance Inflationary Factor. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table. 4. Moderating role of foreign aid on the relationship between corruption and OECD Imports

Dependent Variable: International Trade Flows (Imports)
Independent Variable: Trading partner's corruption (ICRG)

Variables	Model 1 Corruption (independent and control variables)	Model 2 Aid-ODA-disbursement: net total (moderator)	Model 3 Aid-ODA-total commitments (moderator)	Model 4 Aid for Trade-disbursement: net total (moderator)
Trading partner's corruption (ICRG)	-0.0292***	-0.0180*	-0.0016	0.0314***
	(0.0095)	(0.0100)	(0.0103)	(0.0098)
Trading partner GDP	0.0182***	0.0160***	0.0153***	0.0196***
	(0.0031)	(0.0032)	(0.0034)	(0.0032)
Trading partner Population	-0.0095	-0.0098	-0.0047	-0.0084
	(0.0060)	(0.0062)	(0.0066)	(0.0061)
Trading partner Trade Freedom	0.0074***	0.0071***	0.0068***	0.0075***
	(0.0005)	(0.0005)	(0.0005)	(0.0005)
Trading partner FDI Freedom	-0.0003	0.0002	0.0000	-0.0002
	(0.0005)	(0.0005)	(0.0005)	(0.0005)
Trading partner Net FDI Inflow	0.0079***	0.0086***	0.0086***	0.0080***
	(0.0012)	(0.0013)	(0.0013)	(0.0012)
Common Boarder	0.7058***	0.4005	0.4245*	0.7046***
	(0.2674)	(0.2567)	(0.2499)	(0.2676)
Common Language	0.1708***	0.2264***	0.2083***	0.1749***
	(0.0578)	(0.0601)	(0.0653)	(0.0582)
Colonial Link	-0.0295	-0.2522**	-0.0866	-0.0306
	(0.0950)	(0.1028)	(0.1115)	(0.0952)
Distance	-0.0182	0.0177	0.0100	-0.0181
	(0.0273)	(0.0288)	(0.0307)	(0.0276)
Aid-ODA- disbursement: net total		0.0022***		
		(0.0007)		
Aid-ODA- disbursement: net total x Trading partner's corruption (ICRG)		-0.0005***		
		(0.0002)		
Aid-ODA- total commitments			0.0006	
			(0.0005)	
Aid-ODA- total commitments X Trading partner' corruption (ICRG)			-0.0001	
			(0.0001)	
Aid for Trade-disbursement: net total				0.0002
				(0.0002)
Aid for Trade-disbursement: net total x Trading partner's corruption (ICRG)				-0.0050*
				(0.0300)
Constant	5.8594***	5.7821***	5.8776***	5.8165***
	(0.2568)	(0.2720)	(0.2913)	(0.2597)
Observation	46860	39803	35713	45923
R-squared	0.0080	0.0085	0.0081	0.0425
Breusch test: p-value	0.0000	0.0000	0.0200	0.0001
Hausman test: p-value	0.0000	0.0000	0.0030	0.0010

Note: This table lists the fixed effect of regression on international trade flows (imports) *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 5. Moderating Role of Foreign Aid on the relationship between Corruption and OECD Export

