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Bribery and Export Intensity: the Role of Formal Institutional Constraint Susceptibility

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BRIBERY AND EXPORT INTENSITY: THE ROLE OF FORMAL
INSTITUTIONAL CONSTRAINT SUSCEPTIBILITY

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Dedication

I dedicate this dissertation to my parents, my wife, my siblings, my brother-in-law and my close friends. With all my heart, I am grateful for the support, encouragement, and kindness you have provided me throughout this interesting yet challenging journey.

Sic Parvis Magna

BRIBERY AND EXPORT INTENSITY: THE ROLE OF FORMAL
INSTITUTIONAL CONSTRAINT SUSCEPTIBILITY

by

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Abstract

This study explores the influence of home country formal institutional constraints on firm bribery payments and export intensity. Distinguishing between forms of formal institutional constraints based on their susceptibility to bribery, this study highlights the different mechanisms through which formal institutional constraints impact export intensity. I propose that highly susceptible formal institutional constraints will behave as incentives leading to increased bribery payments. In contrast, less-susceptible formal institutional constraints will act as an added cost, ex-post to bribery payments, in the bribery-export intensity relationship. These less-susceptible formal institutional constraints will further decrease export intensity. Utilizing a firm-level dataset from 25 countries, I find support for the proposed relationship between highly-susceptible constraints and firm bribery payments, as well as for the relationship between firm bribery payments and export intensity. Analysis provided mixed results on the hypotheses regarding the moderating role of less-susceptible constraints

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Chapter 1: Introduction

Exporting has been one of the most prominent forms of international market entry and expansion utilized by corporations. For example, the post-1950 era have brought forth exponential export growth globally (Federico, & Tena-Junguito, 2017). According to the World Trade Organization, 2017 saw the strongest trade growth since 2011, which included 10.7% growth in merchandise exports and 7.4% growth in commercial service exports (WTO Press Release, 2018). Despite exporting being a highly utilized form of internationalization, it has been relatively less explored as a research stream compared to other market expansion options, with an increased level of focus placed on it in recent years (Salomon & Shaver, 2005; Leonidou, Katsikeas, & Coudounaris, 2010). Researchers have conducted studies addressing the interplay between various firm level variables such as human resources (Gomez-Mejia, 1988), R&D expenditure (Salomon & Shaver, 2005), firm size (Verwaal, & Donkers, 2002) and firm export outcomes. However, extant literature has yet to adequately incorporate the roles of formal institutional factors that influence such firm level export outcomes. Firms operate in complex home conditions subjected to a plethora of formal institutional constraints. Being a part of a complex institutional environment posits that understanding how institutional entities impact firm level export outcomes can provide valuable insights regarding strategic outcomes (Crossland & Hambrick, 2007). To address this need, this study will explore how the relationship between firm bribery payments and export intensity in the home context is influenced by the susceptibility of formal institutional constraints to bribery.

Institutional environments where corruption is an accepted practice present us with an important setting for understanding the influence formal institutional constraints have on firm

behavior and related outcomes. In most contexts, local public officials have control over many valuable inputs required by firms for their ongoing operations. Therefore, interactions with public officials is an unavoidable act for most, if not all, firms. In environments where corruption is commonplace, public officials, who act as agents of local governing bodies, utilize their positional power to gain private gains (Cuervo-Cazurra, 2006). Such situations provide firms with opportunities to engage in acts of corruption in hopes of achieving beneficial outcomes (Martin, 1999). In fact, firms could be placed in a vulnerable position in which they will be incentivized to engage in corrupt behavior to remain functional (Olken and Barron, 2009).

Scholars have identified bribery as an important and prevalent form of corruption and have attempted to better understand the reasons influencing bribery payments (Chen, Yaşar, & Rejesus, 2008; Wu, 2009; Martin, Cullen, Johnson, & Parboteeah, 2007), as well as how such payment amounts influence firm strategic behaviors (Cai, Fang, & Xu, 2011; Cuervo-Cazurra, & Genc, 2008; Lee and Weng, 2013). Despite these efforts, there is still uncertainty regarding the mechanisms through which specific acts of corruption (such as bribery) influence firm strategic behaviors and outcomes (Cuervo-Cazurra, 2008). The current study is an effort to address this by focusing on the mechanisms through which formal institutional constraints in the home country influence the relationship between firm bribery payments and export intensity.

I propose that the mechanisms through which firm bribery payments and related export outcomes are affected by formal institutional constraints, will differ based on the susceptibility of those constraints to the effects of bribery. Susceptibility to bribery can be defined as the degree to which institutional constraints are easily influenced by bribery payments, for firms to receive a beneficial outcome. Therefore, less-susceptible formal institutional constraints are those that cannot be easily influenced for favorable gains by utilizing bribery.

For this purpose, I will utilize three distinct forms of formal institutional constraints; financial constraints, business permit constraints, and tax rate constraints. Taking firms who perceive corruption to be an accepted norm, I propose that the perceived severity of susceptible formal institutional constraints will act as antecedents to firm bribery payments. In contrast, perceived severity of less-susceptible formal institutional constraints will act as moderators to the relationship between firm bribery payments and firm export intensity.

This study will contribute to extant literature in several ways. First, this study contributes to export literature by highlighting how formal institutions in the home market can influence a firm's export intensity. Firms operate in complex institutional environments and understanding how formal institutional constraints in such contexts affect firm outcomes such as export intensity can provide valuable insight to both scholars and practitioners. While some studies have explored the influence of institutions on firm level export outcomes (Söderlund, & Tingvall, 2014; Méon & Sekkat, 2004), no prior studies have explored how the interaction between firm bribery payments and exports is affected by formal institutional constraints in the home context. For example, research has studied how institutional quality of the target host country impacts exports (Söderlund, & Tingvall, 2014; Méon & Sekkat, 2004), but none have explored how the susceptibility of home context formal institutional constraints to bribery can influence firm export outcomes. This study also takes into consideration how firm level perceptions of formal institutional constraints influence firm exports, whereas extant literature has primarily opted to focus on country level measurements of institutions. This enables this study to highlight the heterogenous nature of how firms change their exporting behavior under the influence of formal institutions.

Second, this study contributes to corruption literature by highlighting the importance of considering the susceptibility to bribery in understanding firm level outcomes. Specifically, while extant literature has focused on many facets of corruption related behavior such as bribery (Cuervo-Cazurra, 2016), none have taken the role of susceptibility into consideration. Bribery is a strategic choice (Luo, 2006) made to garner a potentially beneficial outcome. However, not all hurdles faced by firms can be overcome through bribery, and formal institutions are no exception. Therefore, this study contributes to corruption literature by highlighting how the susceptibility of formal institutional constraints to bribery payments can impact firm level outcomes such as export intensity.

Finally, this study contributes to literature on institutions, by highlighting the role of formal institutions, and the ability of firms to influence them can lead to firm level implications. Specifically, moving beyond how informal institutions influence firm outcomes (Elsbach, & Sutton, 1992), this study highlights how perceptions of formal constraints can also influence firm level outcomes such as bribery payments and export intensity. Furthermore, this study highlights how formal institutions differ in the way their effects can be countered via bribery. Also, to the best of my knowledge, no other study has taken both the formal institution constraints and the implementation of those constraints into consideration, in relation to export intensity.

This paper is structured as follows. Next section reviews the extant literature on acts of corruption such as bribery and home country institutions. The following section presents the theoretical arguments and develops the hypotheses. Finally, I will discuss the data source for this study and the operationalization of the relevant variables.

Chapter 2: Literature Review

2.1 Institutional Constraints and Firm Outcomes

Firms operate in contexts in which their economic activities are continuously subjected to institutional constraints (Witt & Lewin, 2007). Such constraints exerted via external sources could prove to be costly if firms do not address them adequately (Hrebiniak & Joyce, 1985). While scholars tend to agree that institutional constraints matter for multinational corporations, the manner and mechanisms through which institutions influence specific firm outcomes remains an important topic in need of further exploration (Jackson & Deeg, 2008). Depending on the scholarly domain of reference, institutions have been viewed through a multitude of definitions. Of these, the following definition adequately captures the economic impact institutional constraints have on firms.

“Institutions are the humanly devised constraints that structure human interaction. They are made up of formal constraints (e.g., rules, laws, constitutions), informal constraints (e.g., norms of behavior, conventions, self-imposed codes of conduct), and their enforcement characteristics” (North, 1994; pg., 360).

This definition highlights two key components which ultimately aids us define institutional constraints of a firm’s operational context; institutional constraints and enforcement of institutional constraints. Informal institutions refer to ‘rules of the game’ (North, 1991). Applying this idea to the topic of corruption, it refers to contexts where corruption has been informally institutionalized. There are practices that are accepted as a norm and part of the shared cognition of citizens (Peng, Wang, & Jiang, 2008). Similarly, there are home contexts where firms believe engaging in acts of corruption such as bribery is a normatively accepted

behavior. This study will focus solely on such firms that perceive that engaging in acts of corruption such as bribery, is an accepted norm across their commercial peers.

Specifically, I will explore how formal institutional constraints and formal constraint enforcement impact firm export intensity, in home contexts where corruption is an informal institutional constraint. This will be accomplished by understanding the susceptibility of formal institutions to firm bribery payments.

For the purposes of this study, focus will be placed on three forms of formal institutional constraints and their enforcement; financial constraints, tax rate constraints, and business permit constraints. These three forms of constraints were chosen based on the distinct nature of the underlying mechanisms through which they exert pressure on local firms. These distinct mechanisms will lead to novel insights as to how bribery impacts firm export intensity.

Overall, scholars have promoted the notion that understanding the differing qualities between institutional constraints and their implementation can lead to insight on firm level outcomes. For example, Paulo Mauro attempted to understand the connection between a combination of different constraints and economic growth (Mauro, 1995). Another study considered how firm perceptions on financial constraints can potentially influence their investment decisions in the home market (Birhanu, Gambardella, and Valentini, 2016). Following such examples, I will consider a combination of unique formal institutional constraints and explore how they will interact with the relationship between firm bribery payments and export intensity.

2.2 Bribery and Firm Outcomes

Corruption is a complex and multi-form construct of which the meaning can change based on the focal context (Luo, 2005). For example, extant literature has explored corruption related topics in contexts such as transition economics (Cuervo-Cazurra, 2008), firm temporal orientation (Birhanu, Gambardella, & Valentini, 2016) and local business environments (Mendoza, Lim, & Lopez, 2015). Corruption is a type of barrier firms encounter across various market contexts. While there are multiple definitions of corruption in the extant literature, defining corruption as the misuse and abuse of public roles and resources for personal gain (Bardhan, 1997; Getz & Volkema, 2001) provides a comprehensive outlook on the nature of it. Researchers have paid a significant amount of attention to government related corruption, or to be more specific, corruption that takes place during firm interactions with public officials. Acts of corrupt dealings with public officials, such as bribing, are both illegal across, most if not all, countries firms operate in (Cuervo-Cazurra, 2016) and at times also are in violation of legitimacy related norms of the context (Jain, 2001). However, despite the illegal nature of these actions, some firms opt to engage in such behavior. Hence, researchers have endeavored to understand the conditions that which entice firms to engage in corrupt activities, as well as related organizational outcomes that are related to such behavior.

The potential benefits garnered through acts of corruption are sought after by firms because they could ultimately provide them the means to compete and gain a strong position in the market contexts they operate in (Cuervo-Cazurra, 2016). Acts of corruption can provide actors with the opportunity to access valuable organizational inputs in the host context (Lui, 1985). In addition, actors who refuse to engage in such practices could be placed in highly disadvantageous positions when attempting to access the same forms of government resources

that actors that bribe gain access to (Bertrand, Djankov, Hanna, & Mullainathan, 2007).

Therefore, acts of corruption such as bribing can be viewed as a necessity for firms attempting to stay competitive in the markets they operate in.

However, high levels of corruption can be viewed as a deterrent to firms as well. For example, corruption itself can act as a warning for potential investing firms considering entry into foreign markets (Wei, 2000). Established high levels of corruption could entail additional costs and high inefficiencies to firm operations (Wei, 2000). So, corruption could act as a double-edged sword that could act as a benefactor or a detractor to firm operations, depending on the contextual variables in question. Efforts in understanding this duality nature of corruption has led to studies attempting to understand the true nature of corruption, by focusing on underlying mechanisms connecting acts of corruption to firm outcomes (Lee & Weng, 2003; Birhanu et al., 2016).

A good example of extant literature exploring these corruption related mechanisms as they relate to firm level outcomes can be found in Lee and Weng's 2003 paper on bribery and export intensity. Corruption can manifest in a multitude of forms in the world of business. Of which, bribery has been one of the most prominently studied forms of corruption in the extant literature. Bribery can be defined as a situation where "At least two actors are involved in this form of corruption: the receiver (public official) and the payer (in international business, a representative of a private organization)" (Getz & Volkema, 2001: pg. 9). In such corrupt interactions, payments are provided by firms to public officials to receive preferential treatment in institutional processes or to gain access to valuable resources.

