Essays on Corporate Political Actions Under Globalization

by
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DEDICATION

This dissertation is dedicated to my mother.

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ABSTRACT

This dissertation consists of three essays on firms' political actions under globalization. More specifically, it examines different aspects of firm lobbying on regulatory policies and trade policies. Even though the arguments articulated in the dissertation are generalizable theories on firm-government interactions, I focus on the institutional contexts of contemporary US and China. Chapter 1 summarizes each essay and discusses the common theme across all chapters of the dissertation.

Chapter 2 asks: how does a firm's global production affect its political behaviors to shape its home country regulatory policies? This question lies at the intersection of globalization and money-in-politics, and it is becoming increasingly relevant today with nationalist discontent challenging the global order. I address this question with a theory of regulatory arbitrage: in response to unfavorable regulatory outcomes at home, it is easier for firms with overseas operations to offshore more of their domestic operations abroad, resulting in an outflow of capital and jobs from the home country. This locational flexibility across multiple jurisdictions serves as an advantageous bargaining position for internationalized US firms in the lobbying process. To test it, I construct a 2007-2016 offshoring panel to show that US firms with overseas operation in the same sector (i.e. shell companies are excluded) are substantially more active in lobbying on US domestic regulations (i.e. lobbying reports with international economic policy components are excluded). These results suggest that international pressure for national regulatory change can also take place at the firm level, where firms' global expansion

gives strength to their domestic political actions.

Chapter 3 asks: what factors determine corporate support for China's international trade initiatives? This paper argues that firms with existing overseas operations have an intrinsic incentive to support international trade agreements that promotes an open and stable global business environment. Being independent from other firm and industry features that can drive firms' reaction to trade policies, this effect reveals a firm-level political consequence of FDI. To test it, I collect the first data set on corporate public statement on trade in Chinese media, which provides a rare opportunity to reveal corporate policy positioning in a country with no lobbying disclosure requirement. I find that 1) the conventional perspective of the Chinese trade policy making being top-down is incomplete because firms are actively participating in this process with public statements; 2) foreign multinationals in China are not only economically active, but also politically active on China's trade policy making; 3) as Chinese firms extend their operations abroad, they have also become a vocal lobbyist of free trade agreements in China. These findings are robust against potential media reporting bias in China, and are comparable to the dynamics of corporate trade preference in the US context.

Chapter 4 investigates how political connection shapes firm owner preference on economic openness and international competition in China, a topic that is getting increasingly relevant today amid China's trade disputes with its trading partners over the nature of the country's business-government relations. Politically connected entrepreneurs and their enterprises (PCEs) usually exploit and benefit from their political resources, but this can lead to both supporting and opposing

views on expanding trade liberalization. To solve this puzzle, this paper proposes a theory that focuses on 1) a selection effect of political connection on firm productivity and 2) trade-related institutional development in China. With survey data on China joining the WTO, I develop a modified Bayesian IRT model to measure political connection and find that Chinese PCEs held a less supportive view before joining WTO than their less connected counterparts. This suggests an anticipation that the imminent opening would neutralize the privileges of PCEs. By looking at trade liberalization, this paper offers a firm level analysis that political opposition to sustained economic reform may derive from the short-term winners, instead of the losers, in transitional societies.

CHAPTER I

Introduction: Lobbying, Globalization, and National Policies

This dissertation advances the scholarship on firm lobbying on national regulatory policies and international trade policies under globalization. This topic is inspired by the phenomenon that, over the past few decades, the world marched towards international integration, multilateral cooperation, and global production. In recent years, however, skepticism of globalization and populist sentiment are gaining traction in major countries of the world. Protectionist and disruptive national policies have emerged, and their adverse effects have begun to unfold in today's international trade and investment. This dissertation studies one important aspect of such global trends: the interaction between multinational firms and national governments in domestic regulatory policy making and international trade policy making.

The overarching theme of the three-paper dissertation is that firms' global production brings them new leverage, but also new needs and new risks. These changes motivate firms to approach policy makers in innovative ways. Because this dissertation evaluates

how firms' global production affects their political actions, it can be seen as a discussion of the political implications of FDI at the firm-level. Even though the arguments articulated in the dissertation are generalizable theories on firm-government interactions, I focus on the institutional contexts of the US and China since they are the two largest countries in the contemporary global political economy. They play prominent roles in driving both cooperation and contestation in global economic relations. The first dissertation paper analyses how overseas operation empower American firms to lobby on US domestic regulatory policies via a regulatory arbitrage mechanism. The second dissertation paper analyses how overseas operation drives corporate support for China's free trade agreements (FTA) among not only foreign multinational companies (MNCs) in China, but also Chinese firms that have become internationalized in recent decades. The third paper examines firms' policy stance in the process international trade liberalization, and proposes a modified Bayesian method to measure corporate-government connection. The following paragraphs outlines each of the three papers.

The first paper (Chapter 2), "Regulatory Arbitrage and Overseas Operation of US Firms", examines how a firm's global expansion affects its lobbying participation to influence its home-country regulatory policies. This paper answers this question by developing a theory of regulatory arbitrage. It is known in the literature that a firm's decision to go abroad involves a substantial fixed cost for the initial setup, which is often described as a discrete and lumpy investment. But once the firm has built the initial infrastructure abroad, it gains higher ability to cope with changing regulatory conditions at home. This is because, when unfavorable policies affecting its business occurs at home, firms with existing overseas presence can easily move production away from the US to its overseas establishments. When this offshoring occurs due to regulatory changes, it can be seen as a case of "regulatory distortion" of the existing configuration of the firm's foreign operation. As a result, the flexibility to move abroad of already internationalized US firms across different

regulatory jurisdictions serves as a favorable bargaining position in the lobbying process. Thus, these firms lobby often and invest heavily in shaping the domestic business environment because their chances of getting favorable policies are higher than without such cheap offshoring options.

This paper first extracts large-scale text evidence from a novel repository of firm public statements to show that regulatory arbitrage claims in media are indeed made by offshoring multinationals. This part is not a hypothesis test per se, but qualitative evidence to sketch the landscape of corporate media statements related to the regulatory arbitrage argument. The hypothesis testing section is built upon a 2007-2016 offshoring panel to show that American firms with overseas operation in the same sector are substantially more active in lobbying on taxation, labor, and other domestic regulations. The restriction on the subsidiary and headquarter being in the same sector is theoretically crucial for this paper since it is quite common for MNCs to have foreign affiliates for tax purposes in low-tax regions. The regulatory arbitrage argument applies only when the foreign subsidiary engages in similar productive and commercial activities with its US headquarter.

This paper contributes to the international political economy literature by showing that international pressure for national regulatory change can also take place at the firm-level, where firms' global expansion gives strength to their domestic political actions. Previously, discussions around race to the bottom or race to the top of national regulatory policies usually focus on country-level factors, such as national governments competing for FDI, international organizations pressuring national governments to amend their domestic regulations, and powerful countries influencing their smaller allies. There has been less discussion at sub-national levels, and this paper proposes a firm-level mechanism that contributes to our understanding of this topic.

This paper also provides a timely discussion on the relationship between globalization of production and money in politics, when both phenomena are being challenged

by the current anti-globalization and anti-corporate voices in the society. Related to the common blame that corporate offshoring in the past decades has caused job losses and de-industrialization in the US, and contributed to the election of an anti-globalization government. This common belief, however, assumes that firms could move abroad abruptly to evade stringent regulations in the US and exploit cheap labor and low standards abroad. In reality, this is often unrealistic given the high fixed cost required for initial foreign operation. However, the public blame on corporate offshoring is not entirely baseless. Because we live in an already globalized world where already internationalized firms do have the realistic option to increase their foreign production based on their existing infrastructure abroad to avoid unfavorable regulations at home. This generates a political implication that internationalized US firms are better positioned than domestically-oriented US firms to influence American regulatory policy making.

The second paper (Chapter 3), "Taking the Media High Ground: Overseas Operation and Policy Positioning on Chinese FTAs" explores factors that determine corporate support for international trade policies. In particular, this paper highlights how firms' overseas operation motivate them to support China's international trade initiatives after the country's accession to the WTO. It argues that firms with existing overseas operation have an intrinsic incentive to support international trade in both home and foreign countries, independent from other firm and industry features that can drive firms' reaction to trade policies. To test it, I collect the first data set on corporate public statement on trade in Chinese media, which provides a rare opportunity to reveal their policy positioning in a country with no institutionalized lobbying nor disclosure requirement.

This paper finds that Chinese firms that have gone abroad and foreign MNCs operating in China are playing active roles in Chinese trade policy making, and in many aspects, their policy participation is comparable to dynamics of trade lobbying in the US context. The findings are surprising in several aspects. Firstly, the conventional wisdom is that pol-

icy makers, especially central government officials, make international economic policies in China. This paper shows that this view is incomplete, because at least in contemporary policy discussion in Chinese media, individual companies are actively participating in the policy making process. Secondly, in the lobbying literature, much of the discussion is based on the experience of the US, where American interest groups lobby the American government. However, there is less research on interest group lobbying in foreign countries. The discovery that non-Chinese MNCs are vocal supporters of Chinese FTAs in Chinese media helps to fill that gap. Thirdly, China is often treated as the world factory hosting foreign MNCs from developed countries, but this paper reveals the recent trend that Chinese firms have grown to extend their operations abroad. At the same time, such internationalized Chinese companies are becoming a salient participant of Chinese policy making.

The third paper, "Measuring Political Connection and Entrepreneur Trade Preference under the WTO", asks what determines Chinese entrepreneurs' stances on international competition and trade openness in the context of China joining the WTO in 2001. It reveals unexplored temporal dynamics where Chinese entrepreneurs' prior experience adapting to waves of post-socialist reforms in the 1980s and 1990s conditions how they react to China's entry to the global market. More specifically, Chinese entrepreneurs that are politically connected hold a less supportive view before joining the WTO than their less connected counterparts. This suggests an anticipation that the imminent opening would neutralize the privileges of politically connected firms.

The major innovation of this paper lies in a methodological attempt to improve the measurement of a key concept in Chinese political economy: corporate political connection. I developed a modified Bayesian item-response-theory (IRT) model that explicitly models the multifaceted nature of a firm's connection with the government. Previously, researchers mostly rely on observable proxies to measure this abstract concept, but there is

no consensus on which proxies should be used nor a systematic way to make that choice. The measurement method proposed also formally models the possibility of survey respondents intentionally lying on politically sensitive questions with demonstrated parameter identification for multiple latent traits on the same dimensional space. This method is highly generalizable to similar applications.

Taken together, these papers examine how firms interact with governments in regulatory and trade policy making. By focusing on multinational firms' policy participation and political actions, this dissertation advances the discussion on the political implications of FDIs in both home and host countries. As of 2019, many of the phenomena discussed in this dissertation are fairly recent and rapidly evolving, such as the industrial offshoring in the US and trade expansion in China. Being closely related to some of the major challenges of today's global political economy, additional research on this topic is warranted.

CHAPTER II

Regulatory Arbitrage and Overseas Operation of Multinational Firms

1 Introduction

How does a firm's international expansion affect its political actions to shape its home country regulations? This question lies at the intersection of globalization of production and corporate political actions, and it is becoming increasingly relevant today when nationalist discontent challenges the global order. For instance, during the 2016 US presidential election race, Carrier Air Conditioner went viral in social media following the company's announcement to offshore its Indianapolis operation to Monterrey, Mexico.[1] In response, Carrier justified its decision to move to the Mexican city since the company has had "an existing, proven manufacturing footprint in Monterrey"[2] since 1969,[3] and the

[1] See report on how the Carrier offshoring case became a centerpiece of then-candidate Donald Trump's campaign at: www.nytimes.com/2016/03/20/business/economy/carrier-workers-see-costs-not-benefits-of-global-trade.html. The Carrier case also drew the attention of Democratic Senator, also then-candidate, Bernie Sanders from the Democratic Party: www.sanders.senate.gov/newsroom/press-releases/-sanders-statement-on-carrier-and-outsourcing

[2] $storage.googleapis.com/sos-websvc/files/carrier-to-mexico/Carrier_Fact_Sheet_021916.pdf$

[3] The earliest account of Carrier business activity in Mexico dates back to 1949, when the company contracted with a local retailer who later started producing Carrier products in Mexico in 1969. In 1979,

"existing infrastructure there will allow [Carrier] to operate more cost effectively".[4] Regarding the potential loss of American jobs, Carrier blamed new regulatory requirements and "rising red tape" from Washington DC for its offshoring decision. A negotiation between Carrier and the US government ensued, resulting in the Carrier's offshoring plan being postponed in exchange for large tax credits granted to the company.[5]

Such cases are common in contemporary debates in the American society, and many blame American corporate offshoring for its negative social impact, such as job losses and de-industrialization, as if firms could move abroad easily and abruptly to evade US regulations and exploit better terms abroad. But there has been little scholarly research on this topic due to both theoretical and empirical challenges (Carruthers and Lamoureaux, 2016). To fill this gap, this study offers an argument that relies on two key insights. Firstly, the high fixed cost required for setting up overseas operation makes it unrealistic for firms to go abroad solely for regulatory concerns (e.g., Antras and Helpman. 2004; Rodriguez-Lopez 2014; Carruthers and Lamoureaux 2016; Morck and Yeung. 1992; Wheeler and Mody 1992; Kogut 1983; Kogut and Kulatilaka 1994). Secondly, we live in an already-globalized world where already-internationalized firms do have the *real options* to increase their foreign production based on their existing infrastructure abroad to avoid unfavorable regulatory policies at home (e.g., Kogut 1983; Kobrin and Kogut 1983; Kogut and Kulatilaka 1994; Boddewyn and Brewer 1994; Belderbos and Zou 2009; Guillén 2013). With such flexibility, internationalized US firms are better positioned than domestically oriented US firms to influence US domestic regulations.

This paper terms this mechanism regulatory arbitrage. The regulatory arbitrage the-

Carrier built its first new factory in Monterrey, also known as "Plant II" in its company history. See more details in Trostel and Light (2000).

[4] $storage.googleapis.com/sos-websvc/files/carrier-to-mexico/Carrier_Fact_Sheet_021916.pdf$

[5] www.wsj.com/articles/indiana-gives-7-million-in-tax-breaks-to-keep-carrier-jobs-1480608461
www.chicagotribune.com/business/ct-carrier-indiana-regulations-mexico-20161227-story.html
www.bloomberg.com/news/features/2017-03-29/remember-when-trump-said-he-saved-1-100-jobs-at-a-carrier-plant

ory is essentially a fixed-cost argument. It is known that a firm's decision to go abroad involves a substantial fixed cost for the initial setup (Antras and Helpman., 2004), which is often described as a discrete and lumpy investment (Rodriguez-Lopez, 2014). The initial infrastructure abroad, once in place, generates an implication for the firm's ability to cope with changing regulatory conditions at home. This is to say, in response to unfavorable regulatory outcomes, the internationalized firm can choose to relocate more production swiftly and cheaply away from the US to its foreign establishments. When it occurs, this regulation-induced offshoring is a "regulatory distortion", a concept borrowed from Horst (1980) and Caves (2007), of existing patterns of foreign investment at the intensive margin[6]. Thus, the real options to shift production across jurisdictions serve as an advantageous bargaining position for internationalized US firms in the lobbying process so that these firms lobby often and invest heavily in shaping the domestic business environment.

This is one of the first research attempts that combines lobbying activity[7] and offshoring activity[8] under an "integrated strategy" framework (Baron 1995). In addition, the regulatory arbitrage theory contradicts a common belief that firms operating abroad

[6] Intensive margin in this paper refers to internationalized firms increasing/decreasing their overseas operation based on their existing infrastructure abroad. Accordingly, previously domestically-focused firms deciding to go abroad would be offshoring at the extensive margin. This paper focuses on the intensive margin in both its theory and empirics. It does not test regulation-induced offshoring on the extensive margin, because many existing research papers have demonstrated that it is rare for firm to become international solely in response to regulatory concerns (e.g., Carruthers and Lamoureaux 2016; Morck and Yeung. 1992; Wheeler and Mody 1992). My own understanding of the subject from qualitative evidence collected for this project also supports the observation in Carruthers and Lamoureaux (2016).

[7] This paper does not incorporate other forms of corporate political actions to influence US regulations, most notably campaign contribution in US elections. Compared to lobbying, campaign finance is much smaller in size due to higher disclosure requirements and direct restriction on the provision and use of the campaign contribution (see Briffault 2008 for a detailed discussion). Furthermore, the relationship between lobbying and campaign contribution is complementary instead of substitutable — the consensus in the literature is that campaign contribution is an initial effort to establish a relationship with politicians with the goal of facilitating lobbying activities with them in the years to come (e.g., Langbein 1986; Bertrand 2014).

[8] The term offshoring in this paper is used to describe a firm's productive operation abroad, so it includes both horizontal investment to serve the local market and vertical investment to complement the firm's globalized supply chain. But it does not include portfolio investment abroad, nor arm's length trade of intermediaries, also known as outsourcing.

should simultaneously become less invested in the domestic economy and less interested in the content and effects of domestic regulations than firms that are stuck locally. This replacement mechanism (i.e., firms' foreign activities replacing their domestic activities) may appear intuitive, but scholars testing this mechanism have found conflicting evidence (e.g., Stevens and Lipsey 1992; Devereux and Freeman 1995). Desai, Foley and Hines. (2009) provides a comprehensive review of this body of discussion and shows that the opposite effect holds for US firms' *market* operations. This paper also argues against the replacement hypothesis, but focuses on US firms' *nonmarket* actions.

In the following pages, Section 2 presents the theoretical argument that focuses on regulatory distortion of existing offshoring patterns, fixed costs associated with initial offshoring decisions, and credible threat in firm-government bargaining. Section 3 presents the regulatory arbitrage phenomenon in the media with a novel repository of bill-level statements. Section 4 details the data preparation with complete records of Federal-level lobbying and US corporate offshoring. Section 4 presents the empirical analysis where I pay particular attention to the fact that, compared to an average firm, large and prominent firms tend to offshore and lobby much more at the same time. Section 6 discusses theory and policy implications on national regulatory standards and corporate lobbying after 2016.

2 Theory

This paper examines how firms' overseas operations embolden their efforts to influence domestic regulations. This mechanism relates to two topics in the literature. Firstly, scholars have written extensively on multinational firms' political actions (e.g., Chalmers 2017; Marcoux and Urpelainen 2014; Nehrt 1998; O'Callaghan, Vivoda et al. 2013; Kenny and Larson 1993; Kennedy and Kennedy 2009; Potoski and Prakash 2005; Weymouth 2012).

The regulatory arbitrage thesis articulated in this paper offers a new mechanism on how multinational firms participate in national policy making.

Secondly, in the literature on the Real Options Theory (ROT) pioneered by Kogut (e.g., Kogut 1983; Kogut and Kulatilaka 1994),[9] there is a strand of research on how multinational firms deal with institutional, political, and exchange rate uncertainties in their foreign *host* countries (e.g., Feinberg and Gupta 2009; Lee and Makhija 2009; Beazer and Blake 2018; Bucheli and Kim 2015; Medina, Bucheli and Kim 2019). This paper joins this discussion with a theory on how internationalization enables firms to manage regulatory uncertainties in their *home* countries.

Ideas similar to the firm regulatory arbitrage thesis are not new, and they recently gained prominence following the rising nationalism and protectionism in the American society (Carruthers and Lamoureaux, 2016). Despite well-known cases such as the Carrier example, there are many instances where business leaders utter the regulatory arbitrage argument explicitly in public records. Section 3 of the paper provides a systematic analysis of such public statements, and here is just one example to illustrate what regulatory arbitrage looks like in publicly available records. On July 16, 2015, Intel's Vice President of Finance, Ronald D. Dickel, urged the Senate to subsidize Intel's R&D spending that,

"There is significant global competition for these R&D jobs, however, and companies have an array of choices on where to locate such jobs and where to invest research dollars — here in the U.S. or abroad. In fact, many other countries offer both lower corporate tax rates and more attractive R&D incentives."[10]

Despite its long history and contemporary relevance, research on this topic remains underdeveloped. Carruthers and Lamoureaux (2016) show that existing discussions are mostly "journalistic," firstly because they lack a clear theoretical framework to specify

[9] This literature is vast. Subsequent work includes Boddewyn and Brewer (1994); Belderbos and Zou (2009); Guillén (2013), and so on. See recent reviews of ROT in Trigeorgis and Reuer (2017); Chi et al. (2019).
[10] http://www.nam.org/Issues/Tax-and-Budget/R-D-Credit-Coalition-Letter-to-Senate.pdf

when a firm's threat to leave the home country can be credible and when the regulatory arbitrage story is valid. Secondly, despite scattered news reports, we have yet to see systematic data to test this argument.

This section addresses questions about the theoretical framework. More specifically, sub-section 2.1 describes a framework of a firm's offshoring decision, and how regulatory conditions influence that decision (Horst, 1980; Caves, 2007). With that foundation, subsection 2.2 starts with the fixed cost aspect of initial offshoring decision, and then reveals how varying costs of offshoring between internationalized firms and non-internationalized firms generate implications for the two groups' lobbying behaviors.

The theoretical discussion concludes with three insights:

- From 2.1, the more appropriate place to locate firm-level regulatory arbitrage is in the *intensive* margin of existing patterns of foreign direct investment, not in the *extensive* margin (i.e., firms deciding to become multinational solely because of regulatory concerns).

- From 2.2, a firm's existing offshoring operation should lead to more lobbying participation to influence domestic regulations. The empirical sections of the paper verify this hypothesis.

- From 2.3, the regulatory arbitrage argument should not be applied to all kinds of firms. Instead, the most likely case for the arbitrage mechanism is a parent firm with foreign child firms in the same sector. Also, both the parent firm and child firms should be in goods-producing and non-financial services industries.

2.1 Regulatory Distortion in Offshoring Decision

According to Carruthers and Lamoureaux (2016), the primary theoretical challenge facing existing work on regulatory arbitrage lies in its underestimation of non-regulatory con-

siderations in firms' locational decisions, which often outweigh the effect of unfriendly regulations. When non-regulatory factors make offshoring prohibitively expensive for a firm, the firm cannot credibly threaten the government to leave the country if unfavorable policies prevail. Similarly, when non-regulatory factors make offshoring irresistibly profitable, a firm's offer to stay at home in exchange for favorable domestic regulations is equally un-credible.

Some motivations for offshoring are apparent in the two modes of foreign direct investment. The first one is horizontal, which occurs when a firm enters a foreign country where it enjoys some comparative advantages to sell into the hosting market. The second type is vertical, which occurs when a firm establishes productive facilities abroad to exploit lower production costs arising from location-specific endowments. These two modes often coexist. For instance, Apple Inc. in China sells to the Chinese market and also ships assembled products back to the US.

However, market and cost considerations are not sufficient to explain a firm's offshoring decision. Offshoring is not trade, or else a horizontally offshoring firm could just export its products to the foreign market by contracting with foreign retailers to realize its comparative advantage there. Similarly, a vertically offshoring firm could just import inputs, intermediaries, or assembled products from the foreign market by contracting with foreign producers to take advantage of their lower factor prices. In a Coasian sense, offshoring is a firm's choice of direct control over the market transaction so that the firm's foreign activity remains within the firm boundary (Teece, 1985).

To differentiate offshoring from trade, the industrial-organizational study of multinational firms suggests that firms opting for offshoring over arm's length trade typically come from industries of monopolistic competition with differentiated products. Firms producing differentiated products usually possess proprietary, rent-yielding, assets that are firm-specific. Such firms cannot fully realize profits from these assets in foreign coun-

tries unless the firm exercises some direct control there (Knickerbocker, 1973; Hymer, 1976; Teece, 1985; Yamin, 2000). This offshoring motivation implies that offshoring varies across industries because of their different industrial-organizational structures, instead of industry-level comparative advantages as in classical trade theory.

Combining these theoretical considerations with the historical fact that large-scale offshoring of American industries has been going on for at least half a century. Since the 1960s, scholars have reached the consensus that contemporary production-globalization in the US is primarily a result of firms offshoring due to a combination of market considerations, cost considerations, and industrial-organizational features (Nayyar, 1978; Caves, 2007; Wright, 2014; Feenstra, 2017). In other words, we are living in an already-globalized context after decades of production-globalization; thus, it is not surprising that looking for firms suddenly deciding to become multinational solely in response to a specific regulatory concern is bound to be fruitless (Carruthers and Lamoureaux, 2016).