	Dependent Variable: International Trade Flows (Export)			
	Independent Variable: Trading partner's corruption (ICRG)			
Variables	**Model 5** Corruption (independent and control variables)	**Model 6** Aid-ODA-disbursement: net total (moderator)	**Model 7** Aid-ODA-total commitments (moderator)	**Model 8** Aid for Trade-disbursement: net total (moderator)
Trading partner's corruption (ICRG)	-0.0369***	0.0275***	0.0217**	0.0397***
	(0.0085)	(0.0087)	(0.0088)	(0.0087)
Trading partner GDP	0.0300***	0.0254***	0.0240***	0.0299***
	(0.0028)	(0.0028)	(0.0029)	(0.0028)
Trading partner Population	-0.0178***	-0.0129**	-0.0105*	-0.0162***
	(0.0054)	(0.0053)	(0.0056)	(0.0054)
Trading partner Trade Freedom	0.0102***	0.0086***	0.0088***	0.0102***
	(0.0004)	(0.0004)	(0.0004)	(0.0004)
Trading partner FDI Freedom	-0.0006	-0.0007*	-0.0006	-0.0004
	(0.0004)	(0.0004)	(0.0004)	(0.0004)
Trading partner Net FDI Inflow	0.0079***	0.0071***	0.0070***	0.0080***
	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Common Boarder	-0.3481	-0.3366	-0.3163	-0.3429
	(0.2376)	(0.2213)	(0.2134)	(0.2376)
Common Language	0.1019**	0.0346	0.0521	0.1068**
	(0.0514)	(0.0519)	(0.0558)	(0.0517)
Colonial Link	-0.1114	-0.1106	-0.0351	-0.1130
	(0.0845)	(0.0886)	(0.0951)	(0.0846)
Distance	0.0054	0.0194	0.0475*	-0.0000
	(0.0243)	(0.0248)	(0.0262)	(0.0245)
Aid-ODA- disbursement: net total		0.0029***		
		(0.0006)		
Aid-ODA- disbursement: net total x Trading partner's corruption (ICRG)		-0.0007*** (0.0002)		
Aid-ODA- total commitments			0.0009**	
			(0.0004)	
Aid-ODA- total commitments X Trading partner's corruption (ICRG)			-0.0002* (0.0001)	
Aid for Trade-disbursement: net total				0.0005***
				(0.0002)
Aid for Trade-disbursement: net total x Trading partner's corruption (ICRG)				-0.0001*** (0.0000)
Constant	5.6205***	5.9255***	5.7728***	5.6316***
	(0.2283)	(0.2345)	(0.2487)	(0.2305)
Observation	46860	39803	35713	45923
R-squared	0.0192	0.0167	0.0176	0.0196
Breusch test: p-value	0.0000	0.0000	0.0000	0.0000
Hausman test: p-value	0.0000	0.0000	0.0000	0.0000

Note: This table lists the fixed effect of regression on international trade flows (exports). *** $p<0.01$, ** $p<0.05$, * $p<0.1$

5. DISCUSSION AND CONCLUSION

5.1 Contributions

In this study, we proposed and investigated a framework that bilateral foreign aid (as a formal institution) has a moderating role on the negative impact of trading partners' corruption (as an informal institution) on OECD countries' international trade flows (see Figure 1). We proposed the moderating role of foreign aid as a formal institution through the lens of neo institutional economics and transaction cost theory. Model-A and B show a combined nexus among corruption, foreign aid, and international trade flows (imports and exports). We considered two main categories of bilateral foreign aid: Official Development Assistance (ODA) and Aid for Trade (AfT) as a moderator. We investigate the proposed framework using the gravity model of bilateral trade flows between 29 OECD countries and their 150 trading partners from 1995 to 2018.

Our theoretical framework and empirical analysis contribute to the literature in the following ways. First, we confirm that the trading partner's corruption hurts OECD country's imports and exports. These findings also confirm the OECD member follow the guidelines of the Anti-Bribery Convention 1997 to combat corruption in international business transactions (FID and trade) (OECD, 1997). Second, we show that bilateral aid (ODA) has no moderating effect on corruption's negative impact on imports of OECD countries. However, only AfT has a moderating effect on OECD imports. These findings show that the OECD member avoids importing from corrupt trading partners and AfT boost trade of aid recipient country (OECD, 2005). Third, our results confirm that bilateral foreign aid (ODA and AfT) moderates the negative impact of trading partners' corruption on OECD exports. These findings also confirm the role of foreign aid as formal institutions on OECD member exports. Fourth, this study used a unique sample of OECD countries' international trade because of their extensive trade volume. They are also the largest donors of bilateral aid to low-income countries. Thus, this study's findings are useful for firms' managers, OECD policymakers, and governments of OECD and low-income countries to understand foreign aid (ODA and AfT) impact on institutions, economic development, and international trade flows. Finally, this study contributes to the literature by explaining corruption and foreign aid on international trade flows through neo institutional economics and transaction cost theory. We proposed and confirmed that foreign aid behaves as a formal institution due to its standards, norms, and rules & regulations as defined by OECD and other multilateral institutions.