Researchers have attempted to better understand the different underlying mechanisms of corruption can influence firm export outcomes (Lee and Weng, 2003). While such studies

provide us with valuable insights as to how firm behavior could change in a situation where they engage in corrupt practices such as bribing, there remains many important considerations left unexplored. One such consideration, and the focus of this paper, is how institutional constraints of the home market that firms operate in, can influence such a relationship between bribery and export intensity.

Chapter 3: Hypotheses

3.1 Susceptibility of Institutions to Bribery

Research on corruption have produced several forms of categorizations. These categorizations are based on specific characteristics pertaining to acts of corruption and their interactions with other related variables or entities (Cuervo-Cazurra, 2016). Examples of such categorizations include pervasiveness vs. arbitrariness (Rodriguez, Uhlenbruck, & Eden, 2005), petty vs. grand (Elliot, 1997), and organized vs. disorganized (Shleifer and Vishny, 1993) corruption. While these categorizations provide valuable insight, the applicability of insight provided by them depends on various contextual elements involved. This presents researchers with an opportunity to expand our understanding of acts of corruption and related strategic outcomes, by exploring different contextual considerations that affect bribery outcomes. The susceptibility of formal institutions in face of bribery is one such consideration that scholars have yet to adequately explore. Next, I will discuss why this is an important consideration that has implications for firm bribery payments and related strategic outcomes.

Bribery is not a panacea that can be utilized to overcome all forms of formal institutional constraints. There are some formal institutional constraints that cannot be directly and sufficiently influenced through bribery. For example, if the formal institutional constraint takes the form of an institutional void (e.g., if the home context does not have an adequate number of outlets for garnering financial support), bribing won't be an effective means of overcoming it. Formal institutional constraints may also provide challenges to utilizing bribery due to the way they are implemented. For example, bribing government officials who are implementing institutional constraints during activities pertaining to on-going firm operations (e.g., applying

for permits through government officials), will be a less costly endeavor compared to bribing government ministers to set institutional constraints that are favorable to firms (e.g., federal tax rate constraints). Therefore, formal institutional constraints are not susceptible equally in face of bribery. The susceptibility of formal institutional constraints in face of bribery is a consideration that has yet to be incorporated into studies exploring the relationship between bribery and firm level outcomes, such as exporting.

Another reason to consider the potential susceptibility of formal institutional constraints in face of bribery, is to improve our understanding of incentives leading to bribery payments. Researchers have urged that scholars stand to gain valuable insight by exploring potential incentives to supply and request bribes (Cuervo-Cazurra, 2016). Specifically, understanding why both the supply (firm personnel) and demand (government officials) is important to improving our understanding of corruption related behavior and outcomes. Susceptibility of a formal institutional constraint indicate an opportunity for both the firm and the government official. From the perspective of the government official, if the formal institutional constraint requires direct interaction with firms, it will provide them opportunities to demand bribes. From the perspective of the firm, if they perceive a formal institutional factor to be a constraint, then they will be incentivized to supply bribery payments to address it. However, this will be likelier to act as an incentive to pay bribery payments if the formal institutional constraint is a susceptible one. In other words, if the formal institutional constraint is highly susceptible to the effects of bribery payments, firms are more likely to infer that as an incentive to make bribery payments.

In this study I will utilize the interaction between formal institutional constraints and bribe payment-Export intensity relationship, to explore the role of formal institutional constraint susceptibility in face of bribery. To this end, I will take factors of bribery, as they relate to the

susceptibility of formal institutional constraints, into consideration. One such consideration is the feasibility of firms exerting positive influences on formal institutional constraints by bribing government officials, during the implementation stage of such constraints. Public officials can be viewed as the agents who oversee institutional constraint implementation. Some forms of formal institutional constraints present firms with the opportunity to directly engage with public officials during the act of formal institutional constraint implementation. As discussed earlier, not all forms of formal institutional constraints will adequately provide such opportunities.

I will also consider if the formal institutional constraint presents an institutional void problem, and how such voids influence the susceptibility of formal institutional constraints. Institutional voids occur in contexts where institutional arrangements that firms require are either weak or absent (Mair & Marti, 2009). I argue that bribery will be either inefficient in addressing such voids (when the formal institutions are weak), or incapable of doing so altogether (when the formal institutions are absent). Therefore, firm bribery related outcomes will change when formal institutional constraints include such voids. In such situations the incentive for them to expend financial resources to engage in bribery will be less in face of such formal institutional constraints.

Next, I will build my hypotheses based on these arguments using examples of unique formal institutional constraints. Specifically, I will consider both formal institutional constraints that are highly susceptible in face of bribery and those that are not.

3.2 Bribery and Firm Export Intensity

This is the primary relationship my subsequent hypotheses will be built upon. Extant literature has indicated that acts of corruption can potentially have a negative influence on export related outcomes (Lee and Weng, 2013). The primary theoretical argument utilized in these findings is one of home market positioning. Specifically, extant literature has proposed that when firms establish a strong and favorable position in their home country operations, they may be less interested in exporting (Ito and Pucik, 1993; Hundley and Jacobson, 1998).

Firms can accrue favorable conditions and resources through acts of bribery (Cuervo-Cazurra, 2006; 2016). Such beneficial outcomes will strengthen the home market position such firms hold, and in turn will aid them to remain competitive locally. In a study conducted by Hundley and Jacobson (1998), the authors found evidence that mechanisms which leads to preferential treatment in the home market can potentially lead to a reduced export orientation of firms. It can be argued that bribery is one such mechanisms through which firms can utilize to enjoy preferential treatment. Extant literature has also shown that follower firms actually having a higher export ratio than the market leaders of the home country (Ito and Pucik, 1993). Therefore, bribery payments made by firms can have a diminishing impact on their exporting outcomes such as exporting intensity.

We can also consider the role of resources to further support this argument. Firms have a limited pool of resources that they have access to. Hence their expenditure becomes an important consideration for any type of firm. If a firm must spend a portion of their finite resources on accruing favorable outcomes via bribing public officials, such expenses would be an additional cost to their existing operational costs (Birhanu et al., 2016). Extant literature has showed that

the availability of valuable resources aid firms in their export decisions (Bonaccorsi, 1992; Westhead, Wright, & Ucbasaran, 2001). Therefore, a firm's effort to improve their home market positioning through bribery could be at the expense of their foreign market aspirations. The reason for this being that resources spent on bribery will reduce their overall resources, leading to a diminished ability to engage in exporting activity. This will in turn be depicted through reduced export intensity. Therefore, bribery could lead to reduced export intensity not only because of firms potentially being complacent due to successful positioning in the home context. It could also be due to reduced strategic freedom and maneuverability caused by the exhaustion of resources. The current study will act as an effort to recreate these findings through a different data combination as well.

3.3 Highly Susceptible Institutional Constraints

First, I will take formal institutional constraints that are susceptible into consideration.

Taking this negative relationship between bribery and export into consideration, I propose that institutional constraints that can be influenced via bribery, will act as an incentive leading to bribery. The supply of bribes occurs because of incentives related to expectation of positive outcomes gained through them. The literature on corruption have explored a variety of aspects leading to the supply of bribery payments (Lambsdorff, 2007; Kwok, & Tadesse, 2006). When firms perceive a formal institutional factor to be a constraint, they will be incentivized to successfully address it as being able to do so can have implications on firm performance. One method available to firm management in such situations would be bribe payments.

For the management of a firm, bribery can help them increase the efficiency of firm operations, gain access to valuable resources, and gain access to valuable business opportunities such as government contracts (Cheng, Henisz, Roth, & Swaminathan, 2009; Cuervo-Cazurra, 2016). Access to valuable resources, such as government contracts, could aid firm management in improving firm performance. Hence, such opportunities to influence a susceptible institutional constraint will act as an incentive to firm management to engage in corrupt practices such as bribery. However, a firm is more likely to make bribe payments if the constraint at hand is susceptible to the effects of bribery.

For this current study, I will focus on an example of one such susceptible formal institutional constraint; business permit constraints. Business permit constraints refer to formal institutional constraints faced by firms when applying for government permits and licenses. Applying for and acquiring permits and licenses can be a difficult process due to bureaucratic considerations in the operating context (Djankov, La Porta, Lopez-de-Silanes, & Shleifer, 2002). Firms will need to deal with a variety of regulations and government officials to successfully attain permits and licenses. Scholars have argued that a better understanding of how a firm's interactions with public officials can lead to valuable insight regarding firm level outcomes (Rodriguez, et al., 2005; Uhlenbruck, Rodriguez, Doh, & Eden, 2006). Administration related costs can be viewed as a type of bureaucratic constraint firms' encounter. Extant literature has indicated that bureaucratic constraints to be one of the most significant challenges some firms face in international business (Hackett, 1976). For example, such constraints can lead to high levels of inefficiencies in firm operations (Fogel, 2006). In fact, scholars have shown that some host governments utilize such constraints placed on firms to enforce their own beliefs regarding local economic conditions (Samiee, 1984). Despite the hurdles faced in acquiring them, firms

can benefit from accessing valuable permits and licenses in improving their home market position (Lee et al., 2013).

I propose that business permit constraint to be a susceptible formal institutional constraint for two reasons. First, bribery can be a feasible means of exerting positive influences on this constraint due to the high involvement of public officials in implementing them. During the process of applying for permits and licenses, firms will directly engage with public officials who are in charge with implementing this formal institutional constraint. Providing a bribery payment to such officials can potentially enable firms to successfully gain access to permits and licenses they require (Pacini, Swingen, & Rogers, 2002). Second, business permit constraints are not a reflection of an institutional void. Therefore, this is a constraint that can potentially be susceptible to influences of firm bribery payments. Overall, bribery could provide firms with a means to reduce costs related to acquiring permits and licenses and overcome this formal constraint.

However, it is important to note that successfully addressing business permit constraint does not mean that such constraints will be perceived to be less in the future. These types of formal constraints persist and firms will need to address them in a periodical manner. What firms can do however is to try and minimize the costs and concerns while improving the efficiency of the process of acquiring them. Firms will continue to perceive business permits to be a formal institutional constraint.

Higher the level of pressure felt by firms due to formal institutional constraints, higher the level of incentives for them to engage in practices to minimize said pressure. However, this also highlights the importance of susceptibility of such formal institutional constraints. If institutional constraints provide firms with the ability to manipulate their influence in a favorable

manner through bribery, such incentives will relate to increased levels of bribery payments. Therefore, formal institutional constraints that are susceptible to firm bribery payments will act as an antecedent to bribery payments. In considering the example of business permit constraints, higher the level to which firms believe such constraints to be a barrier or hindrance, higher the level of incentive they will have to engage in bribery payments. Taking these arguments into consideration, I propose the following,

***Hypothesis 1:** There will be a positive association between the perceived severity of business permit constraints and a firm's bribe amounts paid to government officials in the home country*

***Hypothesis 2:** A firm's bribe amounts paid to government officials in the home country will be negatively related to its subsequent export intensity.*

3.4 Less-Susceptible Institutional Constraints

Next, I will consider formal institutional constraints that are non-susceptible. The first type of such constraints that will be under consideration are financial constraints in the home context. Financial constraints refer to the degree to which access to finance is an obstacle to the current home context operations of a focal firm. This constraint includes concerns regarding both the availability of sources that can provide firms with financial support as well as the costs associated with them. Extant literature has indicated that financial constraints faced by firms can impede their growth (Westhead & Storey, 1997). The reasons for this outcome can vary. For example, high financial constraints could lead to limited strategic maneuverability for firms

(Stein, 2003; Campello, Graham, & Harvey, 2010). In addition, such financial constraints could also potentially influence vital firm outcomes such as contracting related hazards (Rothaermel, & Deeds, 2004) and stock market performance (Lamont, Polk, & Saaá-Requejo, 2001). Financial constraints remain a vital form of institutional constraint that need further exploration, especially regarding firm outcomes such as export intensity.

The mechanisms through which financial constraints will impact bribery and export intensity will be different, compared to business permit constraints. I propose that financial constraints are a less-susceptible form of formal institutional constraints. Financial constraints are a type of formal institutional constraints, without a significant enforcement component. Many sources of financial resources that are available to firms are not part of the home country government. Therefore, these constraints have minimal level of direct exchanges with public officials. Therefore, the ability to positively influence financial constraints through bribery will be minimal in face of bribery. This lack of feasibility indicates that financial constraints to be a less-susceptible formal institutional constraint.