Thus, it is more appropriate to locate regulatory arbitrage on the intensive margin of firm offshoring in the globalized context. Supporting this idea, firms' public statements with explicit reference to the regulatory arbitrage argument often include components such as unfavorable regulation leading to even more jobs leaving America and favorable regulation bringing jobs back to the US. For instance, United Technologies, the parent firm of Carrier Air Conditioner, lobbied the Congress on the Alternative Minimum Tax and Extenders Tax Relief Act of 2008:

"American business leaders are rightly concerned about their competitiveness in the global marketplace if Congress doesn't act now. Failure to extend these provisions in the near term would result in a large tax increase and possibly lead to a shift of <u>even more</u> jobs and business activities overseas."[11]

Such public statements are not lobbying activities per se, but they indicate that the

[11] https://www.finance.senate.gov/chairmans-news/business-leaders-back-baucus-effort-on-extenders

bargaining parties are both aware of the globalized baseline condition after the 2000s. Given the globalized context, regulatory concerns in firm's offshoring decision-making process are best treated as a "regulatory distortion" of existing patterns of foreign direct investment. This conceptualization is proposed by Horst (1980) and Caves (2007) in their analysis of how national taxation regimes across different countries affect multinational firms' allocation of their production globally. When tax neutrality among multiple taxing authorities prevails, it promotes efficient use of resources. Without such neutrality, differences among taxing regimes will distort the distribution of foreign investment (Caves 2007).

In a more complicated scenario, the existence of regulatory distortion does not even require objective differences in regulatory standards, unless we impose the strong assumption that the home government has complete information of firms' operations in foreign countries. In the case of taxation on multinational corporations (MNCs), transactions between corporate affiliates in multiple countries often lack transparency and counterparts in arm's-length markets, so neither the home government and the MNC itself has a reliable standard for pricing and taxing them (Caves, 2007; Diewert, 1985; Eden, 1985). So, firms operating in multiple countries can strategically utilize this information barrier to minimize the overall regulatory burden, and this leverage comes from their presence in multiple regulatory environments, rather than the lack of regulatory neutrality across those regulatory environments.

This paper takes the regulatory distortion concept derived from tax regulation to other domains of regulation, where both imbalances in national regulatory standards and monitoring challenges of firms' foreign activities can produce changes in existing patterns of foreign investment of multinational firms in the intensive margin. However, this generalization to all domains of regulation comes with a caveat. Discussion from Horst (1980) and Caves (2007) are not specific to certain industries, and this industry-free treatment is

largely appropriate for taxation. Federal government taxes corporate income at 21% now and 35% before 2018. This applies to all firms in principle, while deferrals and deductions are considered exceptions to the general rule.

But other domains of regulation should exhibit more heterogeneity for different industries. For instance, labor regulation also affects many firms, but the share of labor cost can vary wildly across industries and firms. In fact, the majority of regulatory domains are somewhat industry-specific, especially in specialized areas such as environmental regulation and intellectual property rights, and they motivate corporate political actions in ways that are different from this paper (e.g., Osgood and Feng. 2017 on IPR related lobbying by US firms). The empirical analysis uses three measurements of the dependent variable: lobbying on tax regulation, labor regulation, and all domestic regulations combined. The discussion here implies that the results should be more robust at the firm level for taxation and all regulations combined, and may be weaker in labor regulation once we compare within industries.

2.2 Why Fixed Costs Make Offshoring a Credible Threat

With this setup, we move on to the core of the theoretical argument that firms can more credibly threaten to offshore when they already have overseas operations. This is due to the large fixed cost required for initiating international expansions (Antras and Helpman., 2004; Rodriguez-Lopez, 2014). But once that initial investment has been made, an internationalized firm can choose to relocate more production away from the US swiftly and cheaply in response to potential unfavorable regulatory outcomes. In other words, existing locational flexibility across multiple regulatory environments means lower offshoring costs for already-internationalized firms. When internationalized firms increase their offshoring production due to regulatory changes, the regulatory distortion of foreign investment occurs at the intensive margin.

The cost of offshoring varies between internationalized firms and non-internationalized firms, but how does this affect their lobbying behaviors? The answer lies in the credibility of exit threat, and this section presents a simple motivating model with complete information to show how offshoring cost affects heterogeneous firm participation in lobbying. The intuition of the model draws inspiration from the exit/voice theme in Hirschman (1970) and its later variants (e.g., Clark, Golder and Golder 2017; Gehlbach 2006).

Hirschman (1970) starts with some deterioration of the home country environment. It is the deteriorating condition at home that motivates actors, usually citizens instead of firms in these models, to make strategic choices. In contrast, the model and argument proposed here do not require a domestic deterioration as a precondition. Firms' political mobilization can be a result of domestic regulatory deterioration, but it can also be a result of an improvement of the foreign environment, or for some other reasons. In addition, existing models inspired by Hirschman (1978) are on individuals' and citizens' choices between exit and voice (e.g., Clark, Golder and Golder 2017; Gehlbach 2006), but firms are different from people in the sense that the latter are either in or out of the organization. But firms can be offshoring a portion of their operations while retaining the rest in the home country. This difference leads to different ways to conceptualize and measure the exit option.

The model has two players, a firm, and a government, and three stages of interaction. The firm in the 1st stage chooses to lobby or not lobby the government for favorable policies. In the 2nd stage, the government decides whether to grant favorable or unfavorable policy to the firm. In the 3rd stage, the firm decides whether to allocate more of its production abroad (offshore) or maintain its current offshoring level (maintain). This motivating model makes three assumptions:

- *Assumption 1*. For the firm, if the government offers a favorable policy to the firm, the latter will maintain the current level of offshoring. As discussed in 2.1, firms

make their offshoring decision due to various non-regulatory reasons, but this model only aims to describe the portion of offshoring induced by regulatory changes in the domestic business environment.

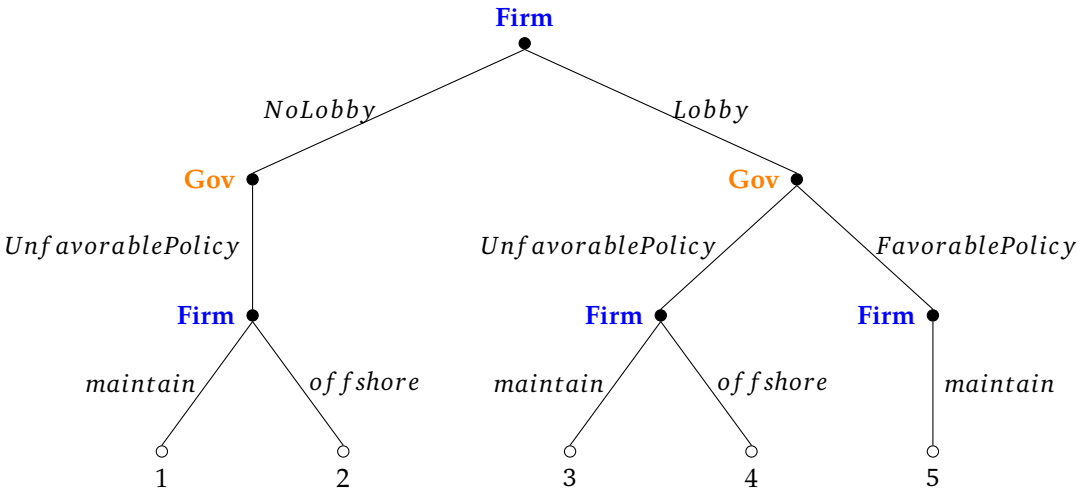
- *Assumption 2*. This model assumes away the trivial case in which the government wants to give the firm favorable policy in the first place. Regardless of the nature of lobbying being exchange, persuasion, or legislative subsidy (Hall 2006), lobbyists are employed to increase the chance of obtaining favorable policy outcomes. If, in contrast, a firm automatically gets the favorable policy from the government, the question of whether to lobby or not does not exist. Under this assumption, if the firm does not lobby it will by default get the unfavorable policy, so the firm has to decide whether it should lobby to reverse the government's initial inclination. From the perspective of the government, the benefit of giving the firm an unfavorable policy is greater than the benefit of giving the firm a favorable policy, but the behavior of the firm can change this calculation.

- *Assumption 3*. This model assumes a one-firm game. But in reality, many policies have externalities, and many firms form associations to lobby. Such horizontal strategic considerations — for example, the possibility of free-riding on the lobbying of others — are out-of-scope for this study. However, Section 5 and II-Table 5 include a discussion on firms in differentiated industries. This sub-sample test helps to resolve the potential threat to validity caused by the theoretical focus on a one-firm model.

Combining these considerations, the model describes a world in which a firm will receive the unfavorable policy if it chooses not to engage with the government, and therefore has an incentive to lobby (i.e., "voice"). The tension comes from the fact that its lobbying effort may or may not bring the desired policy outcome, and the likelihood that the firm gets favorable or unfavorable policies depends on the firm's offshoring cost. This infor-

mation on the firm's offshoring cost is firm specific, and it needs to be communicated to government policy makers through the lobbying process. II-Figure 1 shows the game tree, II-Table 1 lists variable definitions, and II-Table 2 provides the payoffs.

II-Figure 1. Lobbying and Offshoring Game



II-Table 1. Definition of Variables in the Game

Variable	Definition
For the firm	
C_L	Cost of lobbying in the 1st stage
B_f	Benefit of getting favorable policy in the 2nd stage
B_u	Benefit of getting unfavorable policy in the 2nd stage
C_O	Cost of offshoring in the 3rd stage
B_O	Benefit of offshoring in the 3rd stage
For the government	
B_f^G	Benefit of giving firm's favorable policy
B_u^G	Benefit of giving firm's unfavorable policy
C_O^G	Cost if firm offshores

II-Table 2. Payoffs and Outcomes

scenarios	Firm Payoff	Government Payoff	outcomes
1	B_u	B_u^G	no lobby, unfavorable policy, maintain
2	B_u-C_O	B_u^G-C_O^G	no lobby, unfavorable policy, offshore
3	B_u-C_L	B_u^G	lobby, unfavorable policy, maintain
4	B_u-C_L-C_O	B_u^G-C_O^G	lobby, unfavorable policy, offshore
5	B_f-C_L-C_O	B_f^G-C_O^G	lobby, favorable policy, maintain

The model, under complete information and sequential rationality, can be solved through backward induction, as summarized in II-Table 3 below, where the 1st column specifies parameter conditions, columns 2,3, and4 are sub-game perfect equilibria, and column 5 lists equilibrium outcomes.

II-Table 3. Subgame Perfect Equilibria and Outcomes

Partition of Parameter Space	Firm Choice at Stage 1	Government Choice at Stage 2	Firm Choice at Stage 3	*Equilibrium Outcome*
If $B_u > B_f - C_o$	no lobby	unf. pol. unf. pol.	maintain maintain maintain	outcome 1 (no lobby, unf. pol., maintain)
If $B_u < Bf - Co$, $B_u^G - C_o^G > B_f^G$	no lobby	unf. pol. unf. pol.	offshore offshore maintain	outcome 2 (no lobby, unf. pol., offshore)
If $B_u < B_f - C_o$, $B_u^G - C_o^G < B_f^G$ $B_u > B_f$-C_l	no lobby	unf. pol. fav. pol.	offshore offshore maintain	outcome 2 (no lobby, unf. pol., offshore)
If $B_u < B_f$-C_o, B_u^G-$C_o^G < B_f^G$, $B_u < B_f$-C_l	lobby	unf. pol. fav. pol.	offshore offshore maintain	outcome 5 (lobby, fav. pol., maintain)

From the above procedure, we arrive at three comparative statics,

- If C_o decreases, lobbying increases.
- If C_o^G increases, lobbying increases.
- If C_L decreases, lobbying increases.

The solving process generates several theoretical implications, but not all of them are central to the argument of this paper. As such, the following parts of the paper only focuses on the first comparative statistics that links the firm's offshoring cost to the firm's lobbying activity. The key insight here is that the firm's offshoring cost plays a critical role in different stages of the game.

More specifically, for firms with large offshoring costs, as offshoring is a costly option for them, they cannot make a credible threat to leave. These firms will not lobby, will not get favorable policy, and will not offshore, as shown in scenario 1 in II-Figure 1. But for firms with small offshoring costs, their threat to leave is credible. These firms will lobby, get favorable policy, and maintain the current level of offshoring, as in scenario 5 in II-Figure 1. As such, the key comparative statics from subgame perfect equilibria is that lower offshoring cost in the third stage should lead to more lobbying participation in the first stage.

2.3 Appropriate Scope of the Theory

Before taking this theoretical prediction to empirical verification, however, it is necessary to consider whether this arbitrage mechanism applies to different kinds of firms. Most notably, three types of firms are excluded from this paper. Firstly, banks, financial companies, and insurance companies should be excluded from the discussion because the innate mobility of these industries (e.g., "capital flight") does not derive from the logic of fixed

cost associated with setting up foreign establishments. These firms may be able to secure more favorable treatments from regulators by threatening to leave the home country with their large amounts of capital, but such threat is credible with or without overseas establishments. For this reason, firms analyzed in this paper only include manufacturers and non-financial services providers.

Secondly, not all overseas child companies require significant investment for the initial setup. For instance, a parent firm's registered office in tax havens such as the Cayman Islands does not require a large amount of resources to build, nor can it absorb the parent company's production from the home country. Such "shell companies" can be as tiny as mail boxes for registration purposes, and their existence should not increase the bargaining power of the parent firm in the game in II-Figure 1. For this reason, the empirical analysis in Sections 4 and 5 limits the scope of foreign subsidiaries to goods-producing industries and non-financial services-producing industries.

Thirdly, if significant diversification occurs during the process of internationalization, firms may be engaging in entirely unrelated businesses overseas. This case would decrease the threat to home country employment and local economy. For instance, General Motors' threat to leave the US for Canada is more credible when GM has a Canadian subsidiary company producing cars in Ontario than GM having a subsidiary company primarily investing in Alberta's oil and gas industry. The latter is not a substitute of GM's automobile production, thus posing a smaller threat to GM's US jobs.

To summarize, the most likely case for the arbitrage mechanism is a parent firm with foreign child firms in the same sector. Also, both the parent firm and child firms should be in goods-producing and non-financial services industries.

3 Public Statements on Regulatory Arbitrage

This section provides the first large-scale documentation of regulatory arbitrage in firms' public statements, and shows that firms with existing overseas operations are much more likely to make the regulatory arbitrage statement, as shown in II-Figure 2-A. While the qualitative text evidence presented here is not hypothesis testing, this section offers a systematic demonstration of the regulatory arbitrage phenomenon that ordinary people see in public records.

Compared to lobbying records, public statements are a cruder measure of corporate influence on public policy for reasons such as social desirability bias and cheap talk. However, media reports, firm press releases, and congressional testimonies often come with richer nuances than lobbying reports, not to mention that a good portion of citizen attention to corporate political actions comes from such statements in the media. Kollman (1998) terms such firm statements "outside lobbying", and shows how firms strategically utilize it to complement their formal lobbying efforts. In the same spirit, I first analyze firm statements as a necessary sketch of the landscape of firm-level regulatory arbitrage to complement the main analysis based on firm lobbying. Evidence from both what firms say in Section 3 and what firms do in Section 4 and 5 supports the regulatory arbitrage theory.

Regulatory arbitrage statements are common in public records, but collecting such information on a large scale is challenging. This paper employs a novel repository of interest groups' public statements on specific Congressional bills, compiled by Maplight, a transparency organization. MapLight incorporates all bill-level statements made by interest groups[12], but it does not include general policy stances that are not tied to specific bills (e.g., Firm A opposes trade protectionism in general). Relaxing this bill-specific restric-

[12] Details on Maplight's search methods can be found at http://classic.maplight.org/us-congress/guide/data/support-opposition. See an early, probably the first, application of the Maplight repository in Crosson, Furnas and Lorenz 2018

tion would include a lot more policy statements from firms, but at the expense of lower precision.

A total of 118,367 entries were recorded from Feb 12, 2010, to Jan 18, 2018, the date when I scraped data from Maplight. Each entry contains brief descriptive information on the report, such as the news article title, along with the corresponding web-page link, such as the ones shown in footnotes 3 and 4. I first narrowed down the scope by frequency search of relevant key words in the descriptive information, and then employed six research assistants to read each report to tease out the ones containing the regulatory arbitrage argument by the following three steps:

- Use the web link provided by MapLight to access the original article in a web browser. Many links in the repository were dead, for these the research assistants tried to retrieve snapshots of the original contents with internet archival tools such as the Wayback Machine (archive.org). This retrieving procedure benefits from the fact that MapLight repository keeps the specific time of web-page update for each entry.

- After obtaining the full article of a MapLight entry, the RA read the entire report to find the regulatory arbitrage argument, where firms explicitly mentioned offshoring to other countries and/or outflow of American jobs to other countries if a favorable bill was not granted, or an unfavorable bill was passed.

- For each report identified as containing the regulatory arbitrage argument, a second RA would re-read it for verification. Each verified report was recorded and coded for later analysis.

II-Figure 2.

Characteristics of Firms Making the Regulatory Arbitrage Statement

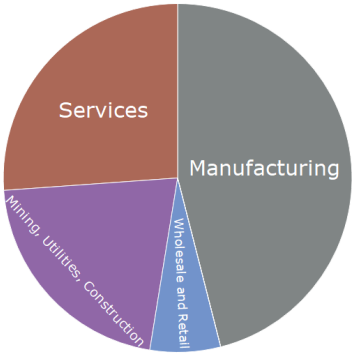
A. Distribution by Offshoring versus Non-Offshoring Status

Firms Making Regulatory Arbitrage Statement

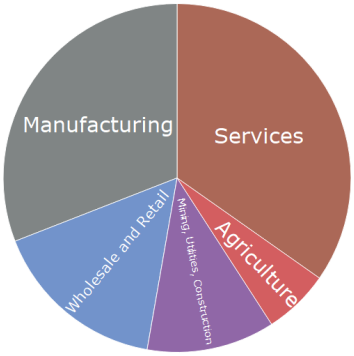
All US Firms

B. Distribution by Major Sectors

Firms Making Regulatory Arbitrage Statement



All US Firms



My team has identified 409 US firms that have explicitly made the regulatory arbitrage argument when commenting on a specific bill in public statements for at least once — many of these firms made similar statements multiple times on different bills. The results are summarized in II-Figure 2, where firms making the regulatory arbitrage statement on the left are compared with all US firms on the right.[13]

[13] Details on the construction of the representative sample of all US firms and their offshoring status are in

The most interesting finding lies in II-Figure 2-A. Among all US firms, offshoring is concentrated in the hands of 1.4% of firms, the tiny darker slice on the right. However, this minority group makes all the regulatory arbitrage statements in public records on the left. Similar concentration also exists in international trade (Melitz, 2003) and international trade politics (Osgood, 2017), as fixed cost associated with both offshoring and trade produces an intra-industry divide in distributional consequences and policy preferences.

II-Figure 2-B shows the comparison of sector distributions based on the industry classification system from NAICS 2012. The US agriculture sector, being highly internationally competitive but mostly un-offshorable, is absent from making the regulatory arbitrage argument, which is consistent with the theoretical expectation. Compared to the general firm population, services providers, wholesalers, and retailers are also underrepresented in the left pie. However, manufacturers are dis-proportionally more active in making the regulatory arbitrage argument, which is consistent with the historical fact that offshoring in the US started in the manufacturing sector, as described in Section 2.1.

4 Data and Measurements

This section performs statistical analysis with complete records of firm lobbying and offshoring. Data sources are introduced with a focus on how they are used to measure domestic regulatory lobbying and US firms' overseas operation. A time-consuming step of data preparation is matching the lobbying data with firm data by company identifiers — the matching method that relies on both automated matching and double-blind human matching is explained in II-Appendix I.

Section 4. II-Figure 2-A focuses on whether the firm is an offshoring firm, and II-Figure 2-B focuses on the distribution of major sectors.

4.1 Lobbying on US Domestic Regulations

The Lobbying Disclosure Act of 1995 is the legal foundation of aggregate information on federal lobbying. It requires lobbying organizations to register and file reports for lobbying activities with the Secretary of the Senate and the Clerk of the House of Representatives.[14] Both branches of the Congress keep the complete records of lobbying activity, and this paper uses the Senate's version compiled by the Center for Responsive Politics (CRP).[15] Out of the total of 943,431[16] lobbying reports from CRP, I identified over 17,000 unique lobbying firms — many firms lobby multiple times and other forms of social organizations also lobby.

This paper focuses on US firms lobbying on the US domestic business environment, so two types of lobbying reports are excluded by using the "lobbying issue codes" in original lobbying reports (i.e., LD-1 and LD-2 forms). First, issues not directly related to business regulation are excluded, such as abortion, religion, and homeland security. Second, lobbying reports with explicit foreign policy components are excluded, including trade, tariffs, and foreign relations. These two exclusion criteria take out 13% of all lobbying reports from CRP.[17] This sample of lobbying reports forms the population of domestic regulatory lobbying in this paper, and II-Appendix II provides its summary statistics based on the "lobbying issue codes".

For the lobbying activities on US domestic regulations, I also identify lobbying on taxation and labor regulations. As discussed at the end of Section 2.1, these two issue areas

[14] The official guide on filing can be found at lda.congress.gov/LD/help/default.htm?turl=Documents%2FAppCodes.htm

[15] https://www.opensecrets.org/

[16] Downloaded on June 7, 2018. CRP constantly updates its lobbying database with most recent reports from the Senate.

[17] Because of the multi-issue nature of both lobbying reports and congressional bills, this cleaning procedure unavoidably excludes some lobbying on domestic regulations that appear in the same lobbying reports/bills with foreign and non-regulatory components.

are singled out because of their relevance for most firms. For taxation, I combine the CRP classification on taxation and lobbying description in the reports. The latter is employed to tease out the taxation on American companies' overseas income (i.e., repatriation) to obtain a clean measurement of lobbying on the domestic taxation issue. For labor regulations, I use Congressional data from the Congress Library database to obtain all 2,046 bills with labor regulation components for 2007 to 2016, out of which 190 have passed to floor consideration in the Congress, and 32 of them have become laws. That list of labor bills is matched with lobby reports, plus reports that listed the Department of Labor as the lobbying agency,[18] to obtain the subset of lobbying activity related to labor regulations.

4.2 US Firms' Overseas Operation

Building a comprehensive firm panel with international and/or cross-national components is often notoriously difficult to the extent that research papers are written solely to address this challenge (Kalemli-Ozcan, 2015). This paper uses Bureau van Dijk's Orbis database for its broad coverage of global ownership structure, the information used to measure overseas operation of US firms.[19] In addition, Orbis is chosen over other commonly used firm databases, most notably Compustat, because Orbis includes not only public firms but also private firms.

I employ the latest worldwide version of Orbis that includes 208,096,202 organizations,[20] and extract firm financial variables following the instructions from Kalemli-Ozcan (2015). The more challenging task is constructing an offshoring panel, based on organizations' ownership structure. The general idea is to first screen the ownership structure of

[18] See You (2017); Ritchie and You (2018) for a discussion on the relationship between lobbying in the legislature and lobbying in the administrative agencies

[19] See examples of Orbis data in recent research with an international (e.g., Di Giovanni and Levchenko 2013) and/or cross-national focus (e.g., Bloom 2010)

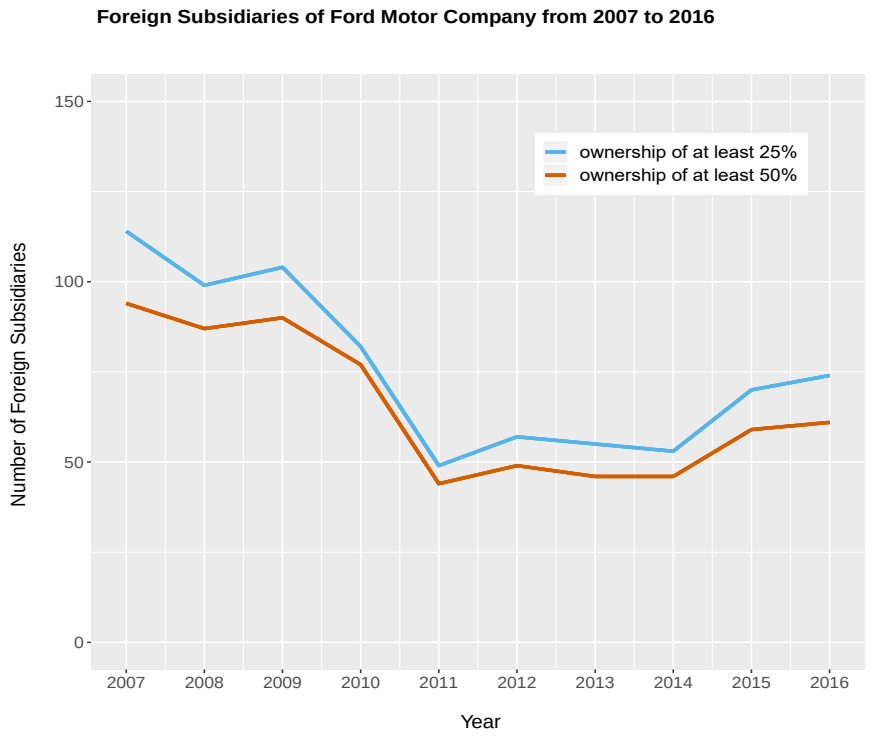
[20] Orbis database comes in different versions and different formats that cannot be merged easily. See discussion in (Kalemli-Ozcan, 2015)

US firms to identify their subsidiaries in foreign countries. Second, each ownership link identified between a US firm and a non-US firm needs to meet two additional criteria to be considered a foreign subsidiary in this paper.