147

5.2 Policy and Managerial Implications

This paper's findings also have vital managerial and policy implications for managers of firms, governments, and OECD policymakers.

First, firms should consider foreign aid as a formal institution that reduces corruption's negative impact on international trade flows. The foreign aid grants (ODA and AfT) help low-income countries boost economic development and trade volume, which helps MNEs build trust in foreign trading partners to conduct a business transaction. Second, the findings are useful for trading partners; they should realize that OECD countries' business people and firms avoid importing for them due to the high level of corruption. Thus, they need to reduce the corruption level to boost their exports to OECD countries.

Third, our findings are useful for the OECD policymakers that OECD country's business people and firms avoid doing international business transactions (import and exports) with corrupt trading partners to confirm the implementation of the Anti-Bribery Convention 1997 (OECD, 1997). Finally, the OECD policymakers should understand that foreign aid (ODA and AfT) plays a moderating role in reducing corruption and increasing trade flows. Thus, formulating a systematic framework of granting aid with strict conditions to improve governance and institutional quality will lower corruption. Further, the results confirm the OECD objective that foreign aid (ODA and AfT) should boost economic development and trade.

5.3 Limitations and Future Research Directions

This paper also has the following limitation, which could be future research directions. First, we analyzed the impact of corruption and foreign aid on international trade flows (imports and exports) of OECD countries. Therefore, we recommend that future studies examine the framework presented in this study for other developing and emerging countries. Second, we investigated the proposed Model A and B by considering bilateral foreign aid and trade relationships between 29 OECD and 150 trading partners. Future studies should investigate this framework by considering a differential regional effect, such as Asia, Africa, America, the Middle East, and Europe. Third, we do not include the individual country effect of OECD countries because we want to investigate the overall behavior of OECD members related to OECD policies about foreign aid (ODA and AfT) and trade.

Further, the researcher can examine this framework for induvial OECD countries. Fourth, we test our framework for bilateral foreign aid and trade. Future researchers should investigate the

framework for multilateral foreign aid. Finally, we used country-level data to confirm our framework. Future researchers can investigate this model by using firm-level data.

Footnotes:

[1]Import: Imports are reported on a cost, insurance, and freight (CIF) basis (IMF, 2020).

[2]Export: Exports are reported on a free on board (FB) basis (IMF, 2020).

[3]Aid-Official Development Assistance-Disbursement: Net total:

"Aid for development and welfare purposes. It may be provided bilaterally, from donor to recipient, or channeled through a multilateral development agency such as the United Nations or the World Bank. The aid includes grants, "soft" loans (where the grant element is at least 25% of the total), and the provision of technical assistance. It does not include credit for military purposes. For this study, we considered only bilateral aid (OECD, 2020)."

[4]Aid-Official Development Assistance-Total Commitments:

"Total commitments under ODA, which are expected to be disbursed on a pre-defined date as per the contract (OECD, 2019). The difference between the commitment and disbursement is happening of actual aid activity between two countries."

[5]Aid for Trade-Official Development Assistance-Disbursement: Net total:

"Aid for the development of trade. It is provided bilaterally, from donor to recipient. It is the sum of aid provided for the development of trade in the following categories: technical assistance for trade policy and regulations, trade-related infrastructure, productive capacity building, trade-related adjustment, and other trade-related needs."

[6]Breusch-Pagan Lagrange multiplier test of Heteroskedasticity: OR Variance across entities is zero.

(i) Ho: No significance difference across units (homoskedasticity) (i.e., no panel effect)

(ii) if $p<0.05$, reject ho and apply panel data analysis and vice versa.

[7]Hausman test: To decide between a random effect's regression or fixed effects regression.

(i) H0: the random effect is appropriate.