In addition, financial constraints also indicate the existence of potential institutional voids. Specifically, financial constraints can be considered as a form of institutional void due because it reflects insufficient sources of financial support sources in the home market. Utility of bribery is marginal in contexts where firms do not have sources of finance they can direct such efforts towards. In different terms, financial constraints cannot be easily influenced in order to gain an advantageous result, as compared to other forms of formal institutional constraints such as business permit constraints. Therefore, financial constraints can be considered a form of less-susceptible formal institutional constraint.

Less-susceptible formal institutional constraints present firms with a unique challenge. Because it is difficult for firms to directly influence these constraints via bribing public officials, the incentive for firms to engage in bribery to tackle these constraints will be minimal. Therefore, the costs incurred by firms due to such less-susceptible constraints will be an additional form of cost consideration, in addition to bribe amounts paid towards constraints that they can influence. Phrased differently, financial constraints would indicate an ex-post consideration for firm bribe payments. When firms pay bribes, the cost burden involved would be enhanced in the presence of a financial institutional void (Birhanu, Gambardella, & Valentini, 2016). The importance of financial resources for strategic outcomes will be increased when firms do not have adequate means to access additional means of financial input by way of financial institutions. As extant literature has argued, a strong home market position gained through corruption can potentially dissuade firms from exporting (Hundley and Jacobson, 1998). The added cost concerns due to financial constraints can further hinder their foreign expansion ambitions, as the limited financial resources will be utilized to prioritize home market operations. Financial resources can be an important resource consideration for firm export related outcomes (Westhead, Wright, & Ucbasaran, 2001). This means that firms will have even less financial resources that they can utilize in foreign market related activities such as exports. Therefore, their strategic maneuverability will be negatively impacted when faced with financial constraints and will be reflected via reduced export intensity.

Overall, I propose that for firms engaging in bribery, financial constraints in the home market will further reduce their export intensity.

Hypothesis 3: Financial constraints will positively moderate the relationship between a firm's bribe amounts paid and export intensity, such that a higher level of perceived financial constraints will further decrease a firm's export intensity.

Next, I will consider Tax rate constraints and their influence on firm bribe payments and export intensity. Like financial constraints, tax rate constraints are also a type of less-susceptible formal institutional constraint. These are set by the relevant government body appointed by the state. Tax rate constraints have been viewed as an important factor influencing strategic outcomes for firms, in the extant literature. It has been argued that similar firms operating in different contexts can potentially lead differences in profitability, due to differences in tax related constraints between those contexts (Schefczyk, 1993). Tax constraints under which firms operate in ultimately provide an added layer of costs they must take into serious consideration. For example, research has shown that tax constraints can influence strategic choices such as deciding on long-term financing options (Shapiro, 1984). Specifically, extant literature has shown that tax rate constraints influence firm strategic outcomes on topics such as firm headquarter location choice (Vernon, 1998), foreign direct investment volume (Caves, 1996; Gordon & Hines, 2002), and foreign direct investment mode choice (Schroath, Hu, & Chen, 1993).

Tax rate constraints are similar to financial constraints, in that both are formal institutional constraints excluding an implementation component. However, I propose that the way tax rate constraints impact the bribe payments-export intensity relationship will be different. Tax rate constraints are also difficult for firms to manage. Unlike business permit constraints which can be positively influenced by bribery, tax rates themselves do not have a direct interaction with public officials. If firms want to spend financial capital on attempts to reduce tax

rates that affect them, or to implement favorable tax regulations altogether, the most notable avenue is lobbying (Richter, Samphantharak, & Timmons, 2009). It is important however to note that lobbying is not a form of corruption, but a costly substitute to it (Campos, & Giovannoni, 2007). In addition, research on corporate lobbying and their economic returns to firms have provided mixed results (Alexander, Mazza, & Scholz, 2009). In fact, these costly lobbying efforts could in turn be harmful for firms (Marceau, & Smart, 2003).

Overall, bribery is not viable means through which firms can directly influence tax rate constraints. The available alternative to bribing in this situation is costly and the expected returns questionable. From a home market position stand point, tax rate constraints hence will present a hurdle to firm operations and performance. For example, research has indicated that tax rates in which firms operate under can have a significant effect on their growth (Fisman, & Svensson, 2007). Therefore, the argument that firms enjoying improved market positioning due to bribery, not being motivated to export (Hundley and Jacobson, 1998; Lee & Weng, 2013) cannot be applied to tax rate constraints.

In fact, tax rate constraints can negatively impact a firm's home market operations, hence enticing them to explore internationalization options. This is consistent with extant literature that has promoted the notion that home country tax rate constraints, lead to firms shifting their attention towards strategic options abroad (Gordon and Hines, 2002; Witt and Lewin, 2007). However, exporting is not one such viable options available to most firms. Some governments provide tax benefits for exporting, but they are available only to firms operating in a handful of specific industries (Feinschreiber, & Kent, 2016). If the intention is to escape or to mitigate the effects of home market tax rate constraints, then choosing an internationalization strategy such as foreign direct investment can prove to be a better option. Extant literature on firm escape

responses supports this notion (Caves, 1995). In fact, research has even showed that firms may opt to change the institutional context completely to establish themselves in a more favorable institutional environment (Vernon, 1998). Therefore, firms would be better served if they reduce their export efforts and use their limited resources on other internationalization strategies.

Therefore, taking these points into consideration, I propose the following,

***Hypothesis 4:** Tax Rate constraints will positively moderate the relationship between a firm's bribe amounts paid and export intensity, such that a higher level of perceived Tax Rate constraints will further decrease a firm's export intensity.*

Chapter 4: Methods

4.1 Data

I will utilize a panel dataset from World Bank Enterprise Surveys for this study. These surveys include firm-level data from emerging economies, which are collected periodically by a team of Economists and survey experts as directed by the World Bank and its affiliates. This dataset has been used in the extant strategic management and international business literature (Hellman, Jones, & Kaufmann, 2003; Lederman, 2010; Spencer & Gomez, 2011; McCann, & Bahl, 2017). The respondents taking part in these surveys are primarily firm owners or top management members (McCann, & Bahl, 2017). The panel dataset will consist of two rounds of surveys, conducted in the years 2002 and 2005, across 25 countries. The country selection primarily consists of nations in Eastern Europe and Central Asia regions. The selection of firms utilized in this study consists only of those who participated in both rounds and will exclude responses with missing relevant data. The first analysis which explores the results pertaining to hypothesis 1 will consist of 410 firms (820 firm-pair years). The second analysis that addresses the proposed relationships for hypotheses 2, 3, and 4 will consist of 394 firms (788 firm-pair years).

Next, I will discuss some key pieces of information regarding the survey process used in World Bank Enterprise Surveys. Executive participation was encouraged by highlighting the academic neutrality of the studies (Welch, Marschan-Piekkari, Penttinen, & Tahvanainen, 2002). This was accomplished by notifying each targeted firm's executives of the details of this study, including the central role of World Bank. Each survey session with a firm consists of two stages. First stage will analyze the firms and screen them for eligibility. One of the key qualifiers for this survey is whether the firm that is being surveyed is an establishment with its own management

and has control over its workforce. If the firm meets the eligibility criteria, then the survey personnel will move onto stage two. In the second stage, the firm will be administered a survey specifically tailored to the industrial sector which they belong. The sectors are differentiated as manufacturing or service.

The personnel conducting the World Bank Enterprise Surveys have been provided with proper training and strict guidelines regarding survey administration and their on-site conduct. For example, they have clear guidelines regarding minimizing Enumerator bias. The personnel also screen the non-objective responses for their perceived truthfulness during each session. At the end of each session they will evaluate the responses and rate them for their truthfulness. This aids me in screening out responses that lack reliability.

The World Bank Enterprise Surveys also incorporate several measures to encourage responders to be truthful in face of questions pertaining illicit actions, such as bribery (Birhanu et al., 2016). The personnel carrying out the surveys are independent data collectors, who have no government affiliations. This helps responders to have an increased level of trust in the confidentiality of the survey results. The questionnaire items regarding sensitive topics such as bribery are framed through an indirect structure. Indirect structure improves the quality of data collected in two ways. First, it helps reduce social undesirability bias (Fisher, 1993). Extant literature has argued that an indirect structure increases the likelihood of a participant providing responses to socially undesirable behavior related questions (Neeley & Cronley, 2004). Second, an indirect structure can also aid in reducing self-censorship bias (Sherwood, 1981; Neeley & Cronley, 2004). This is accomplished by allowing the respondent to project their biases on to an ambiguous target and reveal their personal attitudes in the process (Sherwood, 1981; Birhanu et

al., 2016). Overall, these qualities in the questionnaires help reduce perceived risks of self-incrimination by the respondent (Krammer, 2017).

Survey data based research must take potential common method bias issues into consideration as well (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Extant literature that have utilized World Bank Enterprise Survey data provide us with insight as to how this dataset minimizes common method bias related concerns. World Bank Enterprise Surveys include both questions pertaining to perceptions, as well as indicators based on objective measurements. Such indicator variable related questions are straight forward in their nature (Jensen, Li, & Rahman, 2010). As this study is a combination of both perception-based variables and indicator variables, this helps reduce this concern (Lee et al., 2013). The questions associated with the primary variables in this study are separated from each other in different sections from the survey, leading to a temporal separation. This also helps in addressing common method bias considerations (Podsakoff et al., 2003; McCann & Bahl, 2017).

4.2 Measures

4.2.1 Export Intensity

In accordance with extant export literature, export intensity will be calculated as the ratio of a firm's total foreign sales divided by total sales (Bonaccorsi, 1992; Majocchi, Bacchiocchi, & Mayrhofer, 2005). Values for this variable will range between 0 and 1. This is one of the most widely utilized measurements of firm export behavior (Bonaccorsi, 1992). Export intensity values are based on a World Bank Business Enterprise survey item that recorded the percentage value of firm export sales over their total annual revenue (Lee et al., 2013).

4.2.2 Bribe Amounts Paid

This variable refers to firms' bribe amounts paid in the home country. This value will be calculated as the percentage of annual sales paid as informal payments to government officials in the home country (Lee et al., 2013; Birhanu et al., 2016). Values for this variable will also range between 0 and 1. As discussed earlier, questions pertaining to bribery in the World Bank Enterprise Surveys are indirectly structured. This is done to increase the response rate of the respondents to such sensitive topics, reduce potential biases related concerns, and improve the accuracy of the information gathered. While an objective measurement received via direct questioning may appear ideal, the potential of leaving a paper trail of illicit behavior will hinder the quality and quantity of the data collected (Birhanu et al., 2016). Therefore, this measure has been viewed as one of the best available measures to assess bribery related behavior and has been utilized across multiple disciplines of research (Birhanu et al., 2016; Asiedu, & Freeman, 2009; Fisman, & Svensson, 2007).

4.2.3 Business Permit Constraint

This variable measure how much firms perceive acquiring government permits and licenses to be an obstacle to their operations. Specifically, World Bank Enterprise Survey asks respondent firms to rate this obstacle as either a no obstacle, a minor obstacle, a moderate obstacle, or a major obstacle. The results are recorded on a 0 to 3 scale.

4.2.4 Financial Constraint

Financial constraint is a measurement that assesses a firms' access to financial options in the home country. The survey item used for this asks the respondents the degree to which access to Finance is an obstacle to the current operations of the firm (Birhanu et al., 2016). Respondents

rated this obstacle as either a no obstacle, a minor obstacle, a moderate obstacle, or a major obstacle. The results are recorded on a 0 to 3 scale.

4.2.5 Tax Rate Constraint

This measures the degree to which firms perceive government tax rates in the home country to be an obstacle to their operations. World Bank Enterprise Survey asks respondent firms to rate this obstacle as either a no obstacle, a minor obstacle, a moderate obstacle, or a major obstacle. The results are recorded on a 0 to 3 scale.

4.2.6 Control variables

I will include several control variables in this study based on the extant literature. At the firm level I will control for firm size, firm age, and R&D intensity. The relationship between firm size and export intensity has been a topic of contention among scholars across the years (Majocchi, et al., 2005; Verwaal, & Donkers, 2002). While the effect of firm size on export intensity has yielded mixed results, I will be including it as a control variable in accordance with extant literature (Lee et al., 2013). The number of employees in a firm will be used as a proxy for this control variable.

R&D intensity is a firms' R&D related expenditure as a percentage of total sales (Lee et al., 2013). Firm age will be the log of number of years since the establishment of the firm (Birhanu et al., 2016). I will also include a control variable for firm ownership. Specifically, a dummy will be included to account for firms with a majority foreign ownership. Such firms could potentially influence how a firm operates in the focal environment. In addition, foreign ownership can potentially influence a firms decisions pertaining to internationalization efforts.

Finally, when the model includes export intensity as the dependent variable, I will include a dummy variable accounting for challenges firms face due to customs and regulations. A survey item from the World Bank Enterprise Surveys was utilized for this purpose. The survey item asked the respondents to rate the rate this obstacle as either a no obstacle, a Minor obstacle, a moderate obstacle, or a major obstacle. The results are recorded on a 0 to 3 scale.