- The subsidiary needs to be in the active status of the corresponding year. This requirement is imposed because the extensive coverage of the database includes firms that are inactive, or cannot be confirmed as active after a certain time point. This paper only keeps subsidiaries that are confirmed to be active before December 31 of the corresponding year.
- The subsidiary has to be an industrial entity — this is to take out “shell companies" discussed at the end of Section 2.2. Here industrial entities include all companies that are not banks, financial companies, or insurance companies. Therefore it is not just manufacturing entities but can also include non-financial services providers, such as wholesalers and retailers.

Out of the universe of all ownership links in the Orbis database, over half of them are excluded by the two filters, and the remaining ones constitute the foundation of the ownership panel from 2007 to 2016 for this paper.

II-Figure 3.



II-Figure 3 is a case example of the offshoring panel for the Ford Motor Company. The upper curve shows its changing foreign subsidiary number in the past ten years based on the 25% ownership threshold, and the lower curve is based on the 50% ownership threshold. After the 2008-2009 Financial Crisis, Ford's global expansion first drops and then picks up gradually.

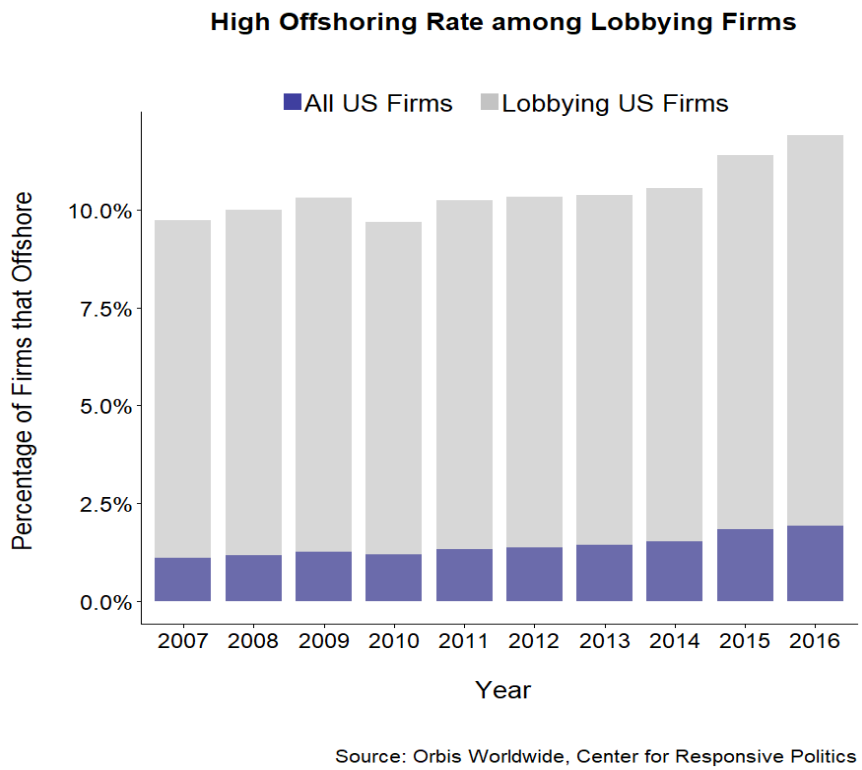
To further scrutinize the validity of the offshoring measurement, I take such examples from the constructed data to alternative sources for comparison. It turns out that the constructed data is more comprehensive than information in the alternative sources, such as individual company websites and the Bureau of Economic Analysis (BEA) statistics on US multinational companies. For instance, 47 foreign establishments appear in the Ford company website's Operations Worldwide section: 7 transmission plants, 26 assembly plants, 2 forging plants, and 12 engine plants.[21] In comparison, the constructed subsidiary data

[21] See corporate.ford.com/company/operation-list.html#s4f17

lists 74 foreign subsidiaries of Ford with over 25% share.

II-Figure 4 is an aggregate overview of US firm offshoring and lobbying from 2007 to 2016 — it shows that lobbying firms are much more likely to offshore than non-lobbying firms. The darker bars are the annual percentages of offshoring firms among all US firms, averaging at 1.4%. In comparison, the lighter bars show offshoring rates among lobbying US firms, which average at 10.6% for the same ten years. The offshoring rate among non-lobbying firms is almost eight times lower than lobbying firms. The association between lobbying and offshoring is apparent in II-Figure 4, and the next section shows that the corporate regulatory arbitrage mechanism can explain a portion of this association. In addition, the temporal pattern in offshoring in the aggregate data here is similar to the case of a single firm in II-Figure 3, suggesting the widespread impact of global trends, such as the 2008-2009 Financial Crisis.

II-Figure 4.



5 Empirical Results

With the lobbying and offshoring measurements from the last section, this section tests the key comparative statics derived from the theoretical model in Section 2 that existing foreign operation should lead to more lobbying participation on domestic regulations. Recalling the discussion in Section 2, it is clear that the empirical verification must incorporate both firm-level features and industry-level features. Here, firm size is the most obvious confounder and deserves closer scrutiny. Thus I use different measurements to control for size, including total revenue, total assets, and total employment. Even in the same industry, larger firms naturally trade more, offshore more, and lobby more due to available resources and the fixed costs associated with these activities. Other than firm size, factors discussed in the previous sections are controlled in the fixed effects at the firm level (e.g., firms with unique rent-seeking assets offshore more from Section 2.1) and at the industry level.

For the dependent variable, there is no single best way to measure "lobbying participation," thus I use three dependent variable measurements in each table. Firstly, a continuous count of domestic regulatory issues lobbied by a firm in a given year. Secondly, all firms are subject to taxation on their income as described in Section 4.1, so lobbying on taxation is singled out as the dependent variable in the third column in each table. Lastly, most firms employ workers as described in Section 2.1, so labor regulation is singled out as the dependent variable in the third column. These two single-issue measurements are counts of firm lobbying on the specific issues in a given year — an alternative single-issue measure can be lobbying expenditure on that issue, but LDA 1995 does not require a breakdown of the total lobbying expenditure by the issues contained in a lobbying report. More importantly, the theory of this paper focuses on lobbying participation, instead of lobbying expenditure. One may even argue that politically influential firms should not spend more

on lobbying, so this paper opt for lobbying participation over lobbying expenditure.[22]

For constructing an appropriate sample for regression analysis, observations used in the empirical models are the same as the ones used in II-Figure 4: a combination of all lobbying firms and a stratified sample of all US firms. As mentioned previously, the majority of all US firms are small to medium-sized services providers; thus I over-draw large firms and manufacturing firms to ensure sufficient information can be extracted to compare to the profile of a typical lobbying firm. However, to construct a balanced representation of the population of all US firms, all models in this paper re-weight observations in a stratified sample to reflect the original size and sector compositions of over 20 million US firms in 2016.

For these reasons, this paper mainly relies on weighted least squares with panel fixed effects for the unit and time in equation (1). After controlling for firm size by annual revenue, total assets, and total employment, this model assumes other firm and time variables influencing lobbying are time invariant and the remaining error term u_{it} is iid when α_i and γ_t are included in the model. Note that a firm's industry is time-invariant in data, so there is no separate control for industry features in the model.

$$lobbying_{it} = OverseasOperation_{it}\beta_1 + size_{it}\beta_2 + \alpha_i + \gamma_t + u_{it}, \tag{1}$$

where,

α_i is the unobserved firm fixed effect

γ_t is the unobserved year fixed effect,

u_{it} is the error term.

For baseline results in II-Table 4, overseas operation is a binary indicator for whether

[22] See detailed guidance on LDA reports filing at lda.congress.gov/LD/help/default.htm?turl=Documents%2FAppCodes.htm

II-Table 4. Firms with Overseas Operation in the Same Sector Are More Active in Lobbying (firms in all industries)

Lobbying participation on	Taxation	Labor	All Reg.	Taxation	Labor	All Reg.	Taxation	Labor	All Reg.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Has Foreign Sub.	0.083***	0.028*	0.050**	0.082***	0.027*	0.050***	0.088***	0.031**	0.035*
	(0.011)	(0.011)	(0.015)	(0.011)	(0.011)	(0.015)	(0.011)	(0.011)	(0.015)
Annual Revenue	−0.040***	−0.037***	0.076***						
	(0.001)	(0.001)	(0.00)						
Total Assets				−0.058***	−0.051***	0.121***			
				(0.001)	(0.001)	(0.002)			
Total Employment							−0.065***	−0.051***	0.136***
							(0.002)	(0.002)	(0.003)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R squared	0.689	0.602	0.828	0.692	0.605	0.833	0.690	0.603	0.830
N	71,981	71,981	71,981	71,981	71,981	71,981	71,981	71,981	71,981

Note: *p<0.05; **p<0.01; *** p<0.001

firm_i has overseas operation of the same sector in year_i. When constructing this overseas operation measure, I only count a US parent firm's foreign subsidiaries in the same sector, based on the sector classification given by Orbis Worldwide. The rationale has been explained at the end of Section 2.3. As shown in II-Table 4, coefficients of the key explanatory variable remain positive and significant across four different specifications of the dependent variable. Converting the log coefficients, firms with overseas operations in the same sectors are substantially more active in lobbying.

One the assumptions of the model in Section 2.2 is that it is a one-firm game. Aside from individual firm lobbying, firms also pressure the government via industry associations and other collective means. However, preference formation for associations is difficult to disentangle in a systematic fashion. For instance, the US Chamber of Commerce claims to have over three million members as of August 2018,[23] but the Chamber's lobby-

[23] www.uschamber.com/about/about-the-us-chamber

II-Table 5. Firms with Overseas Operation in the Same Sectors Are More Active in Lobbying (only include firms in differentiated industries)

Lobbying participation on	Taxation	Labor	All Reg.	Taxation	Labor	All Reg.	Taxation	Labor	All Reg.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Has Foreign Sub.	0.077***	0.014	0.120***	0.078***	0.006	0.118***	0.145***	0.023	0.105**
	(0.019)	(0.019)	(0.028)	(0.021)	(−0.013)	(0.030)	(0.023)	(0.023)	(0.032)
Annual Revenue	−0.015***	−0.007*	0.043***						
	(0.003)	(0.003)	(0.004)						
Total Assets				−0.012**	−0.013**	0.054***			
				(0.004)	(0.004)	(0.006)			
Total Employment							−0.046***	−0.024***	0.114***
							(0.007)	(0.007)	(0.010)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R squared	0.677	0.571	0.807	0.670	0.560	0.773	0.701	0.586	0.825
N	45,277	45,277	45,277	45,277	45,277	45,277	45,277	45,277	45,277

Note: *p<0.05; **p<0.01; ***p<0.001

ing actions often contradict the priorities of its sub-organizations and individual members (e.g., Katz 2015). Instead of making arbitrary assumptions on the preference formation of associations, II-Table 5 addresses this potential concern by limiting the sample of analysis to differentiated industries. In such industries, firms are more likely to lobby on an individual basis, according to the theoretical discussion from Bombardini (2008). The rationale here is that in a differentiated industry, firms are producing differentiated products, so the level of price competition is lower, and the impact of regulations is more firm-specific.[24] Results consistent with the theoretical prediction hold in II-Tables 4 and 5, and I believe this treatment is closer to the game model in 2.2 that focuses on the action of a single firm, even though II-Table 4 includes all industries and thus has better generalizability. Also consistent with the discussion in 2.1, compared to taxation and all domestic regu-

[24] For product differentiation, this paper adopts the standard classification from Rauch (1999) and its 2007 update. The specific version used here is compiled by Zhu and Kim in R package concordance at cran.r-project.org/web/packages/concordance/concordance.pdf

lation combined, results on labor are less consistent when industry level heterogeneity is controlled by firm fixed effects.

Product differentiation may not be the only way to capture the propensity of individual lobbying versus collective lobbying. Other potential candidates include firm size relative to the industry and firm asset specificity. A firm's relative size in an industry is commonly measured by the Herfindahl index (Hirschman, 1964), and this implies larger firms in an industry take the lead. But for the focus on regulation in this paper, Tesla Motors and General Motors, for example, are affected by different sets of regulations mostly because of their differentiated products, not because of their relative sizes in the same industry (NAICS 3361). Asset specificity captures firm uniqueness in a similar way as product differentiation, and it has been used in the firm lobbying literature (Alt, 2014). However, there is no established measurement of this abstract concept, making product differentiation the most suitable proxy to capture the propensity that firms lobby on their own instead of through some collective means.

II-Table 5. Lobbying Activity Increases with Number of Foreign Subsidiaries

Lobbying participation on	Taxation	Labor	All Reg.	Taxation	Labor	All Reg.	Taxation	Labor	All Reg.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
No. Foreign Sub.	0.028***	0.019***	0.013***	0.028***	0.019***	0.012***	0.030***	0.020***	0.007*
	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.003)
Annual Revenue	−0.040***	−0.037***	0.076***						
	(0.001)	(0.001)	(0.002)						
Total Assets				−0.058***	−0.051***	0.121***			
				(0.001)	(0.001)	(0.002)			
Total Employment							−0.066***	−0.052***	0.135***
							(0.002)	(0.002)	(0.003)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R squared	0.689	0.603	0.828	0.693	0.606	0.833	0.690	0.603	0.830
N	72,286	72,286	72,286	72,286	72,286	72,286	72,286	72,286	72,286

Note: *p<0.05; **p<0.01; ***p<0.001

The above two sets of tests verify whether having overseas operation (i.e., a binary indicator) has the predicted effect on lobbying behavior. Now I further test whether this effect holds for incremental changes of a firm's offshoring activity. Models in II-Table 6 follow the specification below,

$$lobbying_{it} = ForeignCountry_{it}\beta_1 + size_{it}\beta_2 + \alpha_i + \gamma_t + u_{it}, \tag{2}$$

where $ForeignCountry_{it}$ is the number of foreign host countries where the firm has active subsidiaries.

As shown by the results in II-Table 6, lobbying activities increase with the number of foreign host countries. The key explanatory variable, $ForeignCountry_{it}$, is a country-level factor, counting the number of unique countries in which a US firm has subsidiaries. Compared to an establishment-level measure, this country-level measure highlights the institutional and cultural barriers, as well as the international shipping costs, associated

with overseas operation.[25]

II-Table 6. Lobbying Activity Increases with Number of Foreign Countries Where a Firm Has Subsidiaries

Lobbying participation on	Taxation	Labor	All Reg.	Taxation	Labor	All Reg.	Taxation	Labor	All Reg.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
No. Foreign Countries	0.080***	0.045***	0.030***	0.080***	0.045***	0.030***	0.085***	0.049***	0.019**
	(0.005)	(0.005)	(0.007)	(0.005)	(0.005)	(0.007)	(0.005)	(0.005)	(0.007)
Annual Revenue	−0.040***	−0.037***	0.076***						
	(0.001)	(0.001)	(0.002)						
Total Assets				−0.058***	−0.051***	0.121***			
				(0.001)	(0.001)	(0.002)			
Total Employment							−0.066***	−0.052***	0.135***
							(0.002)	(0.002)	(0.003)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R squared	0.689	0.603	0.828	0.693	0.606	0.833	0.691	0.603	0.830
N	72,286	72,286	72,286	72,286	72,286	72,286	72,286	72,286	72,286

Note: *p<0.05; **p<0.01; ***p<0.001

Combining results from these models, data on US firm lobbying from 2007 to 2016 supports the theoretical prediction that firms' overseas operation lead to more lobbying participation to alter US domestic regulations.

6 Discussion

This paper articulates the regulatory arbitrage theory, along with systematic evidence to support it. US MNCs are not only actively influencing US international economic policies to facilitate their overseas expansion; their overseas expansion also emboldens them to influence the US domestic regulations. This insight generates several theory and policy implications.

[25] An example of the country-level fixed cost in international economics: Vannoorenberghe, Wang and Yu 2016

6.1 Firm Political Action and Regulatory Standards

The regulatory arbitrage mechanism is one way that firms combine their market operations and political actions into an integrated framework of corporate strategy. The conventional wisdom on the topic has been that firms use political actions to facilitate their market operations. For instance, Greene and Yao (2016) show that monopolistic firms use market strategies to hinder new entrants and non-market strategies to avoid possible reputational damage. Similarly, Holburn and Bergh (2014) show that firms in heavily regulated industries have to contribute to politicians in related offices to influence their regulatory merger approvals. This paper describes a mechanism in the opposite direction: a firm's market expansion facilitates its political efforts.

However, this mechanism is not necessarily limited to US firms lobbying the US government. In general, we know less about how firms influence foreign governments (see discussion on this point in Weymouth 2012). When US MNCs bring needed technology and valuable investment to foreign countries, how do they use that leverage to bargain the host governments for better regulations? Similarly, how do foreign firms creating jobs in US localities get their voices heard by the state and federal governments? When a firm lobbies a foreign government, does it choose to lobby as a foreign entity or through its local subsidiaries and local partners?

The firm-level theory and empirics in this paper also contribute to discussion on regulatory standards at industry and country levels. At the firm level, it is largely agreed upon in the literature that lobbying brings favorable regulatory outcomes to the lobbying firm (e.g., Richter and Timmons. 2009; Mellahi 2016; Unsal and Zirek. 2017; Mellahi 2016; Lux 2011). Aggregating this firm-level implication to the industry level, does lobbying intensity explain regulatory differences across US industries? Alternatively, do regulatory standards across US industries affect how firms lobby? Al-Ubaydli and McLaughlin (2017) is recently attempted to quantify industry-level regulatory standards through text analy-

sis of federal regulations, and to the best of my knowledge, there has been no research linking such industry-level regulatory outcomes with firm lobbying.

The US-focus of this paper does not allow it to test convergence of national regulatory policies directly, which involves a vast literature also known as "race to the bottom" or "race to the top" (e.g., Swank 2006; Gilardi 2010; Henisz and Zelner. 2004; Drezner 2008; Shipan and Volden 2012; Whitford and Tucker 2009). Existing research on the topic has identified several ways through which the convergence of national regulatory policies occur[26], including coercion of international organizations, normative emulation between countries, and inter-governmental competition, as summarized by Henisz and Zelner. (2004). All of them are country-level explanations, while this paper describes a firm-level mechanism that international pressure to change domestic regulations may take effect through a firm-government bargaining process. Extending this research agenda to a cross-national setting, how do different national institutions affect the form and effectiveness of corporate regulatory arbitrage? After all, the US is unique in the sense that most other countries in the world do not have such developed lobbying institutions.[27]

6.2 Corporate Lobbying Under the Trump Administration

Regulatory policies in the US have gone through drastic changes under the current administration. So far, two trends are clear: deregulation in domestic regulations and protectionism in international policies. Recall that US business leaders often complained about US regulatory standards being higher than those of foreign countries, such as the 35% nominal corporate tax rate from 1986 to 2017. It is harder for them to make such claims in 2018.

[26] National regulatory policies are essentially laws enacted and implemented by governments, not regulatory standards adopted and practiced by MNCs in their global production. For the latter, there are more firm-level and organizational-level analyses, such as Distelhorst, Hainmueller and Locke 2016; Amengual, Coslovsky and Yang 2017; Distelhorst and Locke 2018.

[27] Partly due to this reason, there is less discussion on firm lobbying in non-US countries. See Blake (2013) as an example from Australia and Kennedy and Kennedy (2009) as an example from China.

At the same time, current US protectionist trade policies are incurring additional costs for US firms who consume imports such as steel and aluminum.[28] As such, if the two trends persist, results from this paper would expect relatively more corporate lobbying on foreign economic policies and relatively less on US domestic policies.

However, we do not know whether the domestic deregulation and international protectionism will be long-lasting. Deregulation on the domestic front has been strong for the past year, but at the same time, there are hints of further deregulation facing headwinds. For instance, Missouri voters just defeated the GOP-backed "right to work" law in August 2018, while in November 2016, they gave the GOP candidate 57% of their votes. The possibility that the Democratic Party may regain majority in the Congress, or even the executive office, further increases regulatory uncertainty, and the consensus from the literature is that firms facing higher regulatory uncertainty lobby more (e.g., Engau and Hoffmann 2009; Buzard and Saiegh 2016; Hassan et al. 2017).

Compared to domestic regulatory policies, there is less partisan divide on international economic policies. This relative harmony across the aisle could be a result of a genuine alignment of the two party lines that "fair trade comes before free trade"; or international policies having lower priority for politicians who are saving their ammunition for domestic issues of higher stakes; or for some other reasons. That said, US protectionism also comes with its own uncertainty because of potential reactions from other countries. This commercial volatility is especially harmful for US MNCs as intra-firm trade is vital to the making of modern trade policies (Jensen, Quinn and Weymouth (2015); Baccini, Pinto and Weymouth (2017). The same fixed-cost aspect of offshoring that empowered US MNCs' political action in the domestic arena is already motivating them to defend their invested interests abroad on the Capitol Hill.[29]

[28] For instance, US business leaders voice their concern that "[T]he economic progress made by easing regulatory burdens and reforming our tax code faces a looming threat" from rising import cost of newly imposed tariffs on steel and aluminum in 2018. www.ft.com/content/a2e9d8ea-26d1-11e8-b27e-cc62a39d57a0

[29] A recent example is Section 301 Tariffs Hearing on Monday, August 20, 2018, where American companies

References

Al-Ubaydli, Omar and Patrick A McLaughlin. 2017. "RegData: A numerical database on industry-specific regulations for all United States industries and federal regulations, 1997–2012." *Regulation & Governance* 11(1):109–123.

Alt, James E., et al. 2014. "Asset specificity and the political behavior of firms: lobbying for subsidies in Norway." *International Organization* 53.

Amengual, Matthew, Salo Coslovsky and Duanyi Yang. 2017. "Who opposes labor regulation? Explaining variation in employers' opinions." *Regulation & Governance* 11(4):404–421.

Antras, Pol and Elhanan Helpman. 2004. "Global Sourcing." *Journal of Political Economy* 112.

Baccini, Leonardo, Pablo M Pinto and Stephen Weymouth. 2017. "The distributional consequences of preferential trade liberalization: firm-level evidence." *International Organization* 71(2):373–395.

Baron, David P. 1995. "Integrated strategy: Market and nonmarket components." *California management review* 37(2):47–65.

Beazer, Quintin H and Daniel J Blake. 2018. "The Conditional Nature of Political Risk: How Home Institutions Influence the Location of Foreign Direct Investment." *American Journal of Political Science* 62(2):470–485.

Belderbos, René and Jianglei Zou. 2009. "Real options and foreign affiliate divestments: A portfolio perspective." *Journal of International Business Studies* 40(4):600–620.

Bertrand, Marianne, & Matilde Bombardini & Francesco Trebbi. 2014. "Is it whom you know or what you know? An empirical assessment of the lobbying process." *American Economic Review* 104.12.

Blake, Daniel, Aaron Cowper Patrick Gatland. 2013. "XSTRATA AND AUSTRALIA MINING TAX REFORM (A)." *IE Business School Case Center* .
URL: *https://www.thecasecentre.org/educators/products/view?id=117767*

voiced opposition to protectionism due to their subsidiaries in major trading partners such as China.

Bloom, Nicholas, Aprajit Mahajan David McKenzie & John Roberts. 2010. "Why Do Firms in Developing Countries Have Low Productivity?" *American Economic Review: Papers & Proceedings* 100.

Boddewyn, Jean J and Thomas L Brewer. 1994. "International-business political behavior: New theoretical directions." *Academy of management review* 19(1):119–143.

Bombardini, Matilde. 2008. "Firm Heterogeneity and Lobby Participation." *Journal of International Economics* 75.

Briffault, Richard. 2008. "Lobbying and Campaign Finance: Separate and Together." *Stanford Law & Policy Review.* 19.

Bucheli, Marcelo and Minyoung Kim. 2015. "Attacked from both sides: A dynamic model of multinational corporations' strategies for protection of their property rights." *Global Strategy Journal* 5(1):1–26.

Buzard, Kristy and Sebastian Saiegh. 2016. Lobbying and Legislative Uncertainty. Technical report working paper.
URL: *https://kbuzard.expressions.syr.edu/wp-content/uploads/political-uncertainty.pdf*

Carruthers, Bruce and Naomi. Lamoureaux. 2016. "Regulatory races: The effects of jurisdictional competition on regulatory standards." *Journal of Economic Literature* 54.