(ii) If P-value >0.05, we accept H0, the RE model is preferred. If P-value <0.05, we reject H0 and select the fixed-effects model.

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151

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Appendix A

Table A1. Moderating Role of Foreign Aid on the relationship between Corruption and OECD Imports

	Dependent Variable: International Trade Flows (Imports)			
	Independent Variable: Trading partner's corruption (WGI)			
Variables	**Model i** Corruption (independent and control variables)	**Model ii** Aid-ODA-disbursement: net total (moderator)	**Model iii** Aid-ODA-total commitments (moderator)	**Model iv** Aid for Trade-disbursement: net total (moderator)
Trading partner's corruption (WGI)	-0.0283*	-0.0143*	-0.0003*	0.0326*
	(0.0186)	(0.0207)	(0.0217)	(0.0189)
Trading partner GDP	0.0238***	0.0246***	0.0270***	0.0249***
	(0.0028)	(0.0030)	(0.0032)	(0.0029)
Trading partner Population	-0.0068	-0.0015	-0.0008	-0.0060
	(0.0054)	(0.0059)	(0.0063)	(0.0055)
Trading partner Trade Freedom	0.0073***	0.0080***	0.0078***	0.0074***
	(0.0005)	(0.0005)	(0.0005)	(0.0005)
Trading partner FDI Freedom	-0.0005	-0.0001	-0.0001	-0.0004
	(0.0004)	(0.0005)	(0.0005)	(0.0004)
Trading partner Net FDI Inflow	0.0078***	0.0080***	0.0083***	0.0081***
	(0.0013)	(0.0014)	(0.0014)	(0.0013)
Common Boarder	0.7616***	0.4519**	0.4578**	0.7615***
	(0.2363)	(0.2305)	(0.2271)	(0.2367)
Common Language	-0.0626	0.0546	0.0662	-0.0571

Variables				
	(0.0513)	(0.0562)	(0.0615)	(0.0518)
Colonial Link	0.1816**	0.0250	0.1077	0.1783**
	(0.0819)	(0.0921)	(0.1017)	(0.0822)
Distance	-0.0255	-0.0230	-0.0245	-0.0306
	(0.0241)	(0.0266)	(0.0287)	(0.0244)
Aid-ODA- disbursement: net total		0.0005		
		(0.0009)		
Aid-ODA- disbursement: net total x Trading partner's corruption (WGI) (WGI)		-0.0000		
		(0.0003)		
Aid-ODA- total commitments			-0.0003	
			(0.0006)	
Aid-ODA- total commitments X Trading partner's corruption (WGI) (WGI)			0.0002	
			(0.0002)	
Aid for Trade-disbursement: net total				0.0004
				(0.0002)
Aid for Trade-disbursement: net total x Trading partner's corruption (WGI) (WGI)				-0.0001*
				(0.0001)
Constant	4.8191***	4.9634***	5.0246***	4.8227***
	(0.2318)	(0.2578)	(0.2789)	(0.2350)
Observation	70339	57657	51606	68801
R-squared	0.0066	0.0084	0.0089	0.0071

Note: This table lists the fixed effect of regression on international trade flows (imports) by using another measure of corruption for robustness checks. *** *p<0.01, ** p<0.05, * p<0.1*

Table A2. Moderating Role of Foreign Aid on the relationship between Corruption and OECD Exports