I will also control for industry effects by including a dummy variable to distinguish between firms that belong to a manufacturing industry (service industry as the baseline category). This will be achieved by coding them based on their primary industry business, as recorded in the World Bank Enterprise Survey. Finally, I will also country dummies to control for country level effects.

Chapter 5: Analysis and Results

This study includes two sets of analysis, both of which includes a fractional dependent variable. Therefore, the outcomes observed are bounded within the range of 0 and 1. Utilization of ordinary linear regression methods therefore is not suitable for the current study as such methods often fail to consider the bounded nature of the dependent variable (Baum, 2008). Linear regression analysis methods therefore can result in predictions that are nonsensical for models with fractional or proportional dependent variables (Baum, 2008; Villadsen & Wulff, 2018).

To address this concern, I will be employing Fractional Logit Regression (Papke & Wooldridge, 1996; 2008). A recent empirical study found results indicating that Fractional Logit Regression models to be superior to both linear regression models and Tobit models in research questions involving fractional dependent variables (Villadsen et al., 2018). Furthermore, researchers have proposed that replication of previous studies that dealt with fractional dependent variables through fractional regression methods could be a valuable contribution (Villadsen et al., 2018). All estimations for the following analysis were performed using STATA 15.

5.1 Analysis 1 - Influence of Permit Constraints on Bribery Payments

Descriptive statistics are provided in table 1.1. Table 2.1 provides the pairwise correlation matrix pertaining to our first analysis on hypothesis 1. The Variance Inflation Factor (VIF) was calculated to be 1.31. This is well below the recommended VIF threshold of 10. Therefore, multicollinearity is not a significant concern for this analysis.

Column 1 of table 3.1 provides results for the model 1, which is a specification excluding control variables. Column 2 provides results for model 2, which is the specification that includes the relevant control variables of R&D intensity, industry dummy for manufacturing firms, firm size controls, firm age, foreign ownership of firms, and country dummy variables. Hypothesis 1 argues that perceived severity of business permit constraints will be positively related to a firm's bribery payments in the home country. As the results indicate, the raw coefficient for models 1 is positive and significant ($p\text{-value} = 0.000, p < 0.001$). The raw coefficient values found in model 2 also depicts a positive and significant ($p\text{-value} = 0.018, p < 0.05$) relationship between perceived permit constraints by a firm and their bribery payment. This provides preliminary support for hypothesis 1.

Table 4.1 provides the average marginal effects of the perceived permit constraint on a firm's bribery payments in the home country. Perceived permit constraint has a significant ($p\text{-value} = 0.000, p < 0.001$) marginal effect on bribery payments on all levels of constraint severity. Interestingly however, the marginal effect of permit constraint appears to increase throughout the first three levels as an obstacle but decrease once it is perceived to be a major obstacle. Firm bribery payment percentage increases by 1.43% on average across each severity level of permit constraint in the first three levels. This bribery payment percentage decreases by 0.69% once the constraint becomes a major obstacle.

Figure 2.1 provides a visual representation of the predictive marginal effects of permit constraint on firm bribery payments at the 95% confidence interval. A visual representation is recommended when dealing with non-linear models as they provide a powerful resource for result interpretation (Hoetker, 2007). The visual representation further provides support for hypothesis 1.

5.2 Analysis 2 - Influence of Bribery Payments on Export Intensity

Table 5.1 provides the pairwise correlation matrix for this analysis. The Variance Inflation Factor (VIF) was 1.34, which is well below the accepted threshold of 10. Multicollinearity is therefore not a significant concern for this study.

Hypothesis 2 retests the prediction that a firm's bribery payments in the home country will have a negative influence on their exporting efforts. Table 6.1 provides a summary for the fractional logit regression results pertaining to this hypothesis via three model specifications. Column 1 of table 6.1 presents the fractional logit regression results of bribery payment effect on export intensity for model 3, which is a specification that excludes all control variables other than the moderator variables. The raw coefficient for model 3 is negative but not significant.

Model 4 in the second column of table 6.1 presents a specification which excludes moderating variables of the study while including all other control variables. In addition to the control variables that were included in the previous analysis for hypothesis 1, I have included an additional control variable for customs constraint in models 4 and 5. The reason for this inclusion is due the inclusion of export intensity as the dependent variable. A firm's export efforts can potentially be influenced by how they perceive the customs and regulations in the home country to be a constraint. Firms could potentially be deterred from exporting as an internationalization option if customs and regulations constraint in the home country is a significant concern. As shown, model 4's bribery payment's raw coefficient is both negative and significant ($p\text{-value} = 0.041, p < 0.05$) under this specification.

Model 5 presents a specification which includes all relevant control variables and the moderation variables. Model 5's raw coefficient for bribery payments is both significance ($p\text{-value} = 0.010, p < 0.01$) and negative. Therefore, the results from models 4 and 5 provide

support for prior research findings proposing a negative relationship between a firm's bribery payments and their export intensity (hypothesis 2).

In analyzing this non-linear relationship between bribery payments and export intensity, it is important to analyze the marginal effects to gain a clearer understanding of the results. Table 7.1 presents the average marginal effects of bribery payments on export intensity from model 4. The marginal effect ranges between the lowest reported bribery payment percentage, 0 percent and the highest, 15 percent. Here, we can observe an intriguing pattern emerging. The marginal effects support our conclusions from the raw coefficient analysis in both significance ($p < 0.05$) and direction. However, this holds true only up until the 8 percent range of the bribery payments. Starting from the 9 percent range the results are no longer significant. Within the range where the results are significant ($p\text{-values} = 0.000 - 0.040$, $p < 0.05$), firm export intensity decreases by 1.15 percent on average. When bribery payment percentage increases from 0 to 8 percent, firm export intensity decreases by 9.25 percent. Figure 3.1 provides a visual representation for the predictive marginal effects of bribery payments on firm export intensity at the 95% confidence interval.

Hypothesis 3 proposed that financial constraints will enhance the negative relationship between a firm's bribery payments and their export intensity. Raw coefficient value shown in table 6.1 for model 3 indicates a negative and not-significant relationship ($p\text{-values} = 0.778$, $p < 0.05$). Raw coefficient results for model 5, which includes all relevant variables in the model specification, does not indicate support for the hypothesis 3 in both significance and direction ($p\text{-values} = 0.515$, $p < 0.05$).

Analyzing the marginal effects of an interaction in a non-linear model can provide valuable insight for interpretation purposes (Bowen and Wiersema, 2004; Hoetker, 2007).

Marginal effects for this interaction is provided in table 8.1. Interestingly, results indicate that the marginal effects are negative and significant ($p < 0.05$) in the first three levels of finance constraint severity. The marginal effects become increasingly more negative with each level of constraint severity by an average value of 2.09 percent. A visualization of these results are presented in figure 4.1. Contrary to raw coefficient results, the marginal effects provide support for hypothesis 3. Greene (2009) said the following regarding such findings,

“An empirical conundrum can arise when doing inference about partial effects rather than coefficients. For any particular variable, θ_k , the preceding theory does not guarantee that both the estimated coefficient, θ_k and the associated partial effect, δ_k will both be ‘statistically significant,’ or statistically insignificant. In the event of a conflict, one is left with the uncomfortable problem of simultaneously rejecting and not rejecting the hypothesis that a variable should appear in the model.” (Pg. 487).

Scholars have argued that coefficient values for Generalized Linear Models (GLM) can provide unintuitive and uninformative insight regarding hypothesized relationships (Leeper, 2017). Therefore, conditioning all other variables in the model through a marginal effect analysis can be a preferable alternative (Leeper, 2017). Specifically, utilizing Marginal Effects at Representative values (MERs) can be intuitively more meaningful. MERs enables us to better understand how the conditional mean of a dependent variable changes across a meaningful range for the predictor variables in a model, while conditioning all other variables (Williams 2012). The current results discussed in this study are based on a MERs approach, where all control variables are conditioned to be at their observed values. Appendix B provides results from a MERs approach where all non-predictor variables are set to their mean values. Overall, the

results from MER with all other variables set to their mean values reaffirm the findings from MER analysis results with all other variables in the model set to their observed values.

Hypothesis 4 proposed that tax rate constraint will also enhance the negative influence of bribery payments on a firm's export intensity. The results from table 6.1 provides intriguing findings for this hypothesis. Model 3, which excludes control variables, find a non-significant ($p\text{-value} = 0.470$) negative relationship for this hypothesis. Next, let us consider Model 5. As mentioned, this model specification includes all relevant variables in the analysis. Here, the raw coefficients indicate that while the moderating effect of tax rate constraint is significant ($p\text{-value} = 0.024, p < 0.05$), it is in the opposite direction of the hypothesized direction of the relationship.

Table 9.1 provides the marginal values for this interaction effect. The marginal effect becomes more positive (contrary to the proposed hypothesis 4) with each increasing severity level of the perceived tax rate constraint by firms. In different terms, the severity of tax rate constraint counter the negative effect of bribery payments in the home country on a firm's export intensity. However, it is important to note that this effect of tax rate constraints does not have significance once it is considered as a major obstacle to a firm. On average, within the first three levels of constraint severity, firm export intensity increases by 2.40 percent.

Figure 5.1 provides a visual representation for the average marginal effect results of this moderation by perceived tax rate constraints at the 95% confidence interval. Hoetker (2007) proposes that a graphical presentation of an interaction's effect is important, even more so than when interpreting a single coefficient. As observed from figure 5.1, the initial negative influence of a firm's bribery payments in the home country to their export intensity gradually becomes more positive with the increased severity of tax rate constraints. However, even at the highest

level of severity for tax rate constraint with significant results, the overall relationship between bribery payments and a firm's export intensity remains negative.

These findings for hypothesis 4 are contrary to my proposed hypotheses. What these findings ultimately tell us is that tax rate constraints counter the negative effects of bribery payments on a firm's export intensity. There are several potential reasons for this, which I will discuss in detail in next.

As discussed previously, the arguments utilized in support of the hypothesis of negative relationship are primarily based on a firm's home market positioning. Extant literature has argued that firms that enjoy a strong home market presence can potentially be less inclined to explore international markets through exporting behavior (Hundley et al., 1998). Firms pay bribes in the home market to improve the conditions surrounding the firm in hopes of a positive outcome. Research has shown support for this as well (Cuervo-Cazurra, 2006; 2016). Therefore, it can be argued that an increased expenditure of bribery payments by a firm could be related to a reduction in its export orientation (Lee et al., 2013).

Then the question becomes, how could tax rate constraint reduce the negative effect of bribery payment on export intensity? This would imply that tax rate constraint in the home market actually presents a threat to a firm's market positioning. Being under the influence of a constraint that is not highly-susceptible to the effects of bribery payments could reduce a firm's confidence level in their current and future home market position. For example, research has argued that taxes can reduce firm investments due to the increased user cost of capital (Johansson, Heady, Brys, & Vartia, 2010). Therefore, while bribery payments aid firms in establishing a strong home market position, constraints such as tax rates will influence firms to be more diligent. Exporting can be a means through which firms establish a foreign market

presence. This could potentially provide them with an option to relocate their operations if constraints such as tax rates become cost prohibitive to the extent that their home market operations are severely affected. Establishing a foreign market base for a firm could also be a means by which they attempt to combat the negative cash flow related consequences of tax rate constraints.

The dataset used in the current study primarily includes firms from eastern European nations. Perhaps trade agreements that the governments of these countries have agreed to be a part of is another factor that merits further consideration. If there are highly favorable exporting conditions that could potentially help evade the negative consequences of home market tax rate constraints, firms might be more inclined to consider exporting as an internationalization option.

Chapter 6: Conclusions

In this study I proposed that we must consider the susceptibility of institutional constraints in order to better understand the mechanisms through which such constraints can affect firm level outcomes. The results based on firm level survey data across 25 countries provide support for the proposed positive relationship between perceived permit constraint severity and firm bribery payments. Furthermore, I find support for the proposed negative association between firm bribery payments and their export intensity. The latter reaffirms findings from the extant literature regarding said relationship.

I find mixed results for the moderating effect of financial constraint on the firm bribery payment percentage and export intensity relationship. The raw coefficient of the fractional logit regression results are not significant. However, the MER analysis provides support for hypothesis 3. I do not find support for hypothesis 4 regarding the positive moderating influence of tax rate constraint. Contrarily, results indicate that while tax rate constraint severity moderates the relationship between firm bribery payments and their export intensity, it does so negatively, contrary to my expectations.