Caves, Richard. 2007. "Multinational Enterprise and Economic Analysis." *Cambridge University Press* 3.

Chalmers, Adam William. 2017. "When Banks Lobby: The Effects of Organizational Characteristics and Banking Regulations on International Bank Lobbying." *Business and Politics* 19(1):107–134.

Chi, Tailan, Jing Li, Lenos G Trigeorgis and Andrianos E Tsekrekos. 2019. "Real options theory in international business." *Journal of International Business Studies* 50(4):525–553.

Clark, William Roberts, Matt Golder and Sona N Golder. 2017. "The British Academy Brian Barry Prize Essay: An Exit, Voice and Loyalty Model of Politics." *British Journal of Political Science* 47(4):719–748.

Crosson, Jesse M, Alexander Furnas and Geoffrey M Lorenz. 2018. "Estimating Interest Group Ideal Points with Public Position-Taking on Bills in Congress.".

Desai, Mihir A., Fritz Foley and James R. Hines. 2009. "Domestic effects of the foreign activities of US multinationals." *American Economic Journal: Economic Policy* 1.

Devereux, Michael P and Harold Freeman. 1995. "The impact of tax on foreign direct investment: empirical evidence and the implications for tax integration schemes." *International tax and public finance* 2(1):85–106.

Di Giovanni, Julian and Andrei A. Levchenko. 2013. "Firm entry, trade, and welfare in Zipf's world." *Journal of International Economics* 89.2.

Diewert, W. E. 1985. "Transfer Pricing and Economic Efficiency." *Multinationals and Transfer Pricing* New York: St. Martin's Press.

Distelhorst, Greg, Jens Hainmueller and Richard M Locke. 2016. "Does lean improve labor standards? Management and social performance in the Nike supply chain." *Management Science* 63(3):707–728.

Distelhorst, Greg and Richard M Locke. 2018. "Does Compliance Pay? Social Standards and Firm-Level Trade." *American Journal of Political Science* 62(3):695–711.

Drezner, Daniel W. 2008. *All politics is global: Explaining international regulatory regimes.* Princeton University Press.

Eden, L. 1985. "The Microeconomics of Transfer Pricing." *Multinationals and Transfer Pricing* New York: St. Martin's Press.

Engau, Christian and Volker H Hoffmann. 2009. "Effects of regulatory uncertainty on corporate strategy - an analysis of firms' responses to uncertainty about post-Kyoto policy." *environmental science & policy* 12(7):766–777.

Feenstra, Robert C. 2017. "Statistics to Measure Offshoring and its Impact." *National Bureau of Economic Research* No. w23067.

Feinberg, Susan E and Anil K Gupta. 2009. "MNC subsidiaries and country risk: Internalization as a safeguard against weak external institutions." *Academy of Management Journal* 52(2):381–399.

Gehlbach, Scott. 2006. "A Formal Model of Exit and Voice." *Rationality and society* 18.4.

Gilardi, Fabrizio. 2010. "Who Learns From What in Policy Diffusion Processes?" *American Journal of Political Science* 54.3.

Greene, Hillary and Dennis A Yao. 2016. Navigating Natural Monopolies: Market Strategy and Nonmarket Challenges in Radio and Television Audience Measurement Markets. In *Strategy Beyond Markets*. Emerald Group Publishing Limited pp. 367–411.

Guillén, Mauro F. 2013. "Understanding and managing the multinational Firm.".

Hall, Richard & Alan Deardorff. 2006. "Lobbying as a legislative subsidy." *American Political Science Review* 100.

Hassan, Tarek A, Stephan Hollander, Laurence van Lent and Ahmed Tahoun. 2017. Firm-level political risk: Measurement and effects. Technical report National Bureau of Economic Research.
URL: *https://www.nber.org/papers/w24029*

Henisz, Witold J. and Bennet A. Zelner. 2004. "Explicating Political Hazards and Safeguards: A Transaction Cost Politics Approach." *Industrial and Corporate Change* 13.

Hirschman, A. 1978. "Exit, voice, and the state." *World Politics* 31.

Hirschman, Albert O. 1964. "The paternity of an index." *The American Economic Review* 54(5):761–762.

Hirschman, Albert O. 1970. *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States.* Harvard University Press.

Holburn, Guy LF and Richard G. Vanden Bergh. 2014. "Integrated market and nonmarket strategies: Political campaign contributions around merger and acquisition events in the energy sector." *Strategic Management Journal* 35.

Horst, Thomas. 1980. "A note on the optimal taxation of international investment income." *The Quarterly Journal of Economics* 94.

Hymer, Stephen. 1976. *The International Operations of National Firms.* MIT Press.

Jensen, J Bradford, Dennis P Quinn and Stephen Weymouth. 2015. "The influence of firm global supply chains and foreign currency undervaluations on US trade disputes." *International Organization* 69(4):913–947.

Kalemli-Ozcan, S., Sorensen B. Villegas-Sanchez C. Volosovych V. & Yesiltas S. 2015. "How to construct nationally representative firm level data from the ORBIS global database." *National Bureau of Economic Research* .
URL: *https://www.nber.org/papers/w21558*

Katz, Alyssa. 2015. *The Influence Machine: The US Chamber of Commerce and the Corporate Capture of American Life.* Spiegel & Grau.

Kennedy, Scott and Scott Kennedy. 2009. *The business of lobbying in China*. Harvard University Press.

Kenny, Sara York and Robert K Larson. 1993. "Lobbying behaviour and the development of international accounting standards: The case of the IASC's joint venture project." *European Accounting Review* 2(3):531–554.

Knickerbocker, Frederick T. 1973. *Oligopolistic Reaction and the Multinational Enterprise.* Harvard University Press.

Kobrin, Stephen and Bruce M Kogut. 1983. "Managing political risk assessment." *Sloan Management Review (pre-1986)* 24(4):71.

Kogut, Bruce. 1983. "Foreign direct investment as a sequential process." *The multinational corporation in the 1980s* pp. 38–56.

Kogut, Bruce and Nalin Kulatilaka. 1994. "Operating flexibility, global manufacturing, and the option value of a multinational network." *Management science* 40(1):123–139.

Kollman, Ken. 1998. *Outside lobbying: Public opinion and interest group strategies.* Princeton University Press.

Langbein, Laura I. 1986. "Money and Access: Some Empirical Evidence." *The Journal of Politics* 48.4.

Lee, Seung-Hyun and Mona Makhija. 2009. "The effect of domestic uncertainty on the real options value of international investments." *Journal of International Business Studies* 40(3):405–420.

Lux, S., Crook R. & Woehr-D. J. 2011. "Mixing business with politics: A meta-analysis of the antecedents and outcomes of corporate political activity." *Journal of Management* 37.

Marcoux, Christopher and Johannes Urpelainen. 2014. "Profitable participation: Technology innovation as an influence on the ratification of regulatory treaties." *British Journal of Political Science* 44(4):903–936.

Medina, Luis Fernando, Marcelo Bucheli and Minyoung Kim. 2019. "Good friends in high places: Politico-economic determinants of the expropriation and taxation of multinational firms." *Journal of International Business Policy* 2(2):119–141.

Melitz, M.J. 2003. "The Impact of Trade on Intra-industry Reallocations and Aggregate Industry Productivity." *Econometrica* 71(6).

Mellahi, Kamel, et al. 2016. "A review of the nonmarket strategy literature: Toward a multi-theoretical integration." *Journal of Management* 42.

Morck, Randall and Bernard Yeung. 1992. "Internalization: An event study test." *Journal of International Economics* 33.

Nayyar, Deepak. 1978. "Transnational corporations and manufactured exports from poor countries." *The Economic Journal* 88.349.

Nehrt, Chad. 1998. "Maintainability of first mover advantages when environmental regulations differ between countries." *Academy of Management Review* 23(1):77–97.

O'Callaghan, Terry, Vlado Vivoda et al. 2013. How global companies make national regulation. In *The Handbook of Global Companies*. Wiley-Blackwell.

Osgood, I., Tingley D. Bernauer T.-Kim I. S. Milner H. V. & Spilker G. 2017. "The charmed life of superstar exporters: Survey evidence on firms and trade policy." *The Journal of Politics* 79.1.

Osgood, Iain and Yilang Feng. 2017. "Intellectual property provisions and support for US trade agreements." *The Review of International Organizations* .

Potoski, Matthew and Aseem Prakash. 2005. "Green clubs and voluntary governance: ISO 14001 and firms' regulatory compliance." *American journal of political science* 49(2):235–248.

Richter, Brian Kelleher, Krislert Samphantharak and Jeffrey F. Timmons. 2009. "Lobbying and taxes." *American Journal of Political Science* 53.

Ritchie, Melinda N and Hye Young You. 2018. "Legislators as lobbyists." *Legislative Studies Quarterly* .

Rodriguez-Lopez, Antonio. 2014. "What Drives Offshoring Decisions? Selection and Escape-Competition Mechanisms." *University of California, Irvine, manuscript. http://www. socsci. uci. edu/˜ jantonio/Papers/offshoring_decisions. pdf (accessed 10/5/2014)* .

Shipan, Charles R and Craig Volden. 2012. "Policy diffusion: Seven lessons for scholars and practitioners." *Public Administration Review* 72(6):788–796.

Stevens, Guy VG and Robert E Lipsey. 1992. "Interactions between domestic and foreign investment." *Journal of international money and Finance* 11(1):40–62.

Swank, Duane. 2006. "Tax policy in an era of internationalization: Explaining the spread of neoliberalism." *International Organization* 60.4.

Teece, David. 1985. "Multinational Enterprise, Internal Governance, and Industrial Organization." *American Economic Review* 75.

Trigeorgis, Lenos and Jeffrey J Reuer. 2017. "Real options theory in strategic management." *Strategic Management Journal* 38(1):42–63.

Trostel, Albert and Andrew Light. 2000. "Carrier Mexico SA de CV." *Journal of Business Research* 50(1):97–110.

Unsal, Omer, M. Kabir Hassan and Duygu Zirek. 2017. "Corporate lobbying and labor relations: Evidence from employee-level litigations." *Journal of Corporate Finance* 46.

Vannoorenberghe, Gonzague, Zheng Wang and Zhihong Yu. 2016. "Volatility and diversification of exports: Firm-level theory and evidence." *European Economic Review* 89:216–247.

Weymouth, Stephen. 2012. "Firm lobbying and influence in developing countries: a multilevel approach." *Business and Politics* 14(4):1–26.

Wheeler, David and Ashoka Mody. 1992. "International investment location decisions: The case of US firms." *Journal of international economics* 33(1-2):57–76.

Whitford, Andrew B and Justin A Tucker. 2009. "Technology and the Evolution of the Regulatory State." *Comparative Political Studies* 42(12):1567–1590.

Wright, Greg C. 2014. "Revisiting the employment impact of offshoring." *European Economic Review* 66.

Yamin, M. 2000. A critical re-evaluation of Hymer's contribution to the theory of the transnational corporation. In *The Nature of the Transnational Firm, 2nd ed*. Routledge.

You, Hye Young. 2017. "Ex post lobbying." *The Journal of Politics* 79(4):1162–1176.

II-Appendix I: Matching Lobbying Data with Company Information

A time-consuming step of data preparation is matching companies from CRP to their profiles with company information in Orbis global data. Lobbying organizations in CRP data contain not just firms, but also government entities, ideology groups, various associations, American Indian pueblos, and so on. Among all lobbying organizations, I only keep firms. So the remaining sample includes all firms that have lobbied at the federal level from 1998 to 2016, aside from non-compliance to and exceptions from Lobbying Disclosure Act of 1995. More details on reporting of lobbying activities to Secretary of the Senate and the Clerk of the House of Representatives can be found from the United States Senate website.

The essence of the matching task is to find the correct BvD ID number, the unique firm identifier in all datasets produced by Bureau van Dijk, for each lobbying firm in CRP. Automated matching contains a mismatch rate of around 20%. Such an error rate, if ignored, will jeopardize later analysis, so my team checks the automated matching results manually.

A reasonably high level of confidence in the matching quality is achieved because two independent researchers need to make the same human correction on the matching results from the automated method. Corrections are usually results of company name changes, company mergers/acquisitions, ownership structure complexity, and many random mismatches in Orbis online batch search.

Following the United States Senate registration requirements, entities with subsidiaries and affiliates as separate legal entities are matched to BvD IDs of the parent company,

unless the lobbying reports specify a subsidiary/affiliate as the lobbying organization. For instance, a company with name Ford Motor in CRP will be matched to the BvD ID of Ford headquarter in Dearborn, Michigan (US380549190). A company with name Ford Motor Canada in CRP will be matched to the BvD ID of the Ford subsidiary in Ontario, Canada (CA149141408L).

II-Appendix II: Issues in Domestic Regulatory Lobbying

This appendix summary statistics of the issue areas in domestic regulatory lobbying. The issue classification comes from "lobbying issue codes" in LD-1 and LD-2 reports.[30]

[30] lda.congress.gov/LD/help/default.htm?turl=Documents%2FAppCodes.htm

II-Table 7.Issues in Domestic Regulatory Lobbying

Lobbying Issue	No. Reports	Lobbying Issue	No. Reports
Accounting	3264	Immigration	23322
Advertising	3627	Insurance	20055
Aerospace	7506	Labor, Antitrust & Workplace	38261
Agriculture	42531	Manufacturing	9600
Apparel, Clothing, & Textiles	2057	Marine, Boats & Fisheries	18258
Arts & Entertainment	5525	Media Information & Publishing	2347
Automotive Industry	7266	Medical Research & Clin Labs	17654
Aviation, Airlines & Airports	23077	Medicare & Medicaid	69270
Banking	28578	Mining, Money & Gold Standard	685
Bankruptcy	5459	Natural Resources	33476
Beverage Industry	2670	Pharmacy	12699
Chemical Industry	7496	Postal	6447
Clean Air & Water	28466	Radio & TV Broadcasting	19051
Commodities	2274	Railroads	8870
Computers & Information Tech	12066	Real Estate & Land Use	10834
Consumer Product Safety	19725	Retirement	14844
Copyright, Patent & Trademark	31431	Roads & Highways	8221
Economics & Econ Development	17952	Science & Technology	25189
Education	59860	Small Business	10385
Energy & Nuclear Power	83965	Sports & Athletics	2307
Environment & Superfund	62934	Taxes	141841
Fed Budget & Appropriations	233671	Telecommunications	38311
Finance	43860	Tobacco	6297
Firearms, Guns & Ammunition	2513	Transportation	85795
Food Industry	15547	Travel & Tourism	4292
Fuel, Gas & Oil	12371	Trucking & Shipping	4052
Gaming, Gambling & Casinos	7362	Unemployment	1248
Hazardous & Solid Waste	5928	Urban Development	10829
Health Issues	137446	Utilities	12353
Housing	20341	Welfare	3965

CHAPTER III

Taking the Media High Ground: Overseas Operations and Policy Positioning on Chinese FTAs

1 Introduction

What factors determine corporate support for China's international trade initiatives? Existing research on international political economy (IPE) and Chinese economic policy provide useful insights. From the IPE literature, trade models expect champions of globalization to be from industries with comparative advantage and elite firms that are large and productive (Alt, 2014; Davis and Shirato, 2007; Kim, 2017; Kuno and Naoi, 2018; Melitz, 2003; Milner, 1989; Osgood, 2017*b*, 2018; Woll, 2008). From the Chinese economic reform literature, we learn that the Chinese government promotes trade, but at the same time extends particular favorable treatment to state-owned enterprises (SOE) and firms in industries with perceived strategic importance. As such, politically connected firms are expected to support liberalization.

Departing from these approaches, this paper pushes forward a smaller but growing literature on multinational corporations' policy stances on and reactions to international trade (e.g., Kim et al. 2019 on Costa Rican exporters; Manger 2009 North-South PTAs; and Jensen, Quinn and Weymouth 2017 on vertical FDI and intra-firm trade in MNCs). I argue that firms with existing overseas operations have an intrinsic incentive to voice their support for international trade to protect their investments abroad and to promote an open and stable business environment in China. In essence, this is a firm-level political consequence of FDI stemming from a fixed cost effect. It is established in the literature (e.g., Antras and Helpman. 2004,Rodriguez-Lopez 2014) that a firm's initial internationalization requires a substantial set-up investment. This initial fixed cost is often described as a discrete, lumpy investment. Thus, a firm's overseas presence, once in place, cannot be withdrawn easily. This immobility motivates the firm to promote and defend an open international trade regime in both home and foreign countries.

To test this mechanism, I collected the first data set on firms' public statement on FTAs from 2003 to 2018 in the Chinese media. In a country with no lobbying disclosure requirements, public statements in the media provides a rare opportunity to reveal corporate policy positioning. With this primary data, I find that firms with overseas operation are disproportionally vocal in supporting China's FTAs. The proponents of trade include not only Chinese firms with overseas subsidiaries, but also foreign firms in China and Chinese firms owned by foreign parents, confirming the theoretical argument that emphasizes firms' global presence over their country of origin.

The empirical design herein considers the common skepticism about information obtained from the Chinese media: it may be biased and controlled by the government, which hand-picks politically compliant firms that sing praise to government policies in the media. To control for this threat to validity, I argue that if the Chinese government uses compliant firms to justify its international trade policies in the media, it would also use

such compliant firms to justify many other policies and political campaigns in the media. Thus, I construct an index of firms' media exposure by the Chinese government via web scraping. In addition, the findings from China are compared to similar phenomena in the US as a benchmark for what corporate statements on trade should look like in an ultra pluralist society and free media landscape. It turned out that, on the issue of supporting global trade, multinationals behave in similar ways in both countries.

Findings from this paper makes several contributions. Firstly, existing literature on Chinese economic policy-making usually adopts a top-down perspective, focusing on the preferences of Chinese leaders who prescribe policies to fulfill their political and economic objectives. Thus, this paper makes a contribution to the under-explored bottom-up narrative of China's trade liberalization: firms in China taking public positions on economic policy-making. Secondly, joining the discussion on the political consequences of FDI (e.g., Kwok and Tadesse 2006; Gastanaga, Nugent and Pashamova 1998 on host country institutional reforms), this paper suggests that FDI can motivate firms to become vocal participants of public policy debates in both home and host countries. Lastly, findings from this paper that multinationals advocated the global trade regime in home and foreign countries leads to the natural corollary that they should also defend the same system when threatened by anti-globalist policies.

2 Firms' Support for Trade and Their Overseas Operation

This paper makes the argument that firms with existing overseas operation have an intrinsic incentive to support an open and stable trade regime that protects their investment abroad. The initial setup of overseas operations requires large amounts of financial investment and time investment (Antras and Helpman., 2004; Rodriguez-Lopez, 2014). Once a firms sets up its foreign subsidiaries, it has the incentive to protect their vested interests, which cannot be withdrawn easily. This effect influences their reactions to international

trade policy, where the firm's protective incentive should translate into a supportive stance for an open and stable international trade regime. This mechanism is essentially a firm-level political consequence of FDI.

This argument is related to the vast literature on the causes of FDI - why and how firms make their FDI decisions. A common theme of this literature is that overseas investments are often illiquid and vulnerable to potential expropriation, and such features influence a firm's FDI decision (e.g.,La Porta and Vishny. 1997; Henisz 2000; Li and Resnick 2003; Jensen 2003; Pinto and Pinto 2008; Frieden 1991; Li 2006; Markusen 1995). Building on this consensus in the literature, this paper derives the natural corollary that a firm who has already paid for the high cost of overseas operation cannot easily pull back their assets from abroad. This *locked-in-ness* should shape their preference for an open and stable global environment for the benefit of its illiquid and vulnerable assets around the world.

The argument articulated in this paper focuses on the political implication of firms' existing overseas operations, and this paper's empirical section tests this mechanism. However, MNCs' support for FTAs can also occur on the "extensive margin" in the sense that FTAs can help firms to establish new and/additional overseas operations. This is due to modern FTAs' inclusion of investment protection, IP protection, dispute resolution provisions, etc. Even thought the "extensive margin" argument is valid, it is different from the "locked-in-ness" mechanism and it is not tested in this paper.

This argument of international operation driving trade policy stances should apply to both types of FDI: vertical and horizontal. Horizontal FDI occurs when a firm enters a foreign country where it has some comparative advantages to sell into the hosting market. Vertical FDI occurs when a firm establishes productive facilities abroad to exploit lower production costs arising from location-specific endowments. These two modes often coexist. For vertical FDI, MNCs' configuration of global production requires intra-firm trade (Jensen, Quinn and Weymouth 2017) — international trade within firm boundaries.

Firms engaging in vertical FDI are vulnerable to disruption of such trade patterns, and they should support FTAs that promote an open and stable trade regime.

In addition, support for FTAs from vertically internationalized firms should not be limited to bilateral treaties between their home and foreign host countries. For instance, if Apple assembles its iPhones in China and sells to Korea and Japan, this American company will have an incentive to support China-Korea and China-Japan free trade agreements. In other words, as a result of the integrated supply networks across the globe in recent decades, multinational firms should lobby for free trade policies in all countries where they have operations.

This global sourcing network in the production process should also influences MNCs that engage in horizontal FDI. Using the example of Apple again, a good portion of iPhones assembled in China are also sold in China. To survive the highly competitive Chinese smart-phone market, Apple's subsidiaries in China have to utilize input materials and intermediary components from many other countries. In this case, Apple should not only lobby for a healthy commercial relationship between China and the US, but also support trade liberalization between China and the whole world.

It is worthwhile to compare this FDI-focused theory with other theories related to corporate preference on China's international trade policies. For instance, classical trade models posit efficiency gains of international trade from specialization, where trading countries specialize in industries of their respective comparative advantage based on different factor endowments. During the specialization process, distributional consequences arise, making internationally competitive actors support trade while internationally uncompetitive actors oppose trade. More recent work also focuses on the notion of competitiveness and capability, but at the firm level. Only some firms can afford the fixed cost associated with international trade (Melitz, 2003), producing an intra-industry divide on trade politics (Alt, 2014; Davis and Shirato, 2007; Kim, 2017; Kuno and Naoi, 2018; Melitz,

2003; Milner, 1989; Osgood, 2017*b*, 2018; Woll, 2008)

On the contrary, the argument articulated in this paper focuses on the locked-inness, which can be seen as a lack of the capability to withdraw easily, and vulnerability to volatile international trade relations. FTAs between nation states promote such an open and stable global trade regime, protecting MNCs' investments across the globe. This is not to say, however, that firms with overseas operations are not competitive. Instead, internationalized firms belong to the small group of firms that are large and productive, as will be shown in the empirics section. But the competitiveness argument and the locked-inness argument are distinct perspectives: the former paints the picture of "superstar exporters," borrowing the Osgood (2017*a*) terminology, who are capable and forward-looking with regard to opportunities in the international market; the latter portrays multinationals who have already made the effort to operate in multiple jurisdictions because of cost and market concerns, and who are now defensive and want to make the most out of their existing investments across the globe.

As shown in the Apple example, the overseas operation argument applies for multinationals in both home and foreign countries, holding everything else equal. This is to say, foreign multinationals in host country A and domestic multinationals in home country A both have operations in country A and in the outside world. Thus, according to the overseas operation argument, the two groups of multinationals in country A share the *common interest* that country A maintains and promotes open and stable trade relations with the outside world. The policy preference and influence of foreign multinationals in the host country has been documented in both developing countries (e.g., Robertson and Watson 2004) and developed countries (e.g., Lee 2018). Building on this discussion, this theoretical implication tackles multinationals' influence on the host country's international trade policy.

For the particularities of China, Naoi, Shi and Zhu (2017) offers different explanation

of corporate preference for economic liberalization in a non-democratic context: foreign firms and SOEs are "politically stronger" than privately-owned Chinese firms. Due to their political status in China, foreign firms and SOEs are more likely to voice their true policy preferences in authoritarian China. While Naoi, Shi and Zhu (2017) focuses on the ultimate[1] ownership type (i.e. foreign firms *vs.* Chinese SOEs *vs.* Chinese privately-owned firms), my theory focuses on global ownership structure (i.e. firms without overseas production *vs.* firms with overseas production). The relationship between these two theories is shown in III-Table 1, where while Naoi, Shi and Zhu (2017) visualizes in vertical categories, my theory is visualized in horizontal categories. The natural way to disentangle these two explanations is to see whether ultimate owner type or global owner structure explains more variation in the dependent variable on corporate policy preference.[2] The empirical section implements this procedure, and will continue the discussion there.

[1] The word “ultimate" here is used to clarify that, in the situation of multiple layers of ownership, I trace to the global ultimate parent company to determine the ownership type. For instance, Apple Procurement and Operations Management (Shanghai) Co. Ltd. Shenzhen Branch is a registered Chinese company in the city of Shenzhen. Its direct parent company is Apple Procurement and Operations Management (Shanghai) Co. Ltd., a registered Chinese company in the city of Shanghai, who is in turn wholly owned by the American company Apple Inc. in Cupertino, USA. In this paper, the Shenzhen Branch company will be counted as a subsidiary of a foreign firm, not a subsidiary of a domestic firm.