	Dependent Variable: International Trade Flows (Export)			
	Independent Variable: Trading partner's corruption (WGI)			
Variables	**Model v** Corruption (independent and control variables)	**Model vi** Aid-ODA-disbursement: net total (moderator)	**Model vii** Aid-ODA-total commitments (moderator)	**Model viii** Aid for Trade-disbursement: net total (moderator)
Trading partner's corruption (WGI)	-0.0024*	0.0110*	0.0163*	0.0121*
	(0.0170)	(0.0182)	(0.0188)	(0.0172)
Trading partner GDP	0.0379***	0.0333***	0.0358***	0.0380***
	(0.0026)	(0.0026)	(0.0028)	(0.0026)
Trading partner Population	-0.0187***	-0.0104**	-0.0138**	-0.0173***
	(0.0050)	(0.0052)	(0.0055)	(0.0050)
Trading partner Trade Freedom	0.0108***	0.0107***	0.0109***	0.0108***
	(0.0004)	(0.0004)	(0.0004)	(0.0004)
Trading partner FDI Freedom	-0.0006	-0.0004	-0.0002	-0.0004
	(0.0004)	(0.0004)	(0.0004)	(0.0004)
Trading partner Net FDI Inflow	0.0085***	0.0082***	0.0084***	0.0085***
	(0.0012)	(0.0012)	(0.0013)	(0.0012)
Common Boarder	-0.0454	-0.0664	-0.0664	-0.0437
	(0.2155)	(0.2027)	(0.1973)	(0.2158)
Common Language	-0.0593	-0.0569	0.0114	-0.0583
	(0.0468)	(0.0494)	(0.0535)	(0.0472)
Colonial Link	0.1028	0.0405	0.0245	0.0969

	(1)	(2)	(3)	(4)
	(0.0747)	(0.0810)	(0.0884)	(0.0750)
Distance	-0.0352	-0.0382	-0.0370	-0.0394*
	(0.0220)	(0.0234)	(0.0250)	(0.0223)
Aid-ODA- disbursement: net total		0.0001		
		(0.0008)		
Aid-ODA- disbursement: net total x Trading partner's corruption (WGI)		-0.0001*		
		(0.0002)		
Aid-ODA- total commitments			-0.0008	
			(0.0005)	
Aid-ODA- total commitments X Trading partner's corruption (WGI)			-0.0040**	
			(0.0002)	
Aid for Trade-disbursement: net total				0.0003
				(0.0002)
Aid for Trade-disbursement: net total x Trading partner's corruption (WGI)				-0.0020*
				(0.0001)
Constant	5.1277***	5.5107***	5.6006***	5.1410***
	(0.2114)	(0.2267)	(0.2424)	(0.2142)
Observation	70339	57657	51606	68801
R-squared	0.0159	0.0178	0.0199	0.0163

Note: This table lists the fixed effect of regression on international trade flows (exports) by using another measure of corruption for robustness checks. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table A3. List of OECD member and their trading partners

OECD Members Countries (29 countries represent country i in Equation 1 & 2)

"Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungry, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Netherland, New Zealand, Norway, Poland, Portugal, Slovakia Republic, Spain, Sweden, Switzerland, United Kingdom, United States of America."

Trading-Partner-Countries of OECD Members (excluding OECD) (150 countries represent country j in Equation 1 & 2)

"Afghanistan, Armenia, Azerbaijan, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, Dem People Republic of Korea, Georgia, Hong Kong, Indonesia, India, Kazakhstan, Korea, Kyrgyzstan, Lao People Dem republic, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri-Lanka, Tajikistan, Thailand, Timor-Leste, Turkmenistan, Uzbekistan, Viet Nam, Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo, Cote dIvaire, Dem Rep of Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Tanzania, Togo, Tunisia, Uganda, Zambia, Zimbabwe, Albania, Belarus, Bosnia and Herzegovina, Croatia, Cyprus, Kosovo, Malta, Moldova, Montenegro, North Macedonia, Serbia, Turkey, Ukraine, Bahrain, Cook Islands, Fiji, Iran, Iraq, Israel, Jordan, Kiribati, Kuwait, Lebanon, Marshall Islands, Micronesia, Nauru, Niue, Oman, Palau, Papua New Guinea, Samoa, Saudi Arabia, Solomon Islands, Syrian Arab Republic, Tonga, Tuvalu, Vanuatu, Yemen, Anguilla, Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Cayman Islands, Chile, Colombia, Costa Rica, Cuba, Dominca Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragu, Panama, Paraguay, Peru, Rwanda, Uruguay, Venezuela."

Note: The table represents the list of 29 OECD member countries and 150 their trading-partner-countries excluding OECD.