This study also has implications for practitioners as well. The findings provide further support for the argument that there is an opportunity cost associated with gaining an advantageous home market position through bribery payments (Lee et al., 2013). Specifically, firms may forego potential to further expand their revenue and customer base through exporting due to them enjoying an advantageous home market position. In addition, the findings of this study also have policy implications. The results indicate that institutional environment can have an influence on firm level corrupt behaviors. Specifically, the severity of highly-susceptible

institutional constraints can increase firm level acts of corruption such as bribery payments. This should be highly concerning for policy makers. They should take into consideration both the perceived burden placed on firms by formal institutional constraints as well as the susceptibility of said constraints in their creation, implementation and management.

This study has several limitations that represent potential for future research opportunities. First, the data utilized in this study are primarily from firms based in the Eastern European region. Expanding the arguments put forth in the current study to firms in different regions in the world could prove to be a fruitful endeavor. For example, can the findings of this study be replicated with a firm level dataset from the Middle East region or the South Asia region? If there are differences, it would be intriguing to consider the distinct differences across regions that contribute to such divisive findings.

Studying various forms of trade agreements that firms operate under in their home country and how such agreements influence how firms perceive institutional constraints can potentially lead to insightful findings. For example, researching how such trade agreements impact the manner in which firms' perceive the susceptibility of institutional constraints, and subsequently how such perceptions impact their internationalization decision making can be important areas of research for the future.

I also opted to focus on three specific and distinct forms of formal institutional constraints in this study. While it aids us in considering the nuanced qualitative properties and susceptibility related mechanisms of such constraints by focusing on a specific few, it can also be considered to be one weakness of this study. Future research can explore other forms of institutional constraints and the mechanisms through which they impact firm level outcomes such as bribery payments and export intensity.

While improving our understanding on firm level outcomes such as bribery payments and export intensity has valuable upside, future research can expand the mechanisms presented in this study to other forms of unique firm level outcomes. For example, how will firm perceptions of institutional constraints such as tax rates influence their new product development efforts? Would the susceptibility of these constraints to bribery influence their decision making on such strategic outcomes as well? Would an increase in bribery payment expenditure, caused by perceptions of institutional constraints such as permit constraint, influence their investments in fixed assets in the home country? Will such perceptions impact their foreign direct investment efforts?

Future research can explore how characteristics of top management of firms potentially influence the mechanisms discussed in this study. The measurements used in this study for the institutional constraints are perception based. Specifically, they are based on the perceptions of firm management personnel. Taking into consideration arguments presented by the upper echelon perspective (Hambrick and Mason, 1984), researchers can explore how perceived severity of institutional constraints vary based on upper management characteristics such as education level, experience, age, and gender.

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Appendix A

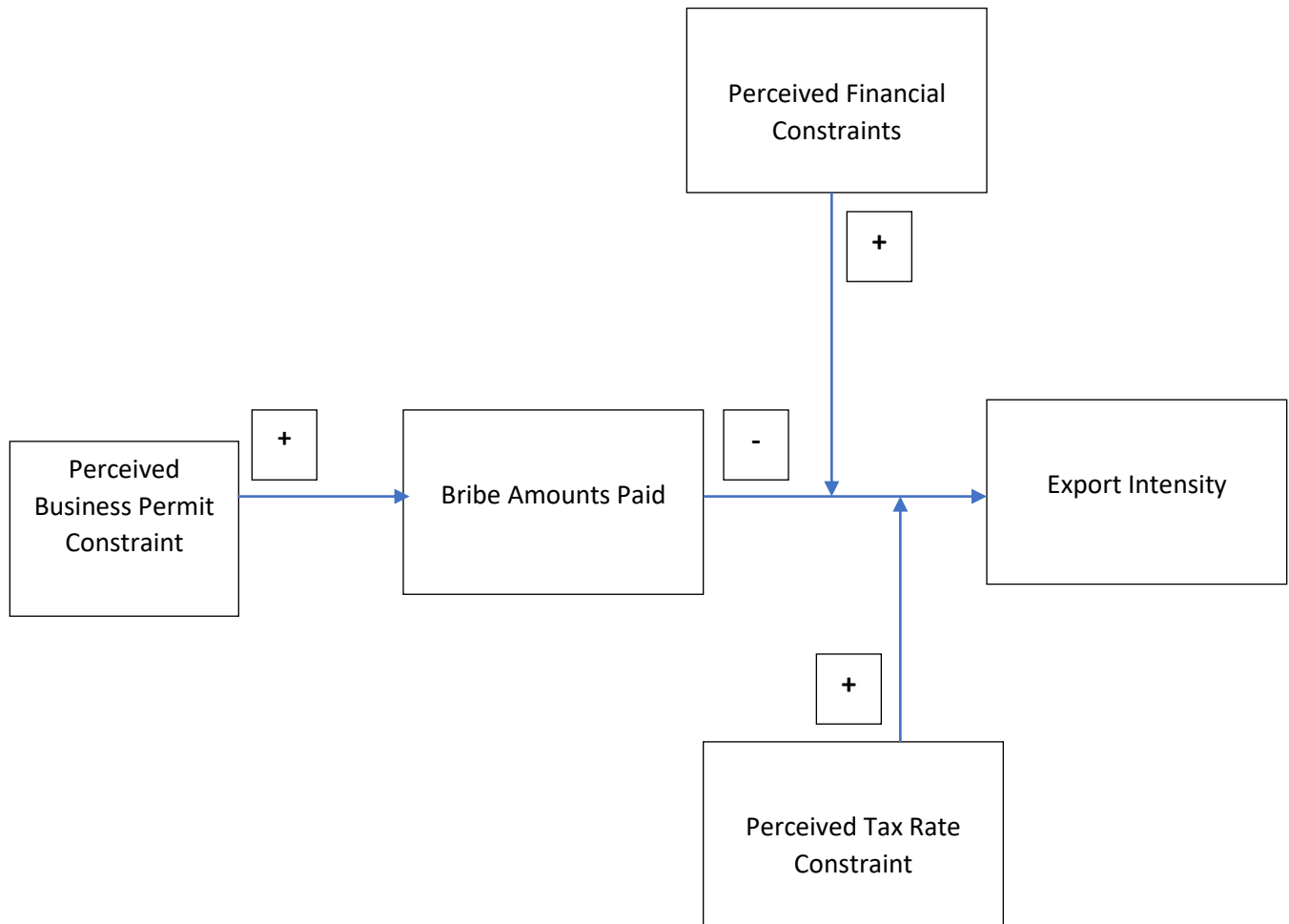


Figure 1.1 Research Model

Table 1.1 Descriptive Statistics

	Mean	Std. Dev.	Min.	Max.
Export Intensity	0.11	0.26	0	1
Home Country Bribery	0.02	0.03	0	0.15
Permits Constraint	0.98	1.07	0	3
Finance Constraint	1.29	1.19	0	3
Tax Rate Constraint	1.75	1.12	0	3
R&D Intensity	0.05	0.07	0	0.6
Manufacturing Firms	0.27	0.44	0	1
Large Firms	0.2	0.4	0	1
Medium Sized Firms	0.31	0.46	0	1
Firm Age - Log	1	0.38	0.48	2.22
Foreign Owned Firms	0.13	0.33	0	1
Customs Constraint	0.96	1.1	0	3

Table 2.1 Pairwise Correlation Matrix – Analysis 1

Variables	1	2	3	4	5	6	7	8
1. Home Country Bribery	1.000							
2. Permits Constraint	0.149**	1.000						
3. R&D Intensity	0.073	0.005	1.000					
4. Manufacuring Firms	0.023	0.015	0.148**	1.000				
5. Firm size - Large	-0.174***	-0.052	-0.095	0.253***	1.000			
6. Firm Size - Medium	0.106*	0.058	0.139**	0.110*	-0.424***	1.000		
7. Firm Age - Log	-0.183***	-0.104*	-0.004	0.198***	0.496***	-0.013	1.000	
8. Foreign Owned Firms	-0.087	-0.022	-0.055	0.148**	0.171***	0.018	-0.033	1.000
* p<0.05, ** p<0.01, *** p<0.001								

Table 3.1 Results of Fractional Logit Regression Predicting Home Country Bribery Payments

(Dependent Variable: Percentage of Bribery Payment)

	Model 1	Model 2
Permits Constraint	0.274*** (-0.05)	0.215* (-0.09)
R&D Intensity		0.248 (-1.31)
Manufacturing Firms		0.346 (-0.26)
Large Firms		-0.553 (-0.44)
Medium Firms		0.146 (-0.25)
Firm Age - Log		-0.849* (-0.34)
Foreign Owned Firms		-0.477 (-0.39)
Constant	-4.479*** (-0.09)	-3.634*** (-0.7)
Country Dummies	No	Yes
Pseudo – R ²	0.0103	0.0636
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ Standard errors in parentheses		

Table 4.1 Marginal Effects of Permit Constraint on Firm Bribery Payments in the Home Country

Permit Constraint Level	Margin	Std. Error	P- Value	95% Confidence Interval
No Obstacle	0.0078	0.0015	0.0000	(0.0048) – (0.0108)
Minor Obstacle	0.0163	0.0028	0.0000	(0.0107) – (0.0218)
Moderate Obstacle	0.0189	0.0031	0.0000	(0.0128) – (0.0250)
Major Obstacle	0.012	0.0034	0.0000	(0.0054) – (0.0187)

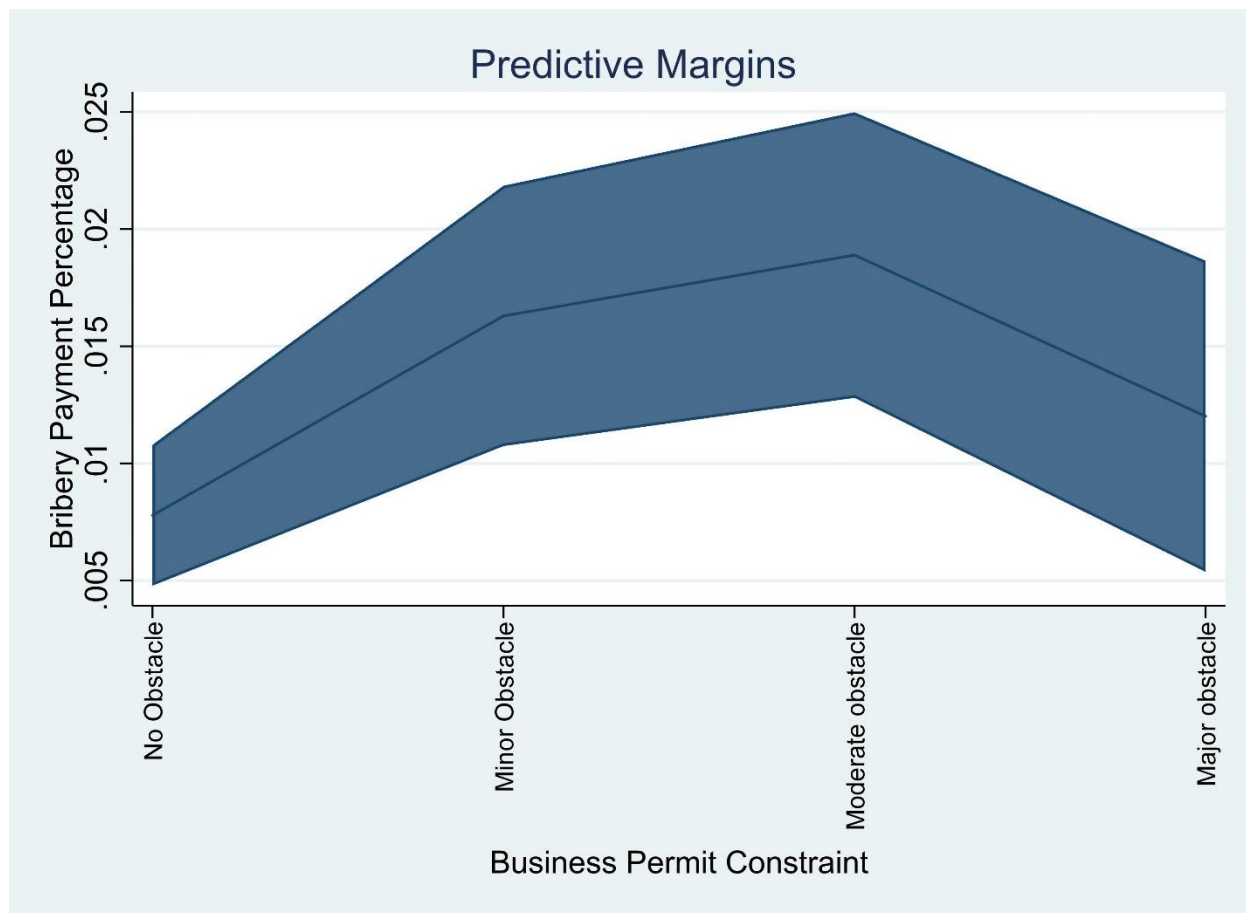


Figure 2.1 Predictive Margins of Permit Constraint on Firm Bribery Payments in the Home Country (at 95% confidence Interval)