[2] This comparison, however, is not a direct test of Naoi, Shi and Zhu (2017) against my overseas operation argument, as the two papers have different dependent variables. In Naoi, Shi and Zhu (2017), the dependent variable is firms’ position taking on FDI entry regulation in China from a survey. In this paper, the dependent variable is firms’ statements on China’s free trade agreements reported in the Chinese media.

Ⅲ-Table 1: Partition of Firms Based on Ultimate Ownership Type and Global Ownership Structure

		Global Ownership Structure	
		Multi-Country	Single-Country
Ultimate Ownership Type	Foreign Entity	foreign firms in China	*null type*
	Chinese State	SOEs with operation outside of China	SOEs that only operate in China
	Chinese non-State Entity	privately-owned Chinese firms with operation outside of China	privately-owned Chinese firms that only operate in China

Lastly, the discussion has been at the firm level, but the relevance of the overseas operation argument obviously differs by industry. For instance, it is known that firms opting for multinational operation often come from industries of monopolistic competition with differentiated products (Knickerbocker, 1973; Hymer, 1976; Teece, 1985; Yamin, 2000). Firms from these industries possess intangible and proprietary assets that are hard to outsource to foreign entities. Thus, they often choose to engage in foreign direct investment so that production in different countries remains within the firms' boundaries. Another potential industry level explanation is that industries of the services sector that require more face-to-face interaction are thus harder to offshore than manufacturing industries. In general, it is possible that such industry features drive firms to offshore and also drive them to voice their support for free trade. This paper does not deal with what kind of industries are more likely to offshore in the first place, but introduces industry dummies at the four-digit level in the empirical section to solve the threat to the argument on firm-level overseas operation.

3 The Case of Policy Positioning on Chinese FTAs

The paper examines the overseas operation argument in the context of China's international trade policies of the 2000s and 2010s. As of summer 2019, China's trade issue is becoming increasingly relevant today since the country's emergence as the world's largest trading nation in 2014. Furthermore, American disputes with China over China's business-government relationship in its trade practices have been escalating and spreading to non-trade issues between the two countries. In retrospect, China's global trade prominence started when China entered the WTO in 2001, the same year when the prolonged Doha Round of the WTO commenced. As the multilateral effort under Doha stalls, many countries, including China, face the difficulty of deeper integration among all WTO member states and seek the alternative resolution: bilateral trade agreements (BTAs) and regional trade agreements (RTAs). As of today, China has signed 19 BTAs and RTAs, and is negotiating 13 BTAs and RTAs, as summarized in III-Table 2.[3] This paper focuses on these FTAs because they constitute the main stage of China's international trade initiatives in the 2000s and 2010s.

[3] Check the most up-to-date information on China's FTA status, Ministry of Commerce of the People's Republic of China (MOFCOM), 'China Free Trade Zone Services Website at http://fta.mofcom.gov.cn/.

Ⅲ-Table 2: Summary of China's Post-WTO Free Trade Agreements

Completed FTAs			**FTAs under Negotiation**	
Partner	Negotiation Starting Date	Treaty Effective Date	Partner	Starting Date
Hong Kong	December 19, 2001	June 29, 2003	RCEP	November 20, 2012
ASEAN	November 4, 2002	January 1, 2010	Gulf Cooperation Council	April 23, 2005
Macau	June 20, 2003	October 17, 2003	Japan-Korea	May 13, 2012
Chile	November 18, 2004	November 18, 2005	Sri Lanka	September 16, 2014
Chile upgrade	November 18, 2004	November 18, 2005	Israel	March 29, 2016
Australia	April 18, 2005	December 20, 2015	Norway	September 18, 2008
Pakistan	August 15, 2005	November 18, 2016	New Zealand upgrade	November 20, 2016
Singapore	August 25, 2006	October 23, 2008	Mauritius	December 12, 2017
Iceland	December 4, 2006	July 1, 2014	Moldova	December 28, 2017
Peru	September 7, 2007	April 28, 2009	Panama	July 9, 2018
Costa Rica	January 19, 2009	August 1, 2011	Korea second phase	March 22, 2018
Switzerland	January 28, 2011	July 1, 2014	Palestine	October 23, 2018
Pakistan second phase	March 10, 2011	April 28, 2019	Peru upgrade	November 17, 2018
Korea	May 2, 2012	June 1, 2015		
ASEAN upgrade	August 26, 2014	November 22, 2015		
Maldives	February 4, 2015	December 7, 2017		
New Zealand	November 6, 2015	April 7, 2008		
Singapore upgrade	November 6, 2015	November 5, 2018		
Georgia	December 10, 2015	January 1, 2018		

3.1 Voice of Individual Firms

The majority of existing research on Chinese trade policy-making takes a top-down approach. It often focuses on preferences of Chinese leaders, China's industrial comparative advantage, national developmental strategies, Beijing's foreign policy goals, and the Party's domestic political concerns (see a comprehensive review of this literature in Hsueh 2016). From this common top-down perspective, trade policies are designed by government officials to fulfill their political and economic objectives. In contrast, there are fewer studies on the micro-level, demand side of China's trade liberalization: firms and other non-government entities in China advocating or opposing economic openness via formal and informal institutions.

Other than international trade policy, however, there is a small but growing literature

on how firms in China participate in and react to economic policy-making in general. For instance, Deng and Kennedy (2010) surveys the government affairs (GA) offices of elite firms in Beijing; Huang, Chen and Heberer (2017) looks at firms' policy engagement via All-China Federation of Industry and Commerce (ACFIC); Naoi (2017) uses survey data to derive how firms interact with the government on FDI entry regulation. This paper extends this work by offering the first analysis with observational data on firm engagement with international trade policy in China.

In particular, this paper draws evidence from corporate policy participation in the form of firms' policy statements in the media. This form of policy influence has been termed "outside lobbying" by Kollman (1998) in the context of interest groups in the US - firms' policy statements in the media. Compared to formal lobbying records, public statements in the media are subject to media bias, but they often come with richer nuances on firms' policy preferences for researchers to understand why and how they support or oppose a specific policy.[4] In addition, a good portion of public attention to corporate influence of policy-making comes from publicly available reports in the media.

In the Chinese context, corporate media statements offer a rare opportunity to understand firms' policy stances in a systematic way for two reasons. Firstly, and most importantly, there is no lobbying in China that is comparable to the lobbying in the US in terms of its magnitude and level of institutionalization. Thus, when comparing different ways of policy influence by interest groups, the relative importance of public statements can be higher in the Chinese case. In fact, this is a major reason why the bulk of interest group lobbying research focuses on the US experience.

Secondly, the kind of lobbying disclosure requirements found in the US does not exist in China. Due to this lack of transparency, researchers have used indirect indicators such

[4] Formal lobbying and public statements each come with advantages and disadvantages, see examples of research utilizing both in a complementary way in Feng 2019*b*; Osgood and Feng. 2018

as entertainment and travel costs to measure firm-government interaction in the form of corruption (Cai, Fang and Xu, 2011), although corruption and lobbying are different concepts. International trade policy, the focus of this paper, is made by the central government in Beijing, instead of local cadres who can be swayed easily by firms' entertainment and travel expenditures. Thus, corruption is not the appropriate form of firm-government interaction here, and this paper relies on the more direct and systematic evidence from firms' public statements on trade policy.

3.2 Collecting Firm Statements in the media

This paper collects firms' public statements from two sources that have not been used in the literature. The first one is from the Department of International Trade and Economics (DITE) under the Ministry of Commerce in Beijing. DITE is an office facilitating trade policy-making in China, similar to the United States Trade Representative (USTR) for US trade policies in several aspects. The second one is from China Council for the Promotion of International Trade (CCPIT), the most comprehensive firm association on trade issues. The association has branches in major cities in China and also for major industries. Both DITE and CCPIT have compiled comprehensive repositories of media reports on trade policies over the years, but most of the reports are not firm or treaty-specific. Instead, the bulk of the media reports are expert analyses and government officials' discussions of trade policies, while firm-level evidence is far more scant.

To identify statements that are firm-specific and treaty-specific, my research team read and coded all media reports in the two repositories compiled by DITE and CCPIT. Up to May 2019, 376 firms have been identified. For instance, XiamenAir, a major Chinese airline founded in 1984, supports the China-Australia FTA on December 8, 2015, in China News, and this report is found in the repository from DITE. Regarding potential new business

prospects following the China-Australia FTA, representatives from XiamenAir state that, despite existing XiamenAir lines from Fuzhou and Xiamen to Sydney, the company will be able to launch a new airline route to Melbourne for the expanded market. This data-set forms the dependent variable for the empirical analysis of this paper.

3.3 Bench-marking the Evidence from Chinese Media

Reporting bias poses a major threat to research relying on media data. In the case of China, this problem can be worse, where firms' statements on policy issues may not reflect their true policy preferences. If the bias is strong enough, what I have collected is less about what firms want to say, but more about what the Chinese government, and its controlled media outlets, wish them to report. One hypothesis is that the Chinese government picks supporting firms to report as a justification of its policies and censors dissenting views.

This problem is not new in the research field of Chinese political economy. With survey data, Feng (2019*a*) develops a Bayesian latent variable method to detect potential lying in firm owners' responses on politically sensitive questions; also with survey data, Naoi 2017 develops a theory of strategic preference expression in an authoritarian system. The observational data collected for this paper is not equipped to implement such methods to model insincere expressions explicitly, but this paper controls for this problem with two bench-marking methods.

The first benchmark is firms' media statements on FTAs in the US - if the data from Chinese media was merely Beijing picking politically compliant views to support its international trade policies, it should show significant differences from firm statements on the same policy issue from the US. The US is a uniquely pluralist society that allows interest groups to compete and participate in the policy-making process; also, American pluralism shows in its media landscape that it tolerates a high level of freedom of expression. For

these reasons, public statements from the US constitute a close approximate to the ideal scenario with no government influence affecting the firm statements we observe.

III-Table 3: Comparing Firms' Media Statements on FTAs in China and the US

	Position on FTA in the media		Firm Size				Sector	
	Support	Oppose	Very Large	Large	Medium	Small	Manufacturing	Non-Manufacturing
China	335	0	64%	14%	6%	16%	36%	64%
USA	242	0	82%	6%	7%	5%	43%	57%

To construct a comparison group of firm statements on US FTAs, I utilize a novel repository on interest groups' public statements on specific US Congressional bills, compiled by the transparency organization Maplight. MapLight incorporates all bill-level statements made by interest groups[5], and I tease out all reports on US FTA related bills. To mirror the statements collected for Chinese FTAs, the firm statements on US FTAs included are from the same period, 2001 to 2018.

Summary statistics from Chinese statements and US statements are presented in III-Table 3. In general, there is no sign of the Chinese data being significantly different from the US data, except for some modest differences in terms of firm size[6] and firm sector. Most notably, all we observe in American and Chinese media are a small group of firms choose to voice their support for FTAs, and most firms remain silent. So following the methodology in Osgood and Feng. (2018), the empirical section tries to understand why some firms choose to support FTAs in their public statements, while most others do not.

The second benchmark is constructing a firm-level index of the likelihood of a firm being used by government-controlled media as a poster boy to support government policies.

[5] Details on Maplight's search methods can be found at http://classic.maplight.org/us-congress/guide/data/support-opposition. See first applications of the Maplight repository in Crosson, Furnas and Lorenz 2018 and Feng (2019*c*)

[6] This classification of firm size categories is given by the Orbis database from Bureau van Dijk company. It is a multifaceted measurement of firm size based on revenue, employment, assets, etc.

The rationale here is, say, a firm is politically compliant and the Chinese government uses its supportive voice in the media to sing the praises of the country's international trade policies. Here the firm is a poster boy hand picked by the government, so its supportive view in the media does not reflect corporate attitudes toward trade policies in China. Assuming this is true, then the politically compliant firm can be used by the Chinese government for policy justification in other policy domains, not just international trade.

For instance, if Baidu publicly supports government polices even if they run against Baidu's interests, and the government does use Baidu to justify its policies and improve its image in the media, there is no reason to use Baidu only for free trade agreements. Baidu would probably be used to justify other policies made by the Chinese government as well, such as industrial policies for the IT sector. As a result, we would see Baidu in all kinds of media reports from the state controlled media outlets.

To construct this firm-level index, I search each firm's name (in Chinese) in my data on websites of the Chinese government and its branches. Then I scrape the research count for each firm from the search engine[7]. Large firms naturally have more media exposure, but holding everything else equal, search result counts from the Chinese state's media should correlate to a firm's likelihood of being used to sing the praises of government policies. This index, *Appearance on State Media*, is included in the empirical analysis to follow.

[7] This paper used Bing as the search engine as Google's anti-scraping technique is harder to bypass by the author

4 Empirical Analysis

4.1 Sample Construction

Along with the collected set of firms supporting Chinese FTAs, I random draw from all active firms in China from the Orbis worldwide database[8] to construct a representative sample of firms that do not choose to support Chinese FTAs in the media. The pool of active firms include all firms in active production status that are registered in China. With this definition, it includes domestic-oriented Chinese firms, headquarters of Chinese MNCs, and foreign MNCs' subsidiaries in China.

The Orbis database is selected for its broad coverage of global ownership structure, the key quantity of interest to measure firms' overseas operation in this paper. Orbis also provides information such as revenue, employment, and assets to measure firm size.[9] In addition, Orbis is preferable over other commonly used firm databases, most notably Compustat, because Orbis includes not only large public firms, but also firms that are small and medium-sized, which do appear in Compustat's sample.

Following instructions from Kalemli-Ozcan (2015), I extract four measurements of firm size from the Orbis data: revenue, employment, total assets, and total subsidiary number. Their distributions among firms with media statements (y=1) and all active firms in China (y=0) are presented in III-Table 4. When comparing the two groups of firms in III-Table 4, it is obvious that firms making media statements are much larger than typical active firms in China. This disparity between the two groups is not surprising as larger firms are also more politically active.

[8] The Orbis database is accessed through the University of Michigan, see more details on the database in: https://www.bvdinfo.com/en-us/our-products/data/international/orbis

[9] See examples of Orbis data in recent research with an international (e.g., Di Giovanni and Levchenko 2013) and/or cross-national focus (e.g., Bloom 2010)

III-Table 4: Descriptive Statistics of Firm Support for FTA in the Chinese Media

	Firms with Media Statements on FTAs	**All Active Firms in China**
Average Revenue	21,404,026 (in USD)	41,868 (in USD)
Average Employment	88227	281
Average Total Assets	566,404,494 (in USD)	73,169 (in USD)
Average No. Subsidiaries	35	0.55
Percentage of Manufacturers	43%	55%

To control for this endogeneity, each model in III-Table 5 adopts one size measure to ensure adequate control for the fact that large firms are also more active politically. Due to large scale missing values in the financial statistics, results in III-Table 5 use the most recent available data from Orbis for the financial variables. As a robustness check, using a particular year's financial variables instead of most recent available data does not change the significance of coefficients in III-Table 5.

4.2 Model and Results

Considering the discussion on global ownership structure and ultimate owner type in III-Table 1 in section 2.2, I construct a binary indicator of whether the firm is ultimately owned by a foreign entity, *Foreign Parent*; a binary indicator of whether the firm has any foreign subsidiary, *Foreign Subsidiary*. These two variables are the explanatory variables of interest, together they reflect firms' overseas operation: *Foreign Parent* corresponds to non-Chinese firms with operation in China; *Foreign Subsidiary* corresponds to Chinese firms with operations outside of China.

In addition, there is a binary indicator of whether the firm is ultimately owned by the People's Republic of China or branches of the Chinese Government, *SOE*. Recall the Apple

example on multiple layers of ownership in 2.2, Foreign Parent, *Foreign Subsidiary*, *SOE* all take care of this scenario. Regarding the concern over industry-level heterogeneity driving the results discussed in 2.2, I include binary indicators for firms' industries at the NAICS-4 level.

The logistic model is summarized below and results are presented in III-Table 5.

$$Support_i = ForeignP_i\beta_1 + ForeignSub_i\beta_2 + SOE_i\beta_3 + Appearance_i\beta_4 + Size_i\beta_5 + Industry_i\beta_6 + e_i, \quad (1)$$

where,

e_i is the error term.

III-Table 5: Baseline Results: Who Support FTAs in the Media?

DV: public support for FTA in the media	(1)	(2)	(3)	(4)
Foreign Parent	0.272***	0.253***	0.275***	0.245***
	(0.051)	(0.068)	(0.051)	(0.245)
Foreign Subsidiary	0.817***	0.759***	0.927***	0.658***
	(0.101)	(0.001)	(0.094)	(0.095)
SOE	0.059	−0.147	0.149	0.085
	(0.123)	(0.001)	(0.110)	(0.096)
Appearance on State Media	0.087	−0.043	0.099	0.057
	(0.081)	(0.001)	(0.080)	(0.076)
Revenue	6.702**			
	(2.055)			
Employment		32.062***		
		(7.631)		
Total Assets			8.858	
			(7.702)	
Total Subsidiary Number				0.842***
				(0.250)
NAICS-4 FE	Yes	Yes	Yes	Yes
AIC	1379.3	699.4	1398.9	1677.2
N	8280	2042	8278	8314
Note:	*p<0.05; **p<0.01; ***p<0.001			

The four models in III-Table 5 are logistic regressions with the above variables, and they show robust results on the two overseas operation variables, *Foreign Subsidiary* and *Foreign Parent*. With various measurements of firm size, we know that their active policy statements are not merely a result of large firms being more active in the media. Also, with *Appearance on State Media*, we are controlling for the potential threat to validity that the Chinese government hand picks politically compliant firms so that the sample does not

reflect the true corporate support for trade policies in China. With this control, we know the result is not driven by the potential bias of the media landscape in an authoritarian regime. Lastly, the *SOE* variable is not significant across all four models, showing that the presence of multinational operation is a stronger predictor of public policy positioning than firm ownership.

5 Conclusion

This paper examines MNCs' political action on bilateral free trade agreements. Other than competitiveness at the industry and firm levels, firms with existing overseas operations have an intrinsic desire for open and stable trade. Their multinational operations depend on the global trade regime, and thus they are disproportionally more active to voice their support for it. In addition, this mechanism applies for MNCs in both home and host countries, and for MNCs engaging in both vertical and horizontal FDI.

In the specific case of China, this paper updates the existing wisdom that firm's relative stance vis-a-vis the Chinese government dictates their position taking on government policies. However, we have seen that SOEs, the most politically powerful group in China, are not more visible than privately-owned firms in the media landscape on international trade policies. Consider the partition of firms by global ownership structure and ultimate ownership type in III-Table 1; evidence from this paper suggests that the global presence of a firm can be more important than which country or government owns the firm in determining its policy preferences.

Combining these results, this paper reveals the under-explored phenomenon that multinational firms have emerged as the most vocal vanguard of globalization in China. This finding is surprising from at least two perspectives. Firstly, it says that the conventional perception of Chinese policy making being mostly top-down is incomplete. Instead, there

have been vibrant firm actions on China's trade initiatives during the past two decades, and future research can utilize the plethora of online data to further this investigation, even if the in-field data collection in China has become significantly more difficult in recent years.

Secondly, in the seminal work on why MNCs support bilateral free trade agreements, Manger (2009) argues that multinational firms from developed countries want to extend their vertical production network in developing countries, thus pushing for North-South preferential agreements. From that perspective, China belongs to the South and functions as the world factory that assembles industrial products for developed markets. However, since Manger's work, many Chinese firms have grown out of the contractor role in the global supply chain (see Wan and Wu 2016 as an example of their "climbing" strategy), and have become powerful MNCs themselves. This paper shows that, these Chinese firms have also emerged as an active force influencing economic policy making in China.

Thirdly, both the theory and the empirics of this paper highlight an *entente* between foreign firms in China and Chinese firms that are multinational. It is their global presence, instead of country of origin, that forged this alliance relationship. This finding gives a piece of hope for the future. In the past few decades we see national governments leading the way for globalization through international institutions and bilateral and regional arrangements. What if major nations of the government instead push for anti-globalist and destabilizing policies? From the lessons learned in this paper, we derive the natural corollary that multinational companies from different countries share the view of the importance of an open and stable international environment, and they have voiced that shared view to the government and to the public of China.

References

Alt, James E., et al. 2014. "Asset specificity and the political behavior of firms: lobbying for subsidies in Norway." *International Organization* 53.

Antras, Pol and Elhanan Helpman. 2004. "Global Sourcing." *Journal of Political Economy* 112.

Bloom, Nicholas, Aprajit Mahajan David McKenzie & John Roberts. 2010. "Why Do Firms in Developing Countries Have Low Productivity?" *American Economic Review: Papers & Proceedings* 100.

Cai, Hongbin, Hanming Fang and Lixin Colin Xu. 2011. "Eat, drink, firms, government: An investigation of corruption from the entertainment and travel costs of Chinese firms." *The Journal of Law and Economics* 54(1):55–78.

Crosson, Jesse M, Alexander Furnas and Geoffrey M Lorenz. 2018. "Estimating Interest Group Ideal Points with Public Position-Taking on Bills in Congress.".

Davis, Christina L and Yuki Shirato. 2007. "Firms, governments, and WTO adjudication: Japan's selection of WTO disputes." *World Politics* 59(2):274–313.

Deng, Guosheng and Scott Kennedy. 2010. "Big business and industry association lobbying in China: The paradox of contrasting styles." *The China Journal* (63):101–125.

Di Giovanni, Julian and Andrei A. Levchenko. 2013. "Firm entry, trade, and welfare in Zipf's world." *Journal of International Economics* 89.2.

Feng, Yilang. 2019*a*. "Measuring Political Connection and Entrepreneur Trade Preference under WTO." *working paper* .

Feng, Yilang. 2019*b*. "Regulatory Arbitrage and Overseas Operation of US Firms." *working paper* .

Feng, Yilang, Andrew Kerner Jane Sumner. 2019*c*. "Quitting globalization: trade-related job losses, nationalism, and resistance to FDI in the United States." *Political Science Research and Methods* .

Frieden, Jeffry A. 1991. "Invested interests: the politics of national economic policies in a world of global finance." *International Organization* 45(4):425–451.

Gastanaga, Victor M, Jeffrey B Nugent and Bistra Pashamova. 1998. "Host country reforms and FDI inflows: How much difference do they make?" *World development* 26(7):1299–1314.

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

Hsueh, Roselyn. 2016. "State Capitalism, Chinese-Style: Strategic Value of Sectors, Sectoral Characteristics, and Globalization." *Governance* 29(1):85–102.

Huang, Dongya, Minglu Chen and Thomas Heberer. 2017. From" state control" to" business lobbying": The institutional origin of private entrepreneurs' policy influence in China. Technical report Working Papers on East Asian Studies.

Hymer, Stephen. 1976. *The International Operations of National Firms.* MIT Press.

Jensen, J Bradford, Dennis P Quinn and Stephen Weymouth. 2017. "Winners and losers in international trade: The effects on US presidential voting." *International Organization* 71(3):423–457.

Jensen, Nathan M. 2003. "Democratic governance and multinational corporations: Political regimes and inflows of foreign direct investment." *International organization* 57(3):587–616.

Kalemli-Ozcan, S., Sorensen B. Villegas-Sanchez C. Volosovych V. & Yesiltas S. 2015. "How to construct nationally representative firm level data from the ORBIS global database.". **URL:** *https://www.nber.org/papers/w21558*

Kim, In Song. 2017. "Political Cleavages within Industry: Firm-level Lobbying for Trade Liberalization." *American Political Science Review* 111(1):1–20.

Kim, In Song, Helen V Milner, Thomas Bernauer, Iain Osgood, Gabriele Spilker and Dustin Tingley. 2019. "Firms and global value chains: identifying firmsâĂŹ multidimensional trade preferences." *International Studies Quarterly* 63(1):153–167.

Knickerbocker, Frederick T. 1973. *Oligopolistic Reaction and the Multinational Enterprise.* Harvard University Press.

Kollman, Ken. 1998. *Outside lobbying: Public opinion and interest group strategies.* Princeton University Press.

Kuno, Arata and Megumi Naoi. 2018. "Framing business interests: How campaigns affect firms' positions on preferential trade agreements." *Available at SSRN 2671986* .

Kwok, Chuck CY and Solomon Tadesse. 2006. "The MNC as an agent of change for host-country institutions: FDI and corruption." *Journal of International Business Studies* 37(6):767–785.

La Porta, Rafael, Florencio L??pez-de-Silanes Andrei Shleifer and Robert Vishny. 1997. "Legal Determinants of External Finance." *Journal of Finance* 52.

Lee, Jieun. 2018. "Foreign Direct Investment in Political Influence.".