Table 5.1 Pairwise correlation Matrix – Analysis 2

Table 5: Pairwise Correlation Matrix - Analysis 2											
Variables	1	2	3	4	5	6	7	8	9	10	11
1. Export Intensity	1										
2. Home Country Bribery	-0.132**	1									
3. Tax Rate Constraint	-0.0599	0.221***	1								
4. Finance Constraint	-0.0241	0.110*	0.294***	1							
5. R&D Intensity	-0.0529	0.078	0.0368	-0.0517	1						
6. Manufacturing Firms	0.410***	-0.00239	0.0375	0.0494	0.136**	1					
7. Firm Size - Large	0.251***	-0.177***	0.0362	-0.102*	-0.0996*	0.261***	1				
8. Firm Size - Medium	0.038	0.0947	-0.0265	0.0857	0.155**	0.101*	-0.430***	1			
9. Firm Age - Log	0.130**	-0.180***	0.0237	0.0425	-0.000732	0.200***	0.507***	-0.0257	1		
10. Foreign Owned Firms	0.332***	-0.0866	-0.0112	-0.0238	-0.0568	0.155**	0.171***	0.0267	-0.0339	1	
11. Customs Constraint	0.101*	0.186***	0.422***	0.168***	-0.0236	0.147**	0.0514	0.0268	-0.0588	0.094	1
* p<0.05, ** p<0.01, ***p<0.001											

Table 6.1 Results of Fractional Logit Regression Predicting Firm Export Intensity

	Model 3	Model 4	Model 5
Bribery Payment	-6.398 (12.53)	-16.748* (8.18)	-75.995** (29.42)
Tax Rate Constraint	0.034 (0.08)		-0.469** (0.15)
Bribery x Tax Rate	-3.005 (4.16)		20.648* (9.16)
Finance Constraint	0.022 (0.08)		-0.032 (0.14)
Bribery x Finance	-1.17 (4.14)		3.838 (5.90)
R&D Intensity		-2.734 (2.01)	-3.262 (1.95)
Manufacturing Firms		2.263*** (0.30)	2.358*** (0.31)
Firm Size - Large		0.798 (0.45)	0.737 (0.45)
Firm Size - Medium		0.834* (0.36)	0.810* (0.37)
Firm Age - Log		0.076 (0.38)	0.139 (0.39)
Foreign Owned Firms		1.301*** (0.35)	1.204*** (0.34)
Customs Constraint		0.184 (0.12)	0.369** (0.12)
Country Dummies	No	Yes	Yes
Constant	-1.983*** (0.16)	-4.624*** (1.02)	-3.853*** (0.96)
Pseudo – R ²	0.0229	0.3042	0.3419
<p>* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ Standard errors in parentheses</p>			

Table 7.1 Marginal Effects of Bribery Payments on Export Intensity

Bribery Percentage	Margin	Std. Error	P-value	95% Confidence Interval
0	0.1552	0.0131	0.000	(0.1296) – (0.1808)
1%	0.1402	0.0109	0.000	(0.1187) – (0.1617)
2%	0.1262	0.013	0.000	(0.1008) – (0.1516)
3%	0.1132	0.0166	0.000	(0.0807) – (0.1457)
4%	0.1013	0.0202	0.000	(0.0616) – (0.1409)
5%	0.0903	0.0234	0.000	(0.0444) – (0.1361)
6%	0.0802	0.0259	0.002	(0.0294) – (0.1310)
7%	0.071	0.0278	0.011	(0.0166) – (0.1255)
8%	0.0627	0.029	0.031	(0.0058) – (0.1195)
9%	0.0552	0.0296	0.063	(-0.0029) – (0.1132)
10%	0.0484	0.0298	0.104	(-0.0100) – (0.1067)
11%	0.0423	0.0294	0.151	(-0.0154) – (0.1000)
12%	0.0369	0.0287	0.199	(-0.0194) – (0.0932)
13%	0.0321	0.0277	0.247	(-0.0222) – (0.0863)
14%	0.0278	0.0264	0.293	(-0.0240) – (0.0796)
15%	0.024	0.025	0.336	(-0.0249) – (0.0730)

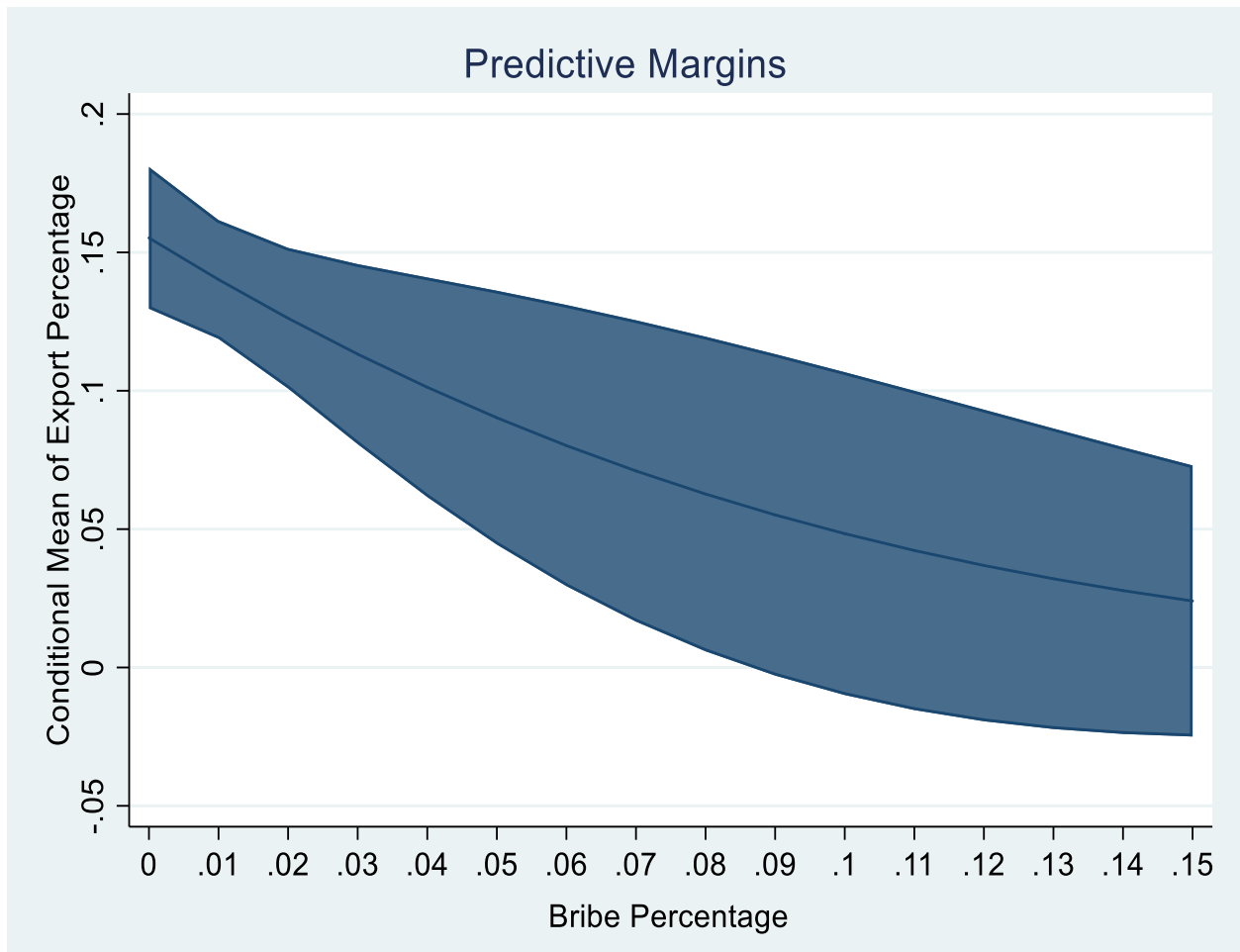


Figure 3.1 Predictive Margins of Bribery Percentage on Export Intensity (at 95% confidence Interval)

Table 8.1 Interaction effect – Finance constraint and Bribery

Finance Constraint Level	Margin	Std. Error	P-Value	95% Confidence Interval
No Obstacle	-2.9989	1.2042	0.013	(-5.3592) - (-0.6387)
Minor Obstacle	-3.6933	1.2938	0.004	(-6.2291) - (-1.1575)
Moderate Obstacle	-7.1961	2.3444	0.002	(-11.7911) - (-2.6011)
Major Obstacle	-1.7359	1.1960	0.147	(-4.0800) - (0.6081)

Table 9.1 Interaction effect - Tax Rate constraint and Bribery

Tax Rate Constraint Level	Margin	Std. Error	P-Value	95% Confidence Interval
No Obstacle	-9.0936	3.8542	0.018	(-16.6477) - (-1.5396)
Minor Obstacle	-5.8446	2.7317	0.032	(-11.1986) - (-.4907)
Moderate Obstacle	-1.8763	0.8196	0.022	(-3.4827) - (-.2700)
Major Obstacle	-0.829	0.5219	0.112	(-1.8518) - (.1939)

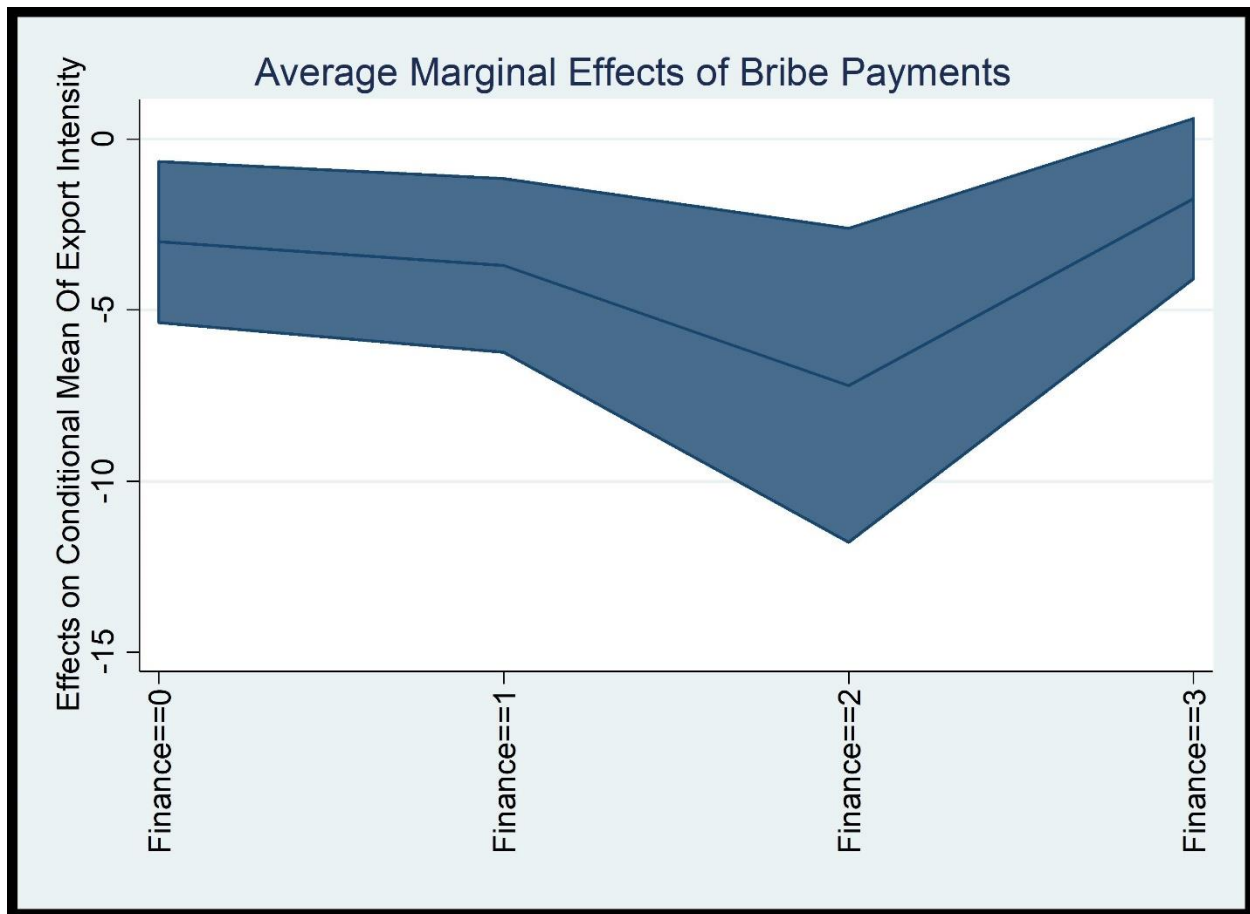


Figure 4.1 Marginal effects for Finance constraint moderation (at 95% confidence Interval)

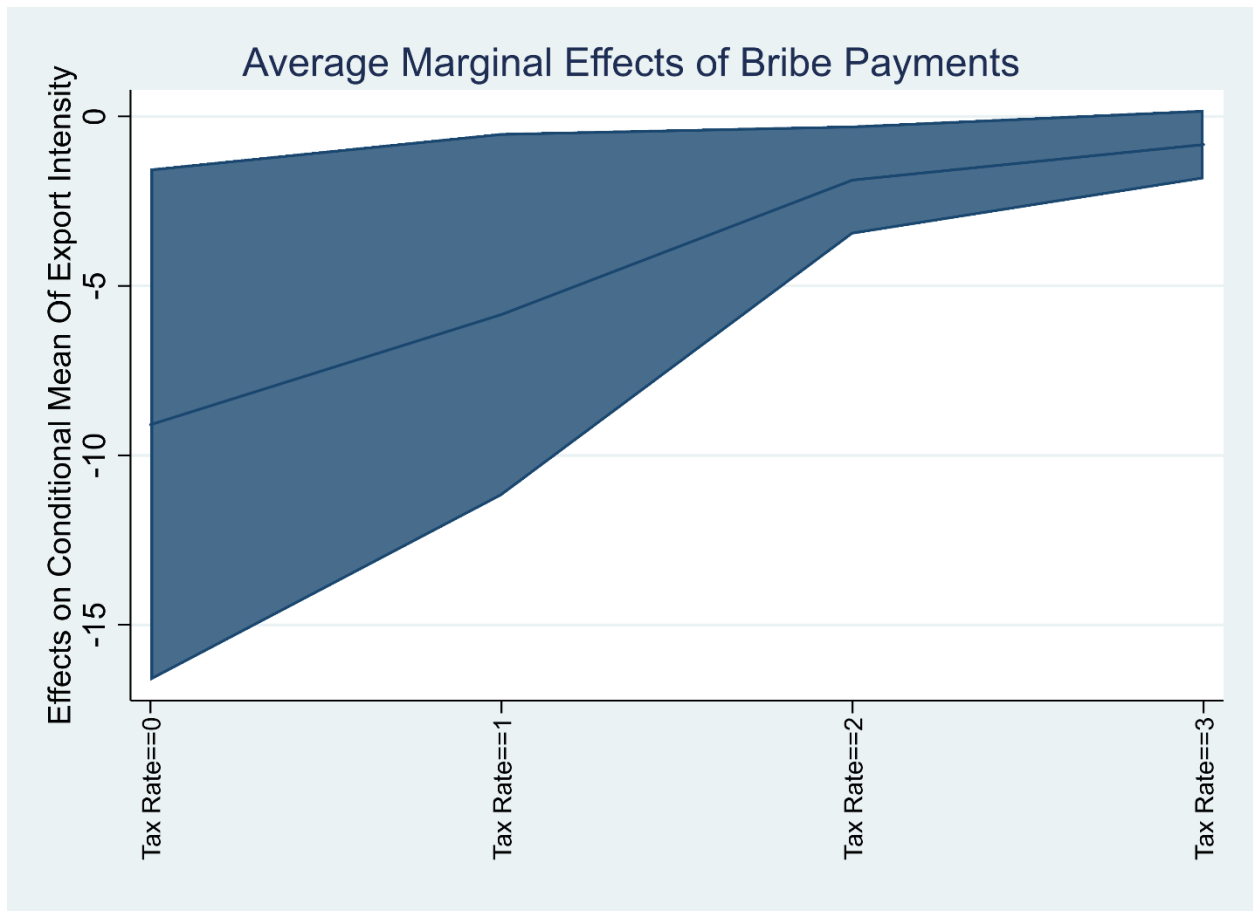


Figure 5.1 Marginal effects for tax constraint moderation (at 95% confidence Interval)

Appendix B

In this section I will provide the marginal analysis results for the hypothesis when all other variables related are set to their mean values.

Table 1A provides results for the marginal effects at the means (MEMs) analysis for hypothesis 1, when holding all other variables in the model to their mean values. As shown below, perceived permit constraint has a significant ($p\text{-value} = 0.000$, $p < 0.001$) marginal effect on bribery payments on all levels of constraint severity. As with the marginal analysis conducted with all other variables held at their observed values, the first three levels of perceived permit constraint shows an increasing marginal effect on firm bribery payments. Bribery payment percentage increases by an average of 0.38 percent with each level incremental severity level of permit constraint. Results also support earlier findings that when firm's perceive permit constraints to be a major obstacle, it reduces their bribery payments by 0.48 percent. The visualization of these marginal effect changes are presented in figure 1A.

Table 1A MEMs of Permit Constraint on Firm Bribery Payments

Permit Constraint Level	Margin	Std. Error	P-Value	95% Confidence Interval
No Obstacle	0.0053	0.0010	0.0000	(0.0032) - (0.0073)
Minor Obstacle	0.0111	0.0020	0.0000	(0.0071) - (0.0151)
Moderate Obstacle	0.0129	0.0024	0.0000	(0.0081) - (0.0177)
Major Obstacle	0.0081	0.0024	0.0010	(0.0035) - (0.0128)

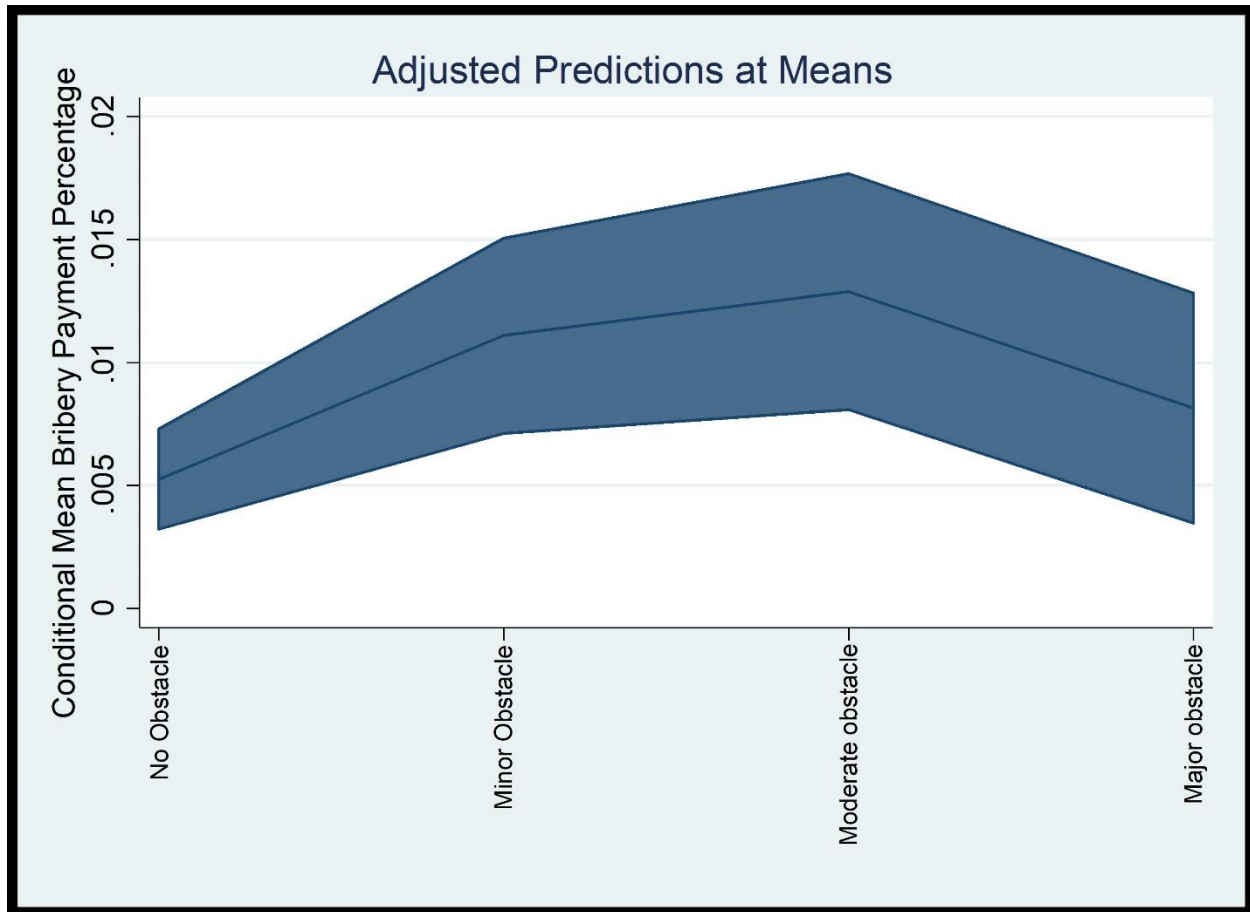


Figure 1A Predictive Margins of Permit Constraint on Firm Bribery Payments in the Home Country (at 95% confidence Interval)

Table 2A provides results for the predictive marginal effects at the means (MEMs) analysis for hypothesis 2, when holding all other variables in the model to their mean values. The resulting marginal effect pattern is mostly similar to previous findings with one notable difference. The marginal effect changes still indicate a decreasing level of export intensity with increasing bribery payment percentage values. However, starting from when bribery payment percentage is 8 percent, the results are no longer significant ($p < 0.05$). Therefore, the results provide support for the hypothesis 2 within the 0-7% bribery payment range. Previously, in the MER analysis where all other model variables were held at their observed values, the marginal effects were significant from 0-8%. Based on the current results, a change in bribery payments from no bribery payments to a bribery payment of 7 percent of a firm's annual revenue, decreases their export intensity from 7.2 percent to 2.3 percent. Figure 2A provides a visual representation of these results.

Table 2A MEMs of Bribery Payments on Export Intensity

Bribery Percentage	Margin	Std. Error	P-Value	95% Confidence Interval
0%	0.0719	0.0114	0.000	(0.0496) - (0.0943)
1%	0.0615	0.0088	0.000	(0.0442) - (0.0788)
2%	0.0525	0.0088	0.000	(0.0354) - (0.0697)
3%	0.0448	0.0098	0.000	(0.0257) - (0.0639)
4%	0.0381	0.0108	0.000	(0.0170) - (0.0593)
5%	0.0325	0.0115	0.005	(0.0099) - (0.0550)
6%	0.0276	0.0119	0.020	(0.0044) - (0.0508)
7%	0.0234	0.0119	0.049	(0.0001) - (0.0467)
8%	0.0199	0.0117	0.088	(-0.0030) - (0.0427)
9%	0.0169	0.0112	0.133	(-0.0052) - (0.0389)
10%	0.0143	0.0107	0.180	(-0.0066) - (0.0353)
11%	0.0121	0.0100	0.227	(-0.0075) - (0.0318)
12%	0.0103	0.0093	0.271	(-0.0080) - (0.0286)
13%	0.0087	0.0086	0.313	(-0.0082) - (0.0256)
14%	0.0074	0.0079	0.351	(-0.0081) - (0.0229)
15%	0.0062	0.0072	0.386	(-0.0079) - (0.0204)