Li, Quan. 2006. "Democracy, autocracy, and tax incentives to foreign direct investors: A cross-national analysis." *The Journal of Politics* 68(1):62–74.

Li, Quan and Adam Resnick. 2003. "Reversal of fortunes: Democratic institutions and foreign direct investment inflows to developing countries." *International organization* 57(1):175–211.

Manger, Mark S. 2009. *Investing in protection: The politics of preferential trade agreements between north and south*. Cambridge University Press.

Markusen, James R. 1995. "The boundaries of multinational enterprises and the theory of international trade." *Journal of Economic perspectives* 9(2):169–189.

Melitz, M.J. 2003. "The Impact of Trade on Intra-industry Reallocations and Aggregate Industry Productivity." *Econometrica* 71(6).

Milner, Helen V. 1989. *Resisting protectionism: Global industries and the politics of international trade*. Princeton University Press.

Naoi, Megumi, Weiyi Shi and Boliang Zhu. 2017. "'Yes-Man'Firms: Government Campaigns and Policy Positioning of Businesses in China.".

Naoi, Megumi, Weiyi Shi Boliang Zhu. 2017. "Yes-Man'Firms: Government Campaigns and Policy Positioning of Businesses in China.".

Osgood, I., Tingley D. Bernauer T.-Kim I. S. Milner H. V. & Spilker G. 2017*a*. "The charmed life of superstar exporters: Survey evidence on firms and trade policy." *The Journal of Politics* 79.1.

Osgood, Iain. 2017*b*. "The breakdown of industrial opposition to trade: firms, product variety, and reciprocal liberalization." *World Politics* 69(1):184–231.

Osgood, Iain. 2018. "Globalizing the supply chain: Firm and industrial support for US trade agreements." *International Organization* 72(2):455–484.

Osgood, Iain and Yilang Feng. 2018. "Intellectual property provisions and support for US trade agreements." *The Review of International Organizations* .

Pinto, Pablo M and Santiago M Pinto. 2008. "The politics of investment partisanship: And the sectoral allocation of foreign direct investment." *Economics & Politics* 20(2):216–254.

Robertson, Christopher J and Andrew Watson. 2004. "Corruption and change: The impact of foreign direct investment." *Strategic management journal* 25(4):385–396.

Rodriguez-Lopez, Antonio. 2014. "What Drives Offshoring Decisions? Selection and Escape-Competition Mechanisms." *University of California, Irvine, manuscript. http://www. socsci. uci. edu/˜ jantonio/Papers/offshoring_decisions. pdf (accessed 10/5/2014)* .

Teece, David. 1985. "Multinational Enterprise, Internal Governance, and Industrial Organization." *American Economic Review* 75.

Wan, Zhixi and Brian Wu. 2016. "When suppliers climb the value chain: A theory of value distribution in vertical relationships." *Management Science* 63(2):477–496.

Woll, Cornelia. 2008. *Firm interests: How governments shape business lobbying on global trade*. Cornell University Press.

Yamin, M. 2000. A critical re-evaluation of Hymer's contribution to the theory of the transnational corporation. In *The Nature of the Transnational Firm, 2nd ed*. Routledge.

CHAPTER IV

Measuring Political Connection and Entrepreneur Stance on International Trade and Competition in China

1 Introduction

Does corporate political connection, a resource stemming from firm owners' relationship with the state, influence their preferences on economic openness and international competition? Intuitively, the answer is probably yes, especially given the salience of state involvement in international trade regulation and assistance in contemporary policy debates. After all, firms do not operate in apolitical environments, and political connection can affect many aspects of their business, including trade and investment activities across borders. This effect is not limited to exporters and import-competing firms, because firms in non-trading sectors can also feel the impact of greater openness via changes in domestic input and output prices, and their political resources can influence how they are affected by and react to those changes. How firms perceive international trade openness differently is a precondition to their different business plannings and political actions under economic

globalization, which in turn influence policy-making circles in both developed and developing nations. In societies undergoing postcommunist transitions, these individual firm preferences can also aggregate to political support or opposition to economic liberalization, affecting the sustainability of continued reforms.

However, there is very limited discussion on firm owners' opinions on economic openness and international competition with respect to their political connection. On the one hand, if political resources translate into favorable policies and additional protection (e.g. Li 2008, Polsiri and Jiraporn 2012, Wu and Rui 2012, Mobarak 2006, Faccio 2006, Cingano and Pinotti 2013, Fisman 2001, Faccio 2010), PCEs should be less worried about increasing foreign competition while enjoying expanded opportunities from abroad. Such a *"connection to evade competition"* mentality leads to a positive correlation between political connection and support for trade. On the other hand, PCEs may fear trade openness because it can neutralize existing domestic favoritism that disadvantages their unconnected competitors: an *"openness to neutralize privilege"* mentality and negative correlation between political connection and support for trade.[1] These two logics run in opposite directions. Which one dominates?

To answer this question, this paper proposes a theory that pivots on the selection effect of political connection and trade-related institutional development:

- Under autarky, benefits of political connection allow some less competitive PCEs to survive, resulting in a lower average competitiveness of PCEs than non-PCEs.

- When free trade comes, benefits of political connection will be neutralized for PCEs, unless sufficient trade-related institutions have developed to give PCEs an additional leg-up to evade impact of foreign competition.

[1] We use the term PCE versus non-PCE only for convenience of discussion, which by no means imply that political connection is conceptualized as a dichotomous trait. Accordingly, empirical part of the paper measures corporate political connection as a continuous variable.

Transition from economic autarky to openness and respective institutional development are characteristic of postcommunist societies, where, on the one hand, effective insulation of political pressure from losers of the reform is required until a constituency of winners grow strong enough to sustain the progress (Przeworski, 1991). On the other hand, if we recognize such structural reforms as being composed of multiple, incremental stages, the main obstacle to further liberalization may derive from short-term winners' incentive to "freeze the economy in a partial reform equilibrium that generates concentrated gains" for themselves at the expense of aggregate social welfare (Hellman, 1998).

To verify the theory proposed, the paper looks at Chinese entrepreneurs in the private sector that thrived after Deng Xiaoping's Southern Tour in 1992 and the subsequent consolidation of reformist power in Beijing. Nationally representative surveys were taken on these entrepreneurs in 2000 on what they thought about China's imminent WTO accession in 2001, along with many firm and individual level questions, which provided the window for us to empirically investigate the research question of the paper. Unlike surveys conducted for scholarly or commercial purposes, the goal of this survey is to collect information on the country's fast growing private sector for its project sponsor, the central government in Beijing. At the time of the survey, respondents' average experience in conducting business is only 5.9 years and the median management experience is only 5 years. In addition to being novice owners of young firms, these entrepreneurs operated under rapidly changing market and regulatory conditions. PCEs first benefited from political connection during China's gradual marketization from centrally-planned economy, but in a relatively autarkic environment. Then at the dawn of China's international openness via joining the WTO in 2001, they were less supportive to further Opening and Reform out of fear that their existing privilege may be neutralized.

This paper provides a firm-level analysis supporting the Hellman (1998) argument that political opposition to sustained economic reform derive from the winners, rather than

the losers, of partial reform in postcommunist societies. However, it differs from Hellman (1998) that China's trajectory did not follow Hellman's policy recommendation to expand political participation to include the losers in the policymaking process so that influence of reactionary short-term winners can be countered during further reforms. Instead, China's central government carried out the trade liberalization via a top down approach, regardless of oppositions from its burgeoning private economy, echoing Li (1998) that institutional and legal reform before economic reform explains the heterogeneity in postcommunist transitions around the world.

Empirical assessment of the role of political connection faces a key difficulty: the measurement of this abstract and unobservable concept. In the existing literature, scholars usually rely on one or two proxies from available data to capture aspects of political connection, but there is no industry standard on which proxies should be used. In addition to the limited construct validity of the proxy approach, it usually has to take available proxies as reliable indicators, thus ignoring the possibility of observees lying on sensitive information. Business-government connection carries such sensitivity, which may be especially problematic in societies with limited legalization. This paper does not make a priori assumption on the severity of this problem, but because political connection is central to all aspects of this paper, it is treated with particular care. We measure the unobservable political connection as a latent variable in an IRT setup so that all usable information are used systematically without picking one proxy over another. Different from a conventional IRT model, this method is an early attempt to model and estimate lying in survey response.

2 Determinants of Preference on International Trade

Distributional consequences of trade opening provide the economic foundation for our understanding of trade preference. Subsequent predictions assume that individuals un-

derstand the oftentimes complicated general equilibrium effects of liberalization, and form their policy preferences accordingly. Thus, trade attitudes should reflect characteristics of people's factor endowments in a Stolper-Samuelson world, or their industries of employment in a Ricardo-Viner world. Recent research compares the relative impact of factor type and industry affiliation (Scheve, 2011), and focuses on factors such as ideology, (Mansfield, 2009), gender (Burgoon and Hiscox, 2008), and education (Hainmueller and Hiscox, 2006) as sources of influence. One consensus reached is that individuals form their policy preferences with non-material considerations, partial information, and limited understanding of economic consequences of trade openness (Rho and Tomz, 2017).

Much of the policy relevance of individual trade preference relies on research subjects being voters, whose policy stances can be translated into policy changes through democratic institutions. However, this focus on voters has several limitations. Firstly, voters usually vote for candidates or parties, not specific policy proposals, unless in an *ad hoc* policy referendum setting. During election periods, trade policy may or may not be a focal point. Secondly, interest groups lobby, campaign, or even bribe policy makers for specific trade deals. These actions greatly influence policy outcomes. Thirdly, major trading nations like China and Vietnam are not democratic, and knowledge on individual trade preference generated from Western democracies may not be applied to economic policy making process in non-democratic countries.

Given these limitations in analyzing individual trade preference, another branch of the trade preference literature focusing on firm owners has emerged, from which we can better identify how preferences translate into concrete policy outcomes. Evidence from both democracies and non-democracies suggests that, like ordinary individuals, firm owners are influenced by ideational factors such as media and government propaganda (e.g. Kuno and Naoi 2012 on Japanese firm owners, Naoi 2017 on Chinese firm owners). Furthermore, since firm owners' policy preferences determine their firms' policy stances, this

literature makes use of the previously under-explored fact that even within competitive industries, only a handful of large and productive enterprises actually engage in international trade because of fixed costs required to enter foreign markets (Melitz, 2003). Given intra-industry differences of distributional consequences, policy preference and political mobilization should exhibit intra-industry divide as well, which has been examined with data from the US (e.g. Osgood et al. 2017, Kim et al. 2016).

Following this tradition of focusing on firms for its greater policy relevance, this paper asks whether PCEs are more or less likely to support trade liberalization, especially in transitional societies with limited legalization and institutionalization. There is very little discussion on this topic in the literature, but a lot has been written on a related question: the benefit of political connection for connected firms. For instance, connected entrepreneurs face less obstacles in financing (Li 2008 on Chinese firms, Malesky 2009 on Vietnamese firms, Polsiri and Jiraporn 2012 on Thai firms), information acquisition (Wu and Rui 2012 on Chinese firms), getting government import licenses (Mobarak 2006 on Indonesian firms), government bailout (Faccio 2006 on firms in 47 countries), government procurement (Cingano and Pinotti 2013 on Italian firms), boosted confidence in the stock market (Fisman 2001 on Indonesian firms), and tax benefits (Kim et al 2015 on American firms, Faccio 2010 on firms from 47 countries).

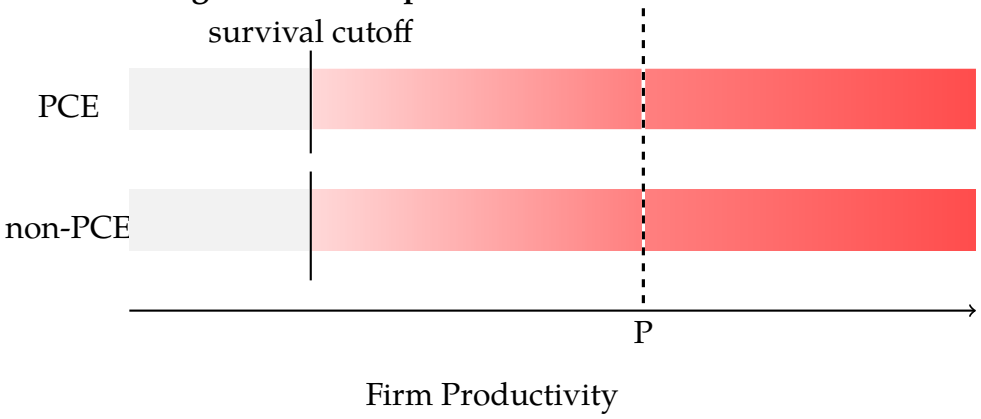
These patterns hold internationally, but the degree of corporate political connection, and its potential impact, vary across countries. Generally speaking, political connection is more common in places with a lower degree of legalization and a higher level of corruption, such as Russia, where connected firms represent 86.75% of the market capitalization, compared to 4.94% for the US according to calculation in Faccio (2006). As such, this paper chooses China as the case due to its economic significance salience of corporate political cronyism in the literature. As discussed previously, benefits of political connection alone do not tell us how PCEs view trade liberalization, as both *"connection to evade competition"*

mentality and *"openness to neutralize privilege"* mentality are reasonable reactions. The next section derives an answer to this question.

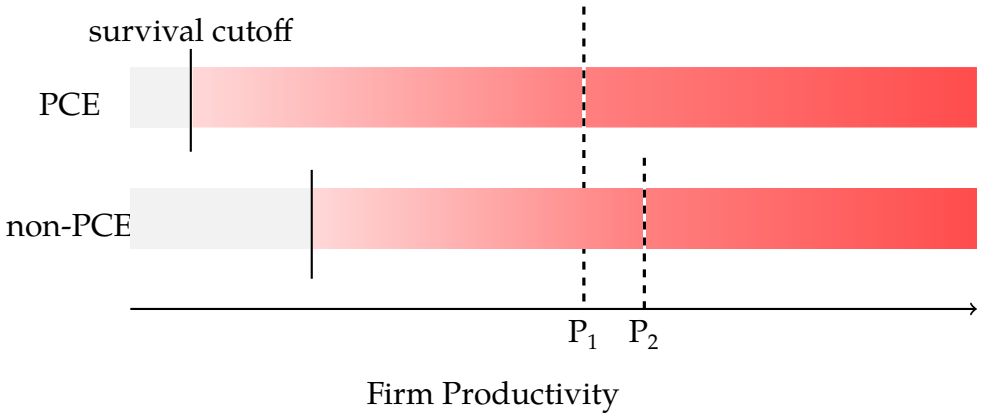
3 Selection Effect of Political Connection

Under autarky, benefits of political connection allow less competitive PCEs to survive. As shown in IV-Figure 1, we start from a hypothetical scenario with two random samples of firms with similar distributions of productivity, and thus the same level of survival cutoff. The only difference is that one group has political connection, while the other group does not. Before political connection takes effect, surviving firms from the two groups will have the same average productivity (P).

IV-Figure 1: Before political connection takes effect



IV-Figure 2: Selection effect of political connection



Now with the effect political connection in IV-Figure 2, some less productive PCEs that would otherwise drop out can now survive with benefits from their political resources. This essentially pushes the PCE survival cutoff leftward, resulting in a lower average productivity of PCEs (P_1) than non-PCEs (P_2). Because of this difference in average productivity, the more productive group, non-PCEs, will be more supportive of a transition from autarky to free trade, translating to a negative correlation between political connection and trade attitude, as in H1a:

***H1a**: under relative autarky, political connection is negatively associated with support for a transition to free trade.*

The gist of this explanation is that political connection itself does not causally make firms more or less productive. Instead, it influences policy stances of PCEs and non-PCEs through a selection effect: surviving non-PCEs are on average more productive because they have to make up for having no political resources. This disparity in productivity can hold as long as China stays in the condition of limited development of the private sector under relative autarky in the 1990s, an "equilibrium of partial reform" in Hellman (1998), where short term winners, PCEs, have bigger incentive to maintain the status quo.

In addition, this selection mechanism implies that the effect of political connection may not be observable when comparing average profitability or revenue between the two groups. PCEs may not have better performance indicators than non-PCEs, because their political benefits and productivity deficiency can cancel each other out. This is similar to Osgood (2017) on gender discrimination in 128 mainly developing countries that the discrimination does not causally make female firm owners more productive. But because of the additional cost incurred by the discrimination, surviving female-owned firms are more productive than male-owned firms, even though the two groups may appear equally profitable.

Other evidence supporting the selection rationale includes Malesky (2009) on Vietnamese firms. It finds firms with connections enjoy greater access to bank loans, but they are no more profitable than firms without the benefits of connections. For readers with limited exposure to postcommunist societies in Eastern Europe and East Asia, banking system is usually government owned and centrally controlled. Arm's-length transaction and legalization are limited, so bank loans reward not only performance but also connection.[2] Malesky (2009) does not focus on international trade, but the theory proposed in this paper would predict that, similar to China in the 1990s, connected firms being less supportive to a transition from relative autarky to relative openness than unconnected firms in Vietnam in the 2000s.

Another corollary of the theory proposed is that, once international openness arrives, the least productive PCEs will have a difficult time surviving the new environment with increased foreign competition. This is consistent with Melitz (2003) on the productivity gain from trade, and also consistent with Hellman (1998) on the distortions from partial reform being corrected by further reform. An exception to this mechanism is that state favoritism

[2] For this reason, being able to obtain loans from the bank is used as one of many indicators of corporate political connection in the empirical part of the paper.

might continue to shield PCEs from foreign competition under free trade, which corresponds to the *connection to evade competition* mentality mentioned previously, and H1b:

***H1b**: under relative autarky, political connection is positively associated with support for a transition to free trade.*

In this scenario, political connection does not only help PCEs under autarky, but also give them an additional leg up to avoid the new challenges. This paper argues that this is unlikely to be the case for Chinese PCEs in the private economy, because sufficient trade-supporting institutions, a necessary but not sufficient condition for shielding PCEs from international trade competition, were not in place by China's trade liberalization. To elaborate on this point, the next section explains history of China's partial reforms and institutional development.

4 Trade Institutional Development and Partial Reform

China began its post-communist economic reform in 1979, when privately-owned enterprises were first allowed and started to flourish.[3] During its rapid social transformation and economic growth, getting into the WTO in 2001 is arguably the most significant trade liberalization effort. Under the multilateral WTO framework, China later proceeded to deeper integration through bilateral and regional agreements. As described by former Chinese president Hu Jintao, "China's accession to the WTO is a milestone in China's reform and opening up, bring us into a new era of further open up." What's important for

[3] State-owned enterprises (SOE) play a big role in China's industrialization and development, and there has been extensive discussion on their low efficiency. But managers of state-owned firms are not firm owners, since by definition these enterprises belong to the state and SOE managers are public servants and government employees. This paper only investigates privately-owned firms, and their owners, which accounts for the majority of China's employment and industrial output since 2004 (Li, 2008).

this paper is that China was in a relatively autarkic situation beforehand, and joining the WTO in 2001 greatly accelerated China's economic opening and establishment of new institutions to improve coordination between the government and firms to cope with the new environment.

The guiding principle for such business-government coordination is called the "four body interaction mechanism (FBIM)", and it worked as a direct response to post-accession challenges. The four bodies include China's Ministry of Commerce, local governments, industry associations, and individual firms. Initially, the pressing need for FBIM was to have the four bodies to work closely to help Chinese firms dealing with WTO litigations and penetrating foreign markets. But gradually, under the same principle, the institutional agenda became more and more comprehensive, covering policy areas such as new forms of non-tariff trade barriers, trade-related intellectual property issues, and negotiations of China's recent free trade agreements (FTAs). In "2017 National Conference on Trade Assistance Work" in Beijing, the head of China's MOFCOM, Ji Zhang, praised the functioning of the "four body mechanism" in advancing Chinese corporate interests in the previous fifteen years, and further laid out a plan for the Ministry to deepen its work on trade assistance and forging better external environment for China's international trade (MOFCOM of PRC 2017).

Based on the author's interview of MOFCOM officials [4], China's contemporary trade supporting apparatus is becoming more and more like the American one in several aspects. Most notably, today's trade policy making and implementation involves extensive consultation of individual firms, instead of Beijing making all the decisions without knowledge of needs and concerns from below. One example is the Ministry's regular consultative sessions with firms and industry associations on trade and investment issues

[4] Series of interviews of MOFCOM officials in the Chinese Embassy in Washington DC in June 2017, and in the MOFCOM in Beijing in July 2017.

through Mixed Economy and Trade Committees. [5] In contrast, the situation was very different pre-2001, when there were no such institutions and joining the WTO was largely a top-down liberalization initiated by the central government.

The above discussion shows that Chinese state's trade-related institutions were not developed in the 1990s. As such, during the run-up to the WTO, it is unlikely that PCEs, with lower average productivity than non-PCEs, could expect trade-related institutions to shield them from foreign competition under free trade. What was the situation like during China's Opening and Reform but before the WTO accession?

Since the beginning of China's Opening and Reform in 1979, the fast growing private sector endured both political and social discrimination. Privately-owned firms were considered a wicked form of ownership due to idealogical prejudices and polarization during post-communist transformation. Entrepreneurs in China often fell victim to periodic political movements, such as campaigns against "capitalist spiritual pollution" in 1983 and 1984, and against capitalist liberalization in 1987 (Li 2008). Commercial and property laws were either non-existent or unenforceable (McMillan 1995), and the antagonism towards the private sector remained strong until the late 1990s (Li 2008). China's legislature body, the National People's Congress, did not approve the constitutional amendment to recognize and protect private property rights until 2004, three years after joining the WTO in 2001.

Given this tough environment for Chinese entrepreneurs, political resources became a desirable asset for business success. On the one hand, some previous government officials started their business, and greatly benefited from their connections from the old days. On the other hand, some private business owners actively invested in connections with the political apparatus to facilitate their business (Dickson 2008). These movements from both

[5] See a list of Mixed Economy and Trade Committees consultative sessions, each with time, location, specific issue areas, and invitation to entrepreneurs in the MOFCOM official website (in Chinese): http://www.mofcom.gov.cn/article/au/aa/?

directions started when the country was still in a relatively autarkic situation, well before China's accession to the WTO. One example of such political connection is membership in the Chinese Communist Party (CCP). As shown by Li (2008), CCP membership brought entrepreneurs better access to key resources that were controlled by the state, such as business operation licenses and eligibility for favorable but discretionary tax benefits. In addition, CCP membership is often a ticket for political status of much higher value, such as membership in the People's Congress at local or national levels (Li 2008).

To summarize, China's developmental trajectory exhibits two characteristics:

- Under harsh political and social environment, political resources were a key asset for Chinese entrepreneurs. This is consistent with research on the benefits of political connection in both developing and developed countries mentioned in Section 1.

- Business-political cronyism emerged since the infancy of China's private sector, but trade openness and trade institutions came much later.

- Institutionalization of trade assistance in China was largely a reaction to new challenges after joining the global trade club in 2001.

As such, we conclude that both the selection theory and the China case support H1a. Before delving into the empirical analysis, we first discuss a few obvious competing explanations.

5 Competing Explanations

5.1 Capable Entrepreneurs

A potential confounder of the above argument on political connection is that capable entrepreneurs are more supportive of trade liberalization and they are better at fostering political connections at the same time. To be clear, capability of entrepreneurs does *not* equal

to their firms' productivity, but it can improve efficiency in 1) utilizing trade liberalization and 2) befriending the policy making circle at the same time, yielding an observationally equivalent correlation as the *"connection to evade competition"* argument in ***H1b***.

Personal capability can be accumulated from both formal schooling and hands-on experience. As discussed in Hainmueller and Hiscox (2006), education contributes to positive attitude toward international trade by equipping people with the knowledge to appreciate the overall welfare effect of trade openness, and help them to see new opportunities provided by liberalization. The same logic can be applied to Chinese entrepreneurs. In addition, unlike ordinary people who are mostly on the receiving end of distributional consequences of trade liberalization as consumers and employees, business owners can actively engage in globalization through interaction with foreign economies.