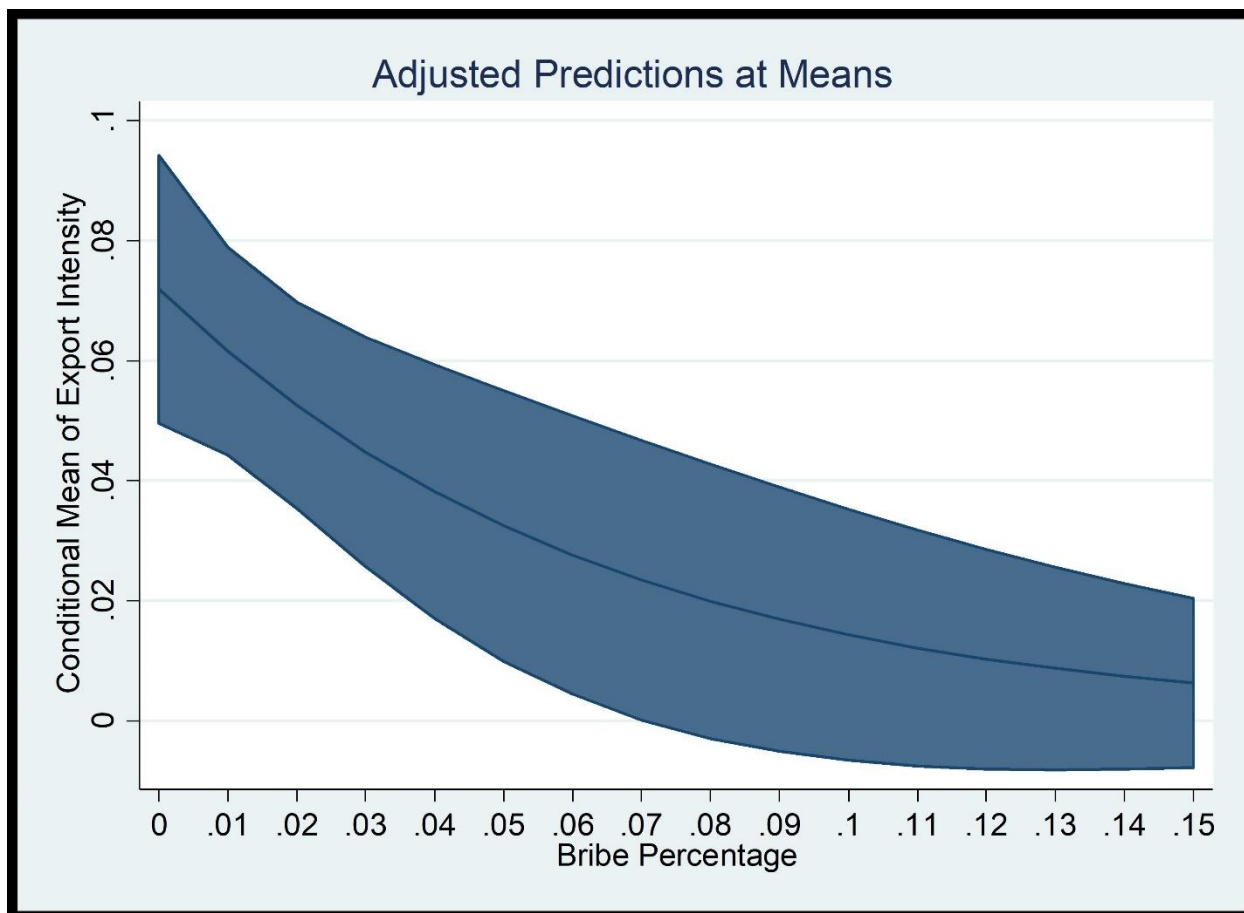


Figure 2A Predictive Margins of Bribery Percentage on Export Intensity (at 95% confidence Interval)

Hypothesis 3 argued that the perceived severity of financial constraints will enhance the negative relationship between a firm's bribery payments and their export intensity. Table 3A shows the MER results for this hypothesis with all other variables held at their mean values. Results are similar to previous results for MER with other variables held at their observed values. Marginal effects show that the moderating effect of finance constraints become increasingly more negative across the first three levels of constraint severity. Moving from a moderate obstacle to a major obstacle, the marginal effects become more positive and not significant. Therefore, perceived finance constraint further decreases firm export intensity by an average of 1.16 percent, per severity level.

Table 3A MER at Means Analysis for Finance Constraint and Bribery Interaction effect

Finance Constraint Level	Margin	Standard Error	P-Value	95% Confidence Interval
No Obstacle	-1.4241	0.4881	0.004	(-2.3807) - (-0.4674)
Minor Obstacle	-1.6584	0.6675	0.013	(-2.9666) - (-0.3501)
Moderate Obstacle	-3.7387	1.1403	0.001	(-5.9738) - (-1.5035)
Major Obstacle	-0.6733	0.4668	0.149	(-1.5882) - (0.2416)

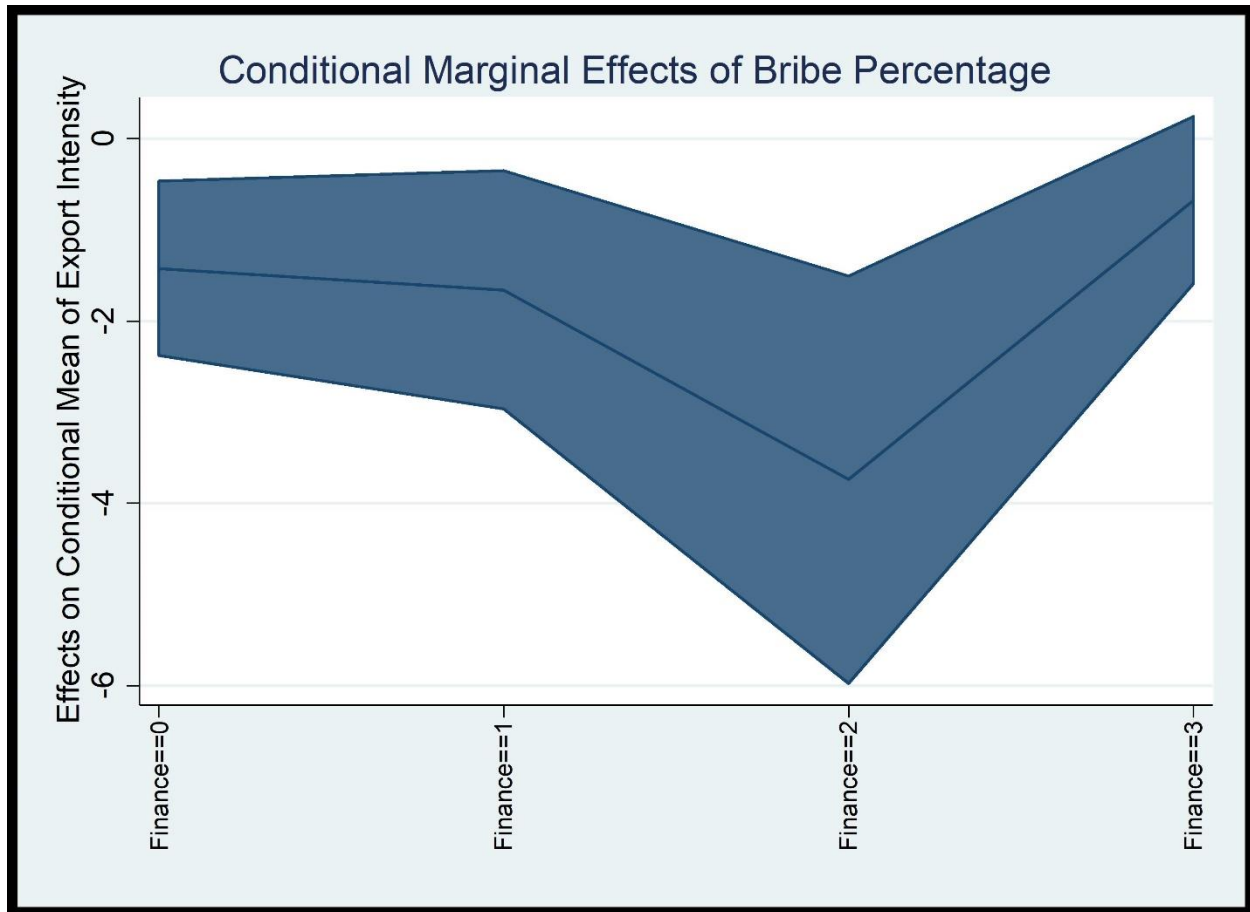


Figure 3A Marginal Effects for Finance Constraint Moderation

Hypothesis 4 was regarding the proposed enhancing effect of perceived tax rate constraint on the negative relationship between firm bribery payments and export intensity. Table 4A provides the MER analysis results where all other variables in the model held at their mean values. Here we observe one noticeable difference between our MER findings at the observation values and mean values. In the previous findings the moderating effect of tax rate constraint made the focal negative relationship between bribery payments and export intensity more positive. However, when all other variables are held at their mean values, changing from perceived no obstacle to a minor obstacle actually enhances the main relationship to be more negative (export intensity further decreases by 32.5 percent). Interestingly, changing from minor obstacle to a moderate obstacle has a diminishing effect on the main relationship (export intensity further increases by 39.7 percent). Only the results for the first three levels of severity were found to be significant ($p < 0.05$). Figure 4A provides a visual representation of these findings.

Table 4A MER at Means Results for Tax Rate Constraint Moderation

Tax Rate Constraint Level	Margin	Standard Error	P-Value	95% Confidence Interval
No Obstacle	-3.8908	1.0025	0.000	(-5.8557) - (-1.9259)
Minor Obstacle	-4.1689	1.6408	0.011	(-7.3847) - (-0.9530)
Moderate Obstacle	-0.8264	0.4099	0.044	(-1.6297) - (-0.0231)
Major Obstacle	-0.3539	0.2744	0.197	(-0.8918) - (0.1840)

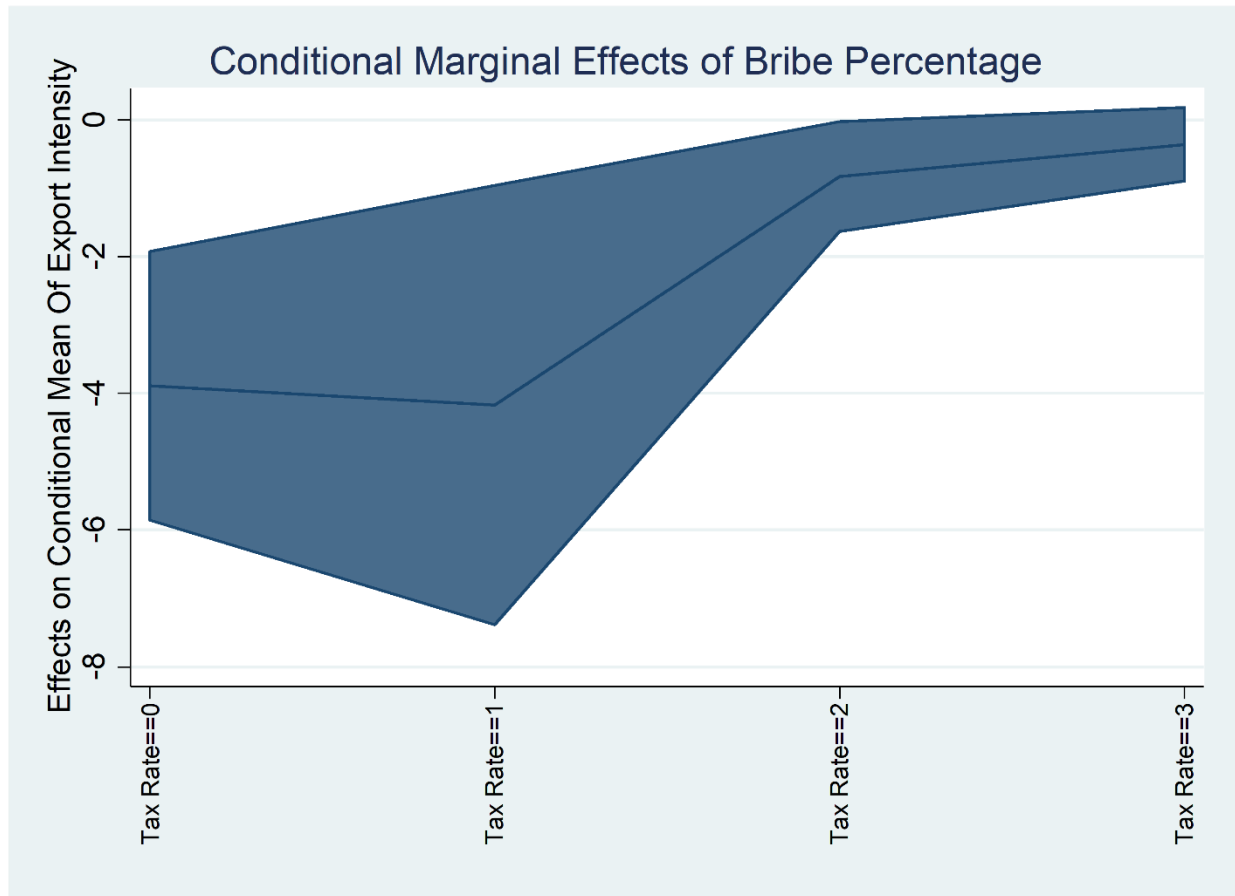


Figure 4A Marginal effects for tax constraint moderation

Vita

Randika Eramudugoda graduated from Portland State University in 2012, where he earned a Bachelor of Science dual degree in Accounting and Management & Leadership. He joined UTEP in 2014 to pursue a doctoral degree in Business Administration with a focus on Strategic Management.

Dr. Eramudugoda has presented his research at several conferences such as the Academy of International Business – West chapter annual conference and the Eastern Academy of Management annual conference. His primary research interests are in the areas of institutional environments, stakeholder management, and strategic platforms.

During his years at UTEP, Dr. Eramudugoda served as an Assistant Instructor in the College of Business Administration. Across more than 10 classes taught, he had an average student evaluation score of over 4.6/5.0. He also served as the College of Business Administration's representative for the Graduate School Assembly of UTEP.

His dissertation “Bribery and Export Intensity: The Role of Formal Institutional Constraint Susceptibility” was supervised by Dr. Miguel Ramos. In the fall of 2019, Dr. Eramudugoda will start a new career as an Assistant Professor of Management at the University of Wisconsin – La Crosse, where he will primarily focus on research and teaching in the area of Strategic Management.