During the early years of China's opening and reform, international joint ventures was the primary form of international corporation encouraged by the Chinese government In particular, the 1979 Law on Sino-Foreign Equity Joint Ventures[6] provides the initial regulations, and the law does not exclude privately-owned Chinese firms from joint ventures with foriegn firms in China. It encouraged joint operation and mutual ownership, and discouraged direct import of foreign brands and foreign-owned subsidiaries in China. This form of international cooperation maximized technological transfer to domestic producers and minimized foreign competition that could crowd out local industries in their infant stage. For this subset of Chinese entrepreneurs with experience in international joint ventures, their knowledge of globalization was greater than the national average. With such knowledge and experience, for instance, they can better utilize trade-related policies from the government and identify future business opportunities should Beijing allow greater exposure to the world market. Furthermore, because of this hands-on experience, globalization is no longer an abstract concept, and business owners should be less influenced

[6] http://english.mofcom.gov.cn/article/lawsdata/chineselaw/200301/20030100062855.shtml.

by either globalist or anti-globalist discourses from media or schools. This confounding argument on entrepreneur capability generates two predictions:

***H2a**: entrepreneur's educational level is positively associated with support for free trade.*
***H2b**: entrepreneur's experience in international joint ventures is positively associated with support for free trade.*

5.2 Strategic Industries

Another potential confounder of the political connection argument is that entrepreneurs in strategic industries tend to receive more attention from the state. Strategic industries are those identified by the Chinese government to have a significant impact on national security and social stability. Identifying and protecting strategic industries is not unique to China, nor is it exclusive for developing countries, though it is commonly overlapped with industrial policies of developmental state to accelerate industrialization and modernization. In addition, industry strategic importance is not defined by the industries' economic value, at least not for the short run. They may or may not be the country's most profitable and productive industries. In the case of China, for instance, a lot of strategic industries fall into the category of capital intensive and technology intensive heavy industries, instead of labor intensive light industries, where the country's comparative advantage was the greatest at the time.

Industries with high strategic importance for China include telecommunications, banking, agriculture, and so on. Industries with low strategic importance include textiles and retail, where foreign competition does not pose a threat to social stability and national security. In its WTO entry deal, similar to many other developing countries, China was able to retain protection of strategic industries for longer time periods than industries of lower strategic importance. Hsueh (2011) provides a good discussion on China's regulation of

textiles and telecommunications, for example. Being a non-strategic industry, China's textile industry experienced a dismantling of central control and government protection in the WTO era. For telecommunications, however, in the WTO era China's central control consolidated and state protection increased against foreign infiltration due to its significance for national security and social stability.

How could the industry strategic importance rationale affect the political connection affecting trade preference argument? Being in strategic industries makes it easier for entrepreneurs to have close relationship with the government, for reasons mentioned in the previous paragraph. At the same time, their strategic importance warrants more protections against foreign competition, which makes them more confident about liberalization. As such, a potential correlation between political connection and liberal trade view, as in **H1b**, may be spurious when both are products of industry strategic importance, an industry-level attribute. The discussion on industry strategic importance predicts that:

H3*: industry strategic importance is positively associated with support for free trade.*

5.3 A Causal Interpretation?

As discussed in Section 2, government favoritism stemming from political connection buffers competition from competitors, so that PCEs can survive among otherwise more competitive non-PCEs. However, with increasing foreign competition and international opportunity come, if without enough trade support (i.e. the "additional leg up"), the PCEs with lower productivity will have a difficult time surviving the new environment. But instead of this selection effect story, is it possible that political background gained through, say, previous work experience in the government causally make a PCE more prone to non-market ideas, such as government management of economy and less trade openness? Alternatively, for example, if a PCE worked for a trade-promoting office in the govern-

ment, such as US Trade Representative (USTR), Japan's Ministry of International Trade and Industry (MITI), or China's Department of International Trade and Economic Affairs under MOFCOM, such background is likely to foster pro-trade ideas.

A causal story can run in both directions, making opposing predictions on how political connection (e.g. through previous work experience in government) affect support for free trade. Which one is more likely to be the case in China? As mentioned in Section 3, the Chinese government had been the major force promoting the WTO entry deal. Trade policy making back then was very different from the comprehensive institutional arrangement in contemporary China that allows for nuanced policy consultation and coordination with the private sector. This is by no means to say that now Chinese firms can influence the policy circle like American firms who can hire lobbyists, sponsor political candidates, make congressional testimonies, and so on, but the contemporary channels for Chinese entrepreneurs to have their voice heard on the country's trade policy were not in place in the 1980s and 1990s. Even if the entrepreneurs were overwhelmingly pro-trade, they could not have made a substantial impact on China getting into the WTO.

In that sense, getting the WTO membership was largely a top-down liberalization, where the Chinese state had been the major advocate since 1982, 19 years before accession in 2001. In 1982, the People's Republic of China (PRC) became an "observer" in GATT, and the State Council of PRC made "regaining" [7] GATT status a national policy goal. During the two decades to come, the Chinese government sent delegates for numerous rounds of bilateral (especially with the US) and multilateral negotiations, making it one of the most prolonged and difficult entry negotiation in the GATT/WTO history [8]. To conclude, the

[7] Republic of China (ROC) was a signatory nation of GATT in 1947, as such in 1982 PRC applied to "regain" China's place in GATT. ROC government that fled to Taiwan after the Chinese Civil War lost its membership in GATT in 1971, and Richard Nixon visited red China in 1972 that started a de facto Sino-US alliance against the Soviet threat.

[8] See a list of major events during the prolonged negotiation period from MOFCOM official website:http://cwto.mofcom.gov.cn/article/c/201001/20100106765404.shtml

Chinese government has been pro-WTO since the early 1980s; then, entrepreneurs with connections in the government, maybe through previous work experience, were likely to be influenced by such pro-WTO idea. If one believes such influence being significant for the Chinese case, political connection and support for trade should be positively correlated, making it observationally equivalent with **H1b**.

In other words, a positive correlation as in **H1b** can be a result of the selection effect proposed in Section 2, or the causal effect described here. Without making a priori assumption on the magnitude of this potential casual effect, later quantitative analysis summarized in **IV-Table 2** actually shows a negative correlation for the political connection variable, contradicting the positive correlation implied by the causal hypothesis.

6 Data and Empirical Design

This paper utilizes survey data on privately-owned business owners in 2000 (n=3073) to test the theory proposed. This nationally representative survey comes from work of an expert team summoned by the United Front Work Department of the Chinese Communist Party Central Committee, China's National Association of Industry and Commerce, and Private Sector Research Association of China. Unlike surveys conducted for scholarly or commercial purposes, the goal of this investigation is to collect information on the country's fast growing private sector for the central government in Beijing.

Since it is directly administered by the Chinese Communist Party Central Committee, this survey project is well funded and the data collection follows standard survey methodology for an accurate representation of China's private sector at the time. For instance, once a firm is selected into the sample through stratified randomization, survey takers will meet with the firm owner in person to conduct the survey. If the firm owner does not show up, survey takers are required to visit again, and facilitate the survey taking by

clarifying survey questions on site, so that missing data is not prevalent.

A broad range of questions are asked about the firm owners' personal backgrounds, daily operation of their firms, and their reactions to various economic policies at the time. There is one question on China joining the WTO: *"After China's accession to the WTO, what is your anticipated impact on your firm?"*. This question is used to construct the dependent variable, and covariates are extracted from from other questions. For firm owners who checked *"Amid competition, my firm will do better"* as their response, we code them having a clear supportive view of China joining the WTO. Under this construction, 45% entrepreneurs expressed support for WTO.

Social desirability bias is a common problem for survey research. As discussed previously, the Chinese government had been the major force behind China's prolonged accession process for twenty years. It utilized state control of media to promote the idea of getting into the WTO. In the 1990s and 2000s, getting the WTO membership was widely considered a success for China's economic modernization, as well as a symbol of China being accepted by the global community, and maybe even a source of national pride. For these reasons, we think the framing of this question on DV minimizes potential social desirability bias. Instead of asking for an overall impression of the imminent policy change, it makes sure that entrepreneurs are taking policy stances based on anticipated consequences of increased international competition on their own business.

IV-Table 1 Descriptive Statistics of Two Cross-Sectional Surveys

	Policy Preference in 2000 (main analysis)	Retrospective Evaluation in 2002
No. Respondents	3073	3258
Mean revenue in 2001 USD	$2193,470	$3438,935
Mean employment	166	153

IV-Table 1 Descriptive Statistics of Two Cross-Sectional Surveys (continued)

Sectors & industries in the questionnaire[9]		
Transportation	2.08%	2.39%
Agriculture	4.29%	5.34%
Manufacturing	36.28%	36.40%
Health and Sports	1.04%	1.22%
Retail and Restaurants	18.71%	20.31%
Geological and Water Resources	0.03%	0.09%
Construction	5.79%	5.61%
Real Estate	2.92%	3.62%
Education and Culture	0.91%	1.07%
Electricity and Gas	1.00%	0.70%
Social Services	5.62%	5.34%
Science and Technology	2.34%	1.96%
Mining	1.10%	1.22%
Finance and Insurance	0.16%	0.24%
Construction	5.79%	5.61%
Other	8.72%	9.39%
No response	8.94%	5.03%

Interestingly, after China's accession, the same expert team conducted another nationally representative survey in 2002, and asked for respondents' *retrospective evaluation* on

[9] Researchers familiar with standard classification systems such as SIC and NAICS will find this industry classification bizarre in several places. For instance, all manufacturing industries are combined in one sector, though it is likely mainly light industries because this survey does not include state-owned enterprises. This survey was conducted almost twenty years for Beijing to get a sense of the booming private economy, so the design of the questions should reflect the convention of Chinese policy makers at the time.

the 2001 policy change, and about 35% reported a positive view. This 2002 survey is similar to the 2000 survey in most dimensions in IV-Table 1. But because pre-WTO anticipation and post-WTO evaluation are different questions in nature, and these two surveys are two separate cross-sectionals, we do not treat differences between the two as temporal changes of the same respondents. However, since other questions and variables are similarly constructed in the survey, we will also run the same statistical model with 2002 data, and provide an additional discussion after the main analysis.

With the binary DV, where 1 corresponds to supportive view, and 0 otherwise, the empirical model is a logistic regression below. Independent variables are 1) political connection, our main variable of interest; 2)confounding variables from competing explanations, including education, experience in international joint ventures, and industry strategic importance; and 3)other covariates at industry, firm, and individual levels.

$$logit(E[Y]) = \beta_0 + \beta_1 * \text{Political Connection} + \beta_2 * \textbf{Confounders} + \beta_3 * \textbf{Other Covariates} \quad (1)$$

The model above assumes independence of errors, and **VI-Appendix 2** performs a geostatistical check of potential spatial dependence. All variables used are from questions in the survey: some are from straightforward questions while others are constructed with information from multiple questions. Below is a summary of all variables that appear in the empirical analysis. The construction of all variables are straightforward, except for political connection, which will be discussed in detail in the following section.

IV-Table 2: Construction of Variables Used in Regressions

Variable Name	Measuring	Construction
Political Connection	Political connection as a latent trait	Estimated from J=6 questions related to political connection
Industry strategic importance	Industry strategic importance	Coded with information from China's WTO entry document and China's industry strategic importance classification system from Hsueh (2011). Firms in sample are either in strategic, mixed, or non-strategic industries.
Owner Education Background	Entrepreneur's education	Illiterate, primary school, middle school, high school, college, or graduate school
International Business Experience	Entrepreneur's experience	Respondent having experience in international joint venture
Manufacturing Sector	Industry competitiveness	Respondent's firm's primary product being manufacturing goods, assuming China's comparative advantage is mainly in manufacturing sector at the time.
Labor Intensity	Industry competitiveness	Respondents' firm's annual wage cost divided up by annual total cost of production one year before the surveys, assuming China's comparative advantage is mainly in labor intensive industries at the time.
R&D Spending	Industry competitiveness	Respondents' firm's spending in R&D one year before the surveys, assuming China's comparative advantage is not in technology intensive industries at the time.
Annual Sales	Firm size	Respondents' firm's annual sales one year before the surveys
Total Employment	Firm size	Respondents' firm's employment one year before the surveys
Owner Gender	Gender	Respondents' gender

7 Measuring Political Connection

7.1 Proxy vs Latent Variable

A major difficulty for empirical assessment of the previous discussion is the conceptualization and measurement of political connection, given its abstract and sensitive nature. Existing literature relies on using proxies, but there is no consensus on which proxies are the most appropriate.

Ang and Jia (2014) utilizes the same survey data of Chinese private firm owners, and operationalizes political connection as being 1) previous officials, at or above the *Chu* rank; 2) delegates in National People's Congress (NPC) or People's Political Consultative Conference (PCC). However, other research, such as Wu (2012), may only use the previous official criterion. Being a official above the *Chu* rank or having membership in NPC/PCC are rare, using one or both of them as proxy limits having political connection to a very small group of political elites. Under this treatment, all entrepreneurs with neither previous working experience as officials nor NPC/PCC membership are treated as having zero political connection. A sub-*chu* rank Chinese Communist Party (CCP) member can also have political resources that are beneficial for business, for instance. Instead of using highly exclusive criteria, Li et al (2008) uses CCP membership as the proxy for an entrepreneur's political connection, but like the other side of the same coin, this highly inclusive measurement treats all CCP member entrepreneurs as having the same level of political connection, when there are 70 million CCP members in the country.

Relying on individual proxies always has to impose an unjustified oversimplification of reality, and when political connection is of particular importance to the research question asked, it deserves a more careful treatment. This paper conceptualizes political connection as an unobservable latent variable, and utilizes all manifestations of political connections that are available from the data. We construct a measure of political connection employing the same set of six questions in the year 2000 survey, each of which *may reveal some* information on corporate political resources:

1. Previous working experience as an official (same as Ang and Jia 2014)
2. Being a delegate in NPC and/or PCC (same as Ang and Jia 2014)
3. Being a member of CCP, Youth League, or democratic parties. (similar to Wu and Chen 2012)

4. Having secured loans from the banking system for corporate operation.
5. Having resolved business disputes through personal connections with local officials.
6. Having contributed to philanthropy to return favor to local government.

Researchers familiar with the political connection literature will notice that this list contains not only origins of political connection as in 1, 2, and 3, but also effects of political connection as in 4 (Malesky, 2009) and 5 (Ang and Jia, 2014), and even efforts to foster political connection as in 6 (Dickson, 2008). In this model, we are conceptualizing all these information as *indicators* of political connection, regardless of the specific mechanisms. It does assume monotonic relationship between political connection and each indicator, and we think it is a reasonable assumption to make for this case.

With this construction, we conceptualize political connection as a latent variable that is fundamentally unobservable. Political connection is the underlying bond that brings more state support to a PCE than a non-PCEs, who are similar in all other dimensions. As such, CCP membership, as in 3, is not political connection itself, it is just a membership of the governing party. But this membership captures a piece of the latent trait to be estimated so it is included. Similarly, the last three questions are factual questions on firm owners' past experience in financing, dispute resolution, and philanthropy, none of which can be seen as political connection itself. They are also included because these variables are indicators of having political connection.

In addition, this construction does not assume equal importance of the six questions, nor is it a weighted average of six individual proxies. The latent variable approach offers a more nuanced treatment where both difficulty and discrimination parameters for each question are incorporated and estimated, something unfeasible in the weighted average of multiple proxies. To give an example of difficulty and discrimination, being NPC/PCC delegates would be high difficulty and also high discrimination in survey data. It is high

difficulty because it is such an elitist political caste that most entrepreneurs would be excluded from this small elitist group. It is high discrimination because, unlike, say having resolved legal disputes through personal back-doors, NPC/PCC membership is public information, so who is in can be reliably separated from who is out in the data.

This approach can be represented in the item response model setup as:

$$
\begin{aligned}
Y_{i1} &\sim f_1(\theta_i) \\
Y_{i2} &\sim f_2(\theta_i) \\
Y_{i3} &\sim f_3(\theta_i) \\
Y_{i4} &\sim f_4(\theta_i) \\
Y_{i5} &\sim f_5(\theta_i) \\
Y_{i6} &\sim f_6(\theta_i)
\end{aligned}
\qquad (2)
$$

where Yi's are the six observed variables from the survey data, and θi's are the latent variable for each respondent, political connection, and i = 1, . . . , 3073 for the 2000 survey, and i = 1, . . . , 3258 for the 2002 survey. For each response Yj, where j = 1, . . . , 6, I reasonably assume latent monotonicity so that the response function, f, is strictly increasing on θ (i.e. respondents with previous working experience as officials have, on average, more political connection than respondents without such background).

The above standard setup for latent variable estimation has not considered another problem with measuring political connection. Most research in the literature, whether using proxies or not, assumes information collected, Y, to be an accurate representation of the reality, Y*, so that:

$$Y_{ij}^{*} \overset{assumed}{=} Y_{ij} \sim f_j(\theta_i) \tag{2.1}$$

For the data used in this paper, this assumption ignores the possibility that respondents may be hiding sensitive connection information in the survey. How do we know survey respondents are telling the truth? This can be particularly problematic since the survey is conducted by the Chinese Communist Party Central Committee. It is reasonable to suspect that respondents may not want all information on their political connection to be revealed and recorded. This potential may or may not jeopardize the final findings of the paper, but it is something worth considering for this research question. To the best of my knowledge, this lying issue in survey data has not been addressed in a systematic way in the literature.

7.2 Parametric Bayesian Approach to Latent Variable Estimation

We use parametric Bayesian approach to estimate the latent variable θ in (2), while taking care of the potential risk of respondents lying. In fact, many problems in social sciences involve making inferences about attributes that are not observable, for instance, ideological dispositions of US legislator roll calls (Erikson 1990, and Clinton and Rivers 2004), judges (Martin 2007), and political parties (Huber and Inglehart 1995). Aside from ideology, concepts such as levels of democracy across countries (Jaggers and Gurr 1996), distance in non-physical space between actors in social network (Hoff and Handcock 2002), and human rights (Fariss 2014 and Fariss forthcoming) are also treated as latent variables in the literature .

When dealing with latent variables, the Bayesian approach has a straightforward in-

terpretation: updating knowledge of unobserved parameters with observed data. In the estimation of political connection, as shown in (2), to "learn" about the latent trait θ with available data Y, it is necessary to assume that Y is generated by some model $\mathscr{F}$, with parameters Θ, which includes but not necessarily limited to the θ in (2), so that we can utilize $p(Y_n|\mathscr{F},\Theta)$ to learn about posterior density of interest, $p(\Theta|\mathscr{F},Y)$, through Bayes' Theorem. This paper follows this tradition for latent variable estimation and start with the standard item response model where $\mathscr{F}$ is specified as in (3) for binary response [10] :

$$P(Y_{ij}=1|\theta_i,a_j,b_j)=\frac{e^{a_i+b_i*\theta_i}}{1+e^{a_j+b_j*\theta_i}}=inv.logit(a_i+b_i*\theta_i) \tag{3}$$

$$\lim_{\theta_i\to-\infty} P(Y_{ij}=1|\theta_i,a_j,b_j)=0 \tag{4}$$

$$\lim_{\theta_i\to\infty} P(Y_{ij}=1|\theta_i,a_j,b_j)=1 \tag{5}$$

This model is widely used in multiple disciplines for data with discrete response. For instance, testing intelligence level with multiple choice questions is a important application. In answering multiple choice questions, P(Y=1) is the probability of $respondent_i$ getting the correct answer in a 2-option multiple choice question, and it is a function of $respondent_i$'s knowledge level θ_i, and question difficulty and discrimination a_j and b_j. The goal of the latent variable approach is to estimate each $respondent_i$'s knowledge θ_i, which is not directly observable. For answering questions on political connection as in this paper, P(Y=1) is the probability of $respondent_i$ revealing political information (e.g. Y

[10] For the survey data used in this paper, the model should be mixed binaries and categoricals, but the single binary response illustration can be extended for more complex cases. For instance, a three-level categorical variable can be represented as two binary variables.

= 1 for $respondent_i$ admitting being a CCP member, and 0 otherwise), and the ultimate goal is to estimate each $respondent_i$'s latent political connection level θ_i.

To answer multiple choice questions, with minimum knowledge θ_i, $respondent_i$ will never get the question right, as in (4). With maximum knowledge θ_i, $respondent_i$ will always get the question right, as in (5). For answering question on political connection, respondents with the least political connection will reveal no political connection, as in (4), and vice versa, as in (5).

We incorporate the lying problem in this basic setting parametrically. Of course, it is not always necessary to work with explicit functional forms, as non-parametric approach can provide equally feasible ways for inference. For instance, following Matzkin (2007), one can conceptualize the lying issue highlighted in this paper as bias associated with response errors. In other words, response Y when asked about the value of Y* may be related to both observable and unobservable characteristics other than Y* that are specific to respondents and surveys. The exact relationship between Y and its determinants are not pre-specified, but these unknown functions may be identified and estimated under certain assumptions (see details in Matzkin 2007). As will be shown in the next section, however, the problem dealt with in this paper does not warrant the additional complexity brought by the non-parametric approach. This is mainly because of two reasons. First, the parametric construction of lying parameters naturally builds on the existing baseline model (3) in the sense that the relationship between these unobservables and response Y is relatively straightforward. Second, the parametrization to follow directly improves our understanding of existing parameters in the baseline model.

7.3 Individual-Specific and Question-Specific Lying Parameters

To solve this problem of intentional lying on sensitive information in a parametric fashion, we construct two "lying parameters" to correct for potential bias that occurs when

this issue is ignored or assumed away. To a certain extent, this resembles the treatment of respondents "guessing" in discrete choice tests (e.g. Wise and DeMars 2006, Thorpe and Favia 2012) in psychometrics literature, where additional parameters are incorporated in the model for the extra layer of complexity. However, aside from the general idea of adding parameters, these two methods are designed to solve different problems, thus the functional forms will be different as well.

Conceptually, guessing and lying operate in different logics. First, guessing parameter accounts for the fact that, regardless of knowledge level, there is always a possibility of the respondent choosing the right or wrong answer. But in the case of lying, respondents tend to conceal sensitive information at different degrees for each question. It is possible for respondents to reveal zero political connection information when there is maximum lying, but it is impossible to reveal more political connection information than the true level. In other words, guessing can go both ways, but lying in this case is unidirectional.

Second, in surveying political connection, some questions are more difficult to lie about. For instance, it is hard to hide the fact that, say, you were a delegate of National People's Congress (NPC), a highly selective and conspicuous political status. In fact, NPC delegate status is supposed to be known to the public because delegates should pass voice from local constituents to Beijing in NPC meetings. As such, in the modeling procedure, we allow this flexibility at the response level for each j. There is no equivalent concept in guessing in multiple choice tests. If anything, the limits of random guessing are determined by the number of options, such as a 1/4 chance of picking the correct one from A, B, C, D, not by the content of questions.

For the characteristics of lying discussed above, a person specific one c_i, and a question specific one d_j, are incorporated into (3) in the functional form:

$$P(Y_{ij} = 1|\theta_i, a_j, b_j, c_i, d_j) = (1 - c_i) * (1 - d_j) * inv.logit(a_j + b_j * \theta_i) \quad (6)$$

$$where \;\; c_i \in [0, 1], \;\; d_j \in [0, 1],$$

c_i is the respondent-level variable capturing each respondent's propensity to lie, and d_j is the response-level variable capturing each response' propensity to be lied on. When there is no lying for $respondent_i$ on $response_j$ so that $c_i = 0$ and $d_j = 0$, the model reduces to the baseline form as in (3). For both c_i and d_j, larger values correspond to bigger lying effects.

7.4 Parameter Identification and Dimension Reduction

Identification of the lying parameters can be difficult. Obviously, there can be infinite number of combinations of parameter values to provide the same fit to the data, so these parameters are not identified without additional information as constraints. One common solution to this identification problem is to pivot on exogenous information, and in **VI-Appendix 1**, we discuss in detail how we follow this tradition by using available data from other questions in the same survey. However, even with this operation, as long as we do not impose fixed c values for all i's, the inclusion of c_i brings a proliferation of parameters. As discussed in detail in Diaconis and Freedman (1986), in high-dimensional inference problem, data will not always swamp the prior, or even when it occurs, it may occur very slowly. we have run through multiple simulations and findings confirm this problem. There are three steps in these simulations. First, Y_{ij}'s on the left hand side of (6) are calculated with known but random parameter values on the rights hand side of (6), assuming this is the true data generating process $\mathscr{F}$. Second, calculated Y_{ij}'s are feed to

the latent variable model to estimate parameter values. Third, estimated parameter values from step 2 are compared with initial known parameter values in step 1. If initial known parameter values are recovered in this simulation exercise, under reasonable range of error given several probabilistic procedures in both the data generating process and Monte Carlo Markov Chain estimate of posterior densities, we can say that, as least in theory, the latent variable model used can correctly identify unknown parameters with real data.

More results from simulations are presented in **VI-Appendix 3**. One lesson learned from multiple simulations is that identification is feasible for models with no consideration of lying at all, as in (3), which is not surprising, and also for models that only consider the question-specific lying parameter d_j, as in

$$P(Y_{ij} = 1|\theta_i, a_j, b_j, c_i, d_j) = (1 - d_j) * inv.logit(a_j + b_j * \theta_i)\,, \qquad (7)$$

But, once I bring in another N $\approx$ 3000 c_i's, identification becomes very unreliable. In this scenario, one choosing to ignore c_i will have to acknowledge that variation among c_i's is absorbed into θ_i's. This simplification can be costly since c_i captures an individual respondent's likelihood to lie on his or her own political connection information, so by definition it is closely related to θ_i. People with higher levels of political connection naturally have bigger incentive to hide their political connection information, while people with little political resources have nothing to hide in the first place. Allowing variations in c_i to be absorbed in θ_i essentially assumes away the lying problem at the individual level.

To compromise the potential bias problem and identification problem, some dimension deduction is required. In the setup of this survey, there are two sets of determinants of c_i,

one that is innate to individuals, making some people tend to lie more often than others on any questions, another that varies with θ_i levels. I use the information on underreporting of sales to capture the first type (more details on this construction in **VI-Appendix 1**), and estimate:

$$P(Y_{ij} = 1|\theta_i, a_j, b_j, c_i, d_j) = (1 - c_i) * (1 - d_j) * inv.logit(a_j + b_j * \theta_i)\,, \tag{8}$$

$$where \quad c_i = inv.logit(\gamma + \sigma * UnderReport_i + \omega * \theta_i),$$

(8) incorporates the problem that respondent$_i$'s θ_i level is influenced by c_i level. The other term, σ, captures the other portion of individual propensity to lie that is unrelated to θ_i, identified with information on underreporting of sales figure. For the identification purpose, (8) reduces N $\approx$ 3000 additional parameters with the inclusion of c_i to only 3, which are γ, σ, and ω. This part makes the idea of adding lying parameters feasible for identification. Thus, (8) is the methodological innovation of this paper on top of existing use of IRT models in the social science literature.

In the regression analysis to follow, I use estimations of political connection from all methods mentioned above, so that they serve as robustness checks to each other. In **VI-Appendix 4**, convergence diagnostics of different models are presented.

8 Results and Implications

We have spent a lot of effort using all available information for a careful measurement of political connection, the central concept of this paper. With this measurement, the rest

IV-Table 3: Main Results
DV: Support for WTO and International Competition in 2000

	2000 no lying (1)	2000 with d (2)	2000 with c (3)
Political Connection	−0.276***	−0.270***	−0.294***
	(0.082)	(0.093)	(0.081)
Industry strategic importance	0.232***	0.242***	0.230***
	(0.079)	(0.079)	(0.079)
Owner Education	0.116**	0.119**	0.114**
	(0.052)	(0.052)	(0.052)
International Business Experience	0.275*	0.280*	0.275*
	(0.148)	(0.148)	(0.148)
Manufacturing Sector	0.168	0.173	0.166
	(0.103)	(0.103)	(0.104)
Labor Intensity	−0.408	−0.427	−0.408
	(0.264)	(0.264)	(0.265)
Annual Sales	−4.632	−4.545	−4.618
	(5.477)	(5.475)	(5.467)
Total Employment	0.0001	0.0001	0.0001
	(0.0001)	(0.0001)	(0.0001)
R&D Spending	−1.712	−1.637	−1.752
	(3.501)	(3.491)	(0.0001)
Owner Gender	−0.080	−0.097	−0.075
	(0.160)	(0.160)	(0.160)
Constant	−0.867***	−0.877***	−0.865***
	(0.286)	(0.286)	(0.286)

Note: *p<0.1; **p<0.05; ***p<0.01

of empirical analysis just follows equation (1), with results in IV-Table 3. In model (1), (2), (3), connection has consistent negative correlation with the DV, confirming **H1a** that *"openness to neutralize privilege"* mentality dominated because of the selection effect of political connection on average firm productivity. Model (2) incorporates a response-specific lying parameter d_j, and model (3) incorporates a respondent-specific lying-parameter c_i, where c_i is estimated from equation (8), utilizing information on under report of sales figures as an indicator of individual propensity to lie that is not related to θ.

The consistency across models suggests that the negative correlation is robust even when we account for potential lying in different ways, without making apriori assumptions on the severity of the lying problem. The inclusion of individual lying propensity parameter in (3) results in a slightly larger magnitude of coefficient estimate than the basic model, an indication that some individuals may have hidden information on their ties with the government. Ignoring this effect may underestimate the effect of political connection on trade preference, though the bias is not large.

The paper proposed selection interpretation over the causal interpretation (Section 4.3) in the sense that, with government help, PCEs can survive among unconnected but otherwise more competitive competitors, and this disparity in competitiveness is critical for non-PCEs to be more optimistic than PCEs on the imminent trade liberalization. In the case of China, getting into the WTO was a prolonged process, with the Chinese government being the main advocating force behind it. Because the Chinese state had been pro-WTO for two decades, a causal story would require political connection and government background to make PCEs more likely to support free trade, thus a positive coefficient for Connection. However, the negative coefficient estimate supports the selection rationale.

Having completed our main statistical analysis, we also wanted to see what happened after the WTO, and ran similar models with data from the 2002 survey. But recall that the WTO question in the 2002 survey is different from 2000: it is now a retrospective evaluation

on the effect of joining the WTO in the previous year. So the DVs from the two surveys are different. Furthermore, these are two cross-sectionals with two different groups of respondents, though both are designed to be nationally representative. For these reasons, results from the two surveys are not directly comparable. Models in IV-Table 4 presents results from 2002 data, where political connection is consistently insignificant. We propose two possible scenarios that can explain this insignificance:

First possibility, China developed enough trade-supporting institution to alter the opinion of some entrepreneurs so that they now believe political connection will shield PCEs from increased international competition. In other words, institutional development needs to be so rapid that *connection to evade competition* mentality grows to balance out *openness to neutralize privilege* mentality in 1-2 years. Second possibility, during the short time window, some unproductive PCEs dropped out, so that remaining PCEs and non-PCEs have a similar evaluation on the role of the WTO and international competition. We are more inclined to the second possibility, because of the short time window between the two surveys. It takes longer time for state institutions to develop and take effect than for some unproductive privately-owned firms to exist the market. Without additional data, we are unable to go further in this direction, but there is a large literature on the interplay of international organization and domestic institutional development (e.g. Fox (2014), Levchenko (2012)).

To some extent, after 16 years since the WTO entry, the China analyzed in this paper does not exit anymore. Its early wave of privately-owned firms were small and vulnerable in the 1990s, but now they have evolved into Alibaba, Huawei, and Tencent. For these reasons, the findings on entrepreneur trade preference in this paper may be more relevant for countries such as contemporary Vietnam. However, if we look at the broader institutional implication, this paper can be seen as a firm level test of the partial reform thesis: political opposition to sustained economic reform derive from the winners, rather than the losers,

of partial reform in postcommunist countries. We look forward to seeing verification of this mechanism in different policy areas in contemporary China and other transitional societies.

IV-Table 4: A Peek into What Happened After WTO
DV: Retrospective Evaluation of WTO and International Competition in 2002

	2002 no lying	2002 with d	2002 with c
	(1)	(2)	(3)
Political Connection	−0.005	0.200	0.041
	(0.472)	(0.153)	(0.155)
Industry strategic importance	0.026	0.033	0.023
	(0.076)	(0.076)	(0.077)
Owner Education	0.278***	0.277***	0.278***
	(0.057)	(0.057)	(0.057)
International Business Experience	0.469***	0.466***	0.470***
	(0.170)	(0.170)	(0.170)
Manufacturing Sector	0.112	0.115	0.113
	(0.105)	(0.104)	(0.105)
Labor Intensity	0.640	0.642	0.647
	(0.417)	(0.417)	(0.417)
Annual Sales	6.738	6.919	6.704
	(5.030)	(5.050)	(5.026)
Total Employment	0.0002	0.0002	0.0002
	(0.0002)	(0.0002)	(0.0002)
R&D Spending	0.061	0.051	0.063
	(0.167)	(0.168)	(0.167)
Owner Gender	0.122	0.119	0.122
	(0.158)	(0.158)	(0.158)
Constant	−1.863***	−1.863***	−1.858***
	(0.286)	(0.293)	(0.294)

Note: *p<0.1; **p<0.05; ***p<0.01

References

Ang and Jia. 2014. "Perverse complementarity: Political connections and the use of courts among private firms in China." *Journal of Politics* .

Burgoon, Brian and Michael J. Hiscox. 2008. "The Gender Divide over International Trade: Why do men and women have different views about openness to the world economy?".

Cingano, Federico and Paolo Pinotti. 2013. "Politicians at work: The private returns and social costs of political connections." *Journal of the European Economic Association* .

Clinton, Joshua, Simon Jackman and Douglas Rivers. 2004. "The statistical analysis of roll call data." *American Political Science Review* .

Diaconis, Persi and David Freedman. 1986. "On the consistency of Bayes estimates." *The Annals of Statisticsr* .

Dickson, Bruce. 2008. "Wealth into Power: The Communist Party's Embrace of China's Private Sector.".

Erikson, Robert S. 1990. "Roll calls, reputations, and representation in the US Senate." *Legislative Studies Quarterly* .

Faccio, Mara. 2006. "Politically connected firms." *The American economic review* .

Faccio, Mara. 2010. "Differences between politically connected and nonconnected firms: A crossâĂŘcountry analysis." *Financial management* .

Fariss, Christopher J. 2014. "Respect for Human Rights has Improved Over Time: Modeling the Changing Standard of Accountability." *American Political Science Review* .

Fariss, Christopher J. forthcoming. "Are Things Really Getting Better?: How To Validate Latent Variable Models of Human Rights." *British Journal of Political Science* .

Fisman, R. 2001. "Estimating the value of political connections." *American Economic Review* .

Fox, Justin, Matthew Stephenson. 2014. "The Constraining, Liberating, and Informational Effects of Nonbinding Law." *The Journal of Law, Economics, and Organization* .

Hainmueller, Jens and Michael J. Hiscox. 2006. "Learning to love globalization: Education and individual attitudes toward international trade." *International Organization* .

Hellman, Joel S. 1998. "Winners take all: the politics of partial reform in postcommunist transitions." *World Politics* .

Hoff, Peter D., Adrian E. Raftery and Mark S. Handcock. 2002. "Latent space approaches to social network analysis." *Journal of the american Statistical association* .

Hsueh, Roselyn. 2011. "China's regulatory state: A new strategy for globalization.".

Huber, John and Ronald Inglehart. 1995. "Expert interpretations of party space and party locations in 42 societies." *Party Politics* .

Jaggers, Keith and Ted Robert Gurr. 1996. "Polity III: Regime type and political authority, 1800-1994." *Inter-University Consortium for Political and Social Research* .

Kim, In Song, Helen V Milner, Thomas Bernauer, Gabriele Spilker, Dustin Tingley and Iain Osgood. 2016. "Firms' Preferences over Multidimensional Trade Policies: Global Production Chains, Investment Protection and Dispute Settlement Mechanisms.".

Kuno, Arata and Megumi Naoi. 2012. "Firms and Preferential Trade Agreements: A Natural Experiment on Politicized Information Environment.".

Levchenko, Andrei. 2012. "International Trade and Institutional Change." *The Journal of Law, Economics, and Organization* .

Li, David D. 1998. "Changing incentives of the Chinese bureaucracy." *The American Economic Review* .

Li, Hongbin, et al. 2008. "Political connections, financing and firm performance: Evidence from Chinese private firms." *Journal of Development Economics* .

Malesky, Edmund, Markus Taussig. 2009. "Where Is Credit Due? Legal Institutions, Connections, and the Efficiency of Bank Lending in Vietnam." *The Journal of Law, Economics, and Organization* .

Mansfield, E., Mutz. 2009. "Support for Free Trade: Self-Interest, Sociotropic Politics, and Out-Group Anxiety." *International Organization* .

Martin, Andrew, Kevin Quinn. 2007. "Assessing Preferece Change on the US Supreme Court." *The Journal of Law, Economics, and Organization* .

Matzkin, Rosa L. 2007. "Nonparametric survey response errors." *International Economic Review* .

McMillan, J. 1995. *Economic Transition in Eastern Europe and Russia: Realities of Reform*.

Melitz, Marc J. 2003. "The impact of trade on intraâĂŘindustry reallocations and aggregate industry productivity." *Econometrica* pp. 1695–1725.

Mobarak, A., Purbasari D. 2006. "Corrupt protection for sale to firms: evidence from Indonesia." *Unpublished working paper, University of Colorado at Boulder* .

Naoi, Megumi, Weiyi Shi Boliang Zhu. 2017. "Yes-Man'Firms: Government Campaigns and Policy Positioning of Businesses in China.".

Osgood, Iain, Dustin Tingley, Thomas Bernauer, In Song Kim, Helen Milner and Gabriele Spilker. 2017. "The Charmed Life of Superstar Exporters: Survey Evidence on Firms and Trade Policy." *Journal of Politics* 79(1):133–152.

Osgood, Iain, Margaret Peters. 2017. "Escape Through Export? Women-Owned Enterprises, Domestic Discrimination, and Global Markets." *Quarterly Journal of Political Science* .

Polsiri, Piruna and Pornsit Jiraporn. 2012. "Political connections, ownership structure, and financial institution failure." *Journal of Multinational Financial Management* .

Przeworski, Adam. 1991. *Democracy and the market: Political and economic reforms in Eastern Europe and Latin America.* Cambridge University Press.

Rho, Sungmin and Michael Tomz. 2017. "Why Don't Trade Preferences Reflect Economic Self-Interest?" *International Organization* .

Scheve, Kenneth F., Matthew J. Slaughter. 2011. "Labor market competition and individual preferences over immigration policy." *Review of Economics and Statistics* .

Thorpe, Geoffrey L. and Andrej Favia. 2012. "Data Analysis Using Item Response Theory Methodology: An Introduction to Selected Programs and Applications." *Journal of Educational Measurement* .

Wise, Steven L. and Christine E. DeMars. 2006. "An Application of Item Response Time: The EffortâĂŘModerated IRT Model." *Journal of Educational Measurement* .

Wu, Jie and Xiaoyun Chen. 2012. "LeadersâĂŹ social ties, knowledge acquisition capability and firm competitive advantage." *Asia Pacific Journal of Management* .

Wu, Wenfeng, Chongfeng Wu and Oliver M. Rui. 2012. "Ownership and the value of political connections: Evidence from China." *European Financial Management* .

VI-Appendix 1

Notes on Lying Parameter Identification

Identification of the lying parameters can be difficult. Obviously, there can be infinite number of combinations of parameter values to provide the same fit to the data, so these parameters are not identified without additional information as constraints. Both d_j and b_j on the j dimension describe how well the question discriminate θ_i in its effect on $P(Y_{ij} = 1)$, but d_j is specific to the lying effect we are dealing with. Similarly, on the i dimension, both propensity to lie, c_i, and political connection level, θ_i, influence $P(Y_{ij} = 1)$, which is the probability in exhibiting political connection.

However, is the above relationship between b_j and d_j, and between θ_i and c_i, complementary or substitutable? Is that relationship linear? To investigate further, I compute first order and second order conditions of d_j with respect to b_j, and of c_i with respect to θ_i, while holding all other elements in (6) as constants:

$$(6) \rightarrow \qquad d = 1 - \frac{P(Y=1)}{(1-c)\frac{e^{a+b\theta}}{1+e^{a+b\theta}}} \tag{9}$$

$$(9) \rightarrow \qquad \frac{\partial d}{\partial b} \propto \theta \cdot e^{-(a+b\theta)} \quad > 0, \quad \forall \ \theta > 0 \tag{10}$$

$$\frac{\partial^2 d}{\partial b^2} \propto -\theta^2 \cdot e^{-(a+b\theta)} < 0 \tag{11}$$

$Similarly,$

$$(6) \rightarrow \qquad c = 1 - \frac{P(Y=1)}{(1-d)\frac{e^{a+b\theta}}{1+e^{a+b\theta}}} \tag{12}$$

$$(12) \rightarrow \qquad \frac{\partial c}{\partial \theta} \propto b \cdot e^{-(a+b\theta)} \quad > 0, \quad \forall \ b > 0 \tag{13}$$

$$\frac{\partial^2 c}{\partial \theta^2} \propto -b^2 \cdot e^{-(a+b\theta)} < 0 \tag{14}$$

As we can see, while holding all other elements in (6) as constant, there is a complimentary relationship between d_j and b_j, as in (9), and between c_i and θ_i, as in (12). This makes sense intuitively, as a question $j = 1$ with both high discrimination $b_{j=1}$ and high propensity to be lied on $d_{j=1}$ can have the same probability of revealing political connection information, P(Y=1), as a question $j = 2$ with both low discrimination $b_{j=2}$ and a low propensity to be lied on $d_{j=2}$ [11] Similarly, a person $i = 1$ with both high political connection $\theta_{i=1}$ and high propensity to lie $c_{i=1}$ can reveal the same level of information on political connection as a person $i = 2$ with lower $\theta_{i=2}$ and lower $c_{i=2}$. Negative signs in (11) and (14) indicate that this complementary relationship diminishes in magnitude with increasing discrimination b and latent political connection θ.

To solve this identification problem empirically under the Bayesian framework, I utilize exogenous information from the survey data, recall that:

[11] Here d_j can be seen as a special case of b_j in the sense that questions that are easier to be lied on have low discrimination levels. However, low discrimination can also be caused by other reasons, such as the question body being ambiguous. So including d_j in the model essentially teases out the part of low discrimination caused by lying. Note that a_j captures the difficulty, so it is not affected by this operation on discrimination.

1. Previous working experience as an official
2. Being a delegate in National People's Congress and Political Consultative Conference
3. Being a member of CCP, Youth League, or democratic parties.
4. Having secured loans from the banking system for corporate operation.
5. Having resolved business disputes through personal connections with local officials.
6. Having contributed to philanthropy to return favor to local government.

I fix the second d_j value to be 0 because, as discussed previously, delegate status in Congress are open to the public and there is no reason to lie on such public information. For b_j's, their signs are set to be positive to ensure positive discrimination of responses, so that the signs of θ_i's are identified, which is critical for later regression analysis that include θ_i as the key explanatory variable.

For parameters on the i dimension, I utilize information that on about 100 out of 3000 respondents may have under reported their sales value in the survey because total cost calculated with the sales figure reported is lower than their total wage cost calculated with wage and employment figures. One possible reason of under-reporting sales is that taxation is based on sales value [12]. Taking this as an indicator of propensity to lie, one can set those c_i at fixed high values and estimate other c_i's through the model, which may nor may not be mostly zero.

VI-Appendix 2

Checking Potential Geo-dependence of Responses

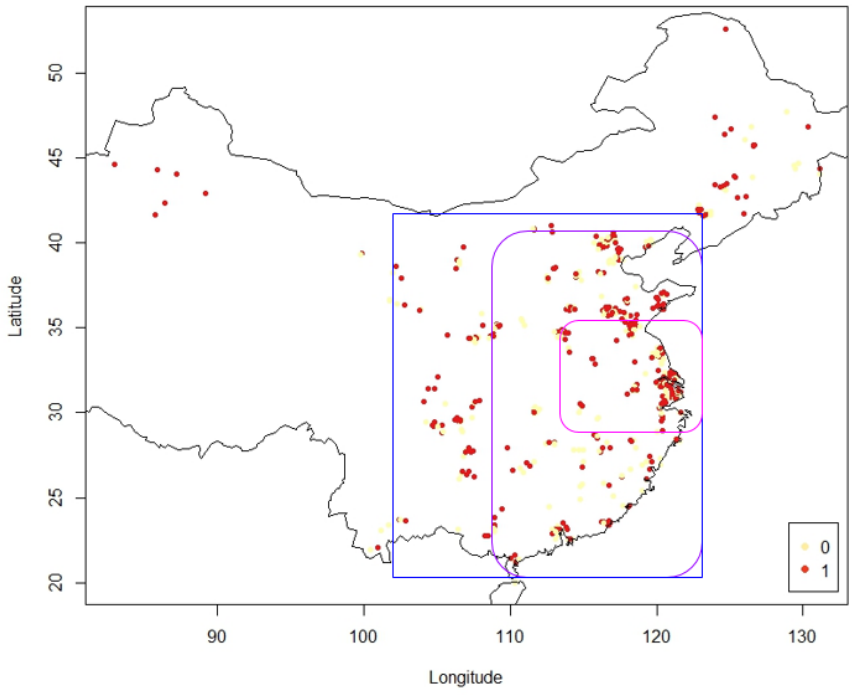
Do entrepreneur trade preferences influence each other locally? Here I present a check for potential geo autocorrelation that is not considered in the main statistical analysis. Geographical information is obtained from zip-codes of firms in the sample, making the spatial analysis feasible. I adopt point-referenced modeling approach for the following operations. This exercise can also be seen as an effort to control for social desirability bias. China is a vast country with great internal diversity, different regions have different

[12] For extreme under-reports, it may also be a result of those respondents being carelessness or incompetent. For this reason, extreme observations where total wage cost figures are more than 10 times larger than total cost figures are not considered intentional underreporting in the estimation. The choice of 10 is somewhat arbitrary but estimation results are not sensitive to different threshold levels.

climate, ethnicity, dialect, and level of economic development. If one speculates that, for instance, entrepreneurs in Shanghai are more pro free trade than entrepreneurs in Beijing, it implies a clustering and mutual-influence of DV values by geographical proximity, and this geo-dependence check verifies that possibility.

Models based on both 2000 and 2002 data show NO spatial dependency, and these no results are not presented here for brevity. However, they are based on the whole data that covers the entirety of China, while different regions of the country may contain regional spatial dependency that are not shown at the national level. Thus I replicate the same investigation for three subsets of the data: 1. "China proper": excluding frontier provinces with low population density, low economic development, and high ethnic diversity. 2. "Coastal China": including only coastal provinces from "China proper" 3. "Yangtze Delta": including only Shanghai, Jiangsu, and Zhejiang from "Coastal China". This delta region is highly developed with high population and industrial density.

IV-Graph 1. Sub-setting Data



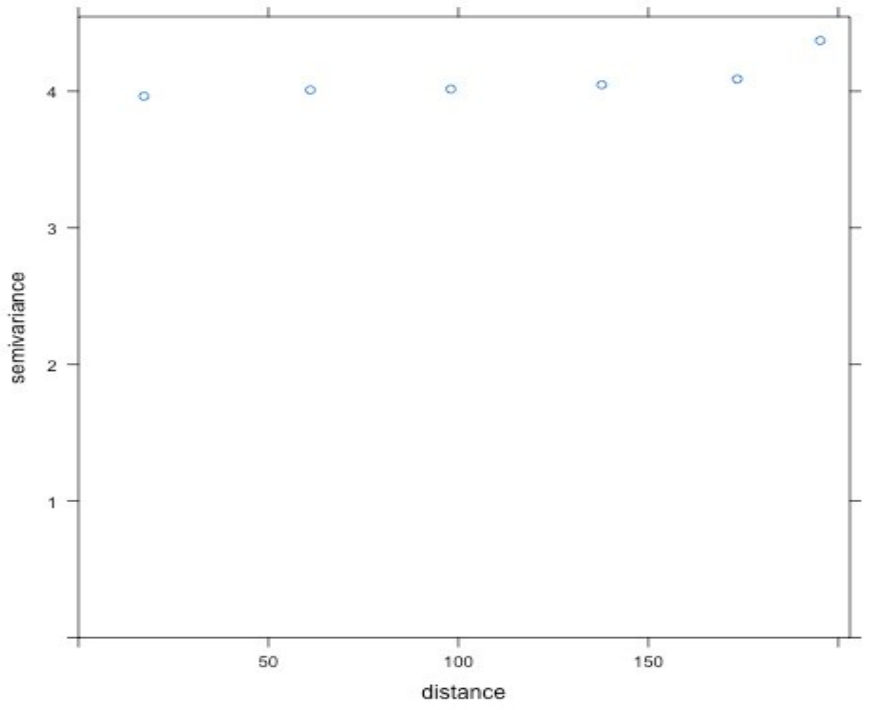
All replications on different subsets show NO clear sign of spatial dependency. The following paragraphs demonstrate the procedure with data from Yangtze Delta subset in 2000. II-Graph 1. shows the above sub-setting with plots of the DV. I use the following

specification to model large scale variation and local autocorrelation:

$$DV_i = a_0 + a_1 longitude_i + a_2 latitude_i + \epsilon_i \quad (15)$$

Residuals from the above model are used to plot the empirical semi-variogram in II-Graph 2. Semi-variogram defines the range or distance over which spatial dependence exists, and from II-Graph 2 we observe no clear sign of decaying dependence as distance increases. I thus conclude that there is NO clear sign of spatial dependence in the data.

II-Graph 2: Empirical Semi-Variogram



VI-Appendix 3

Simulations to Recover Parameters

N=3000, Burn=5000, Draw=1000 for all simulations presented here. Simulation (1) is with basic model with no consideration of lying at response or respondent levels, this should provide the baseline for simulation precision while allowing for reasonable fluctuation brought by randomness in the data generating process and MCMC procedure. Simulations (2), (3), (4) are models with consideration of the response level lying parameter, d_j. With one d_j fixed, identification is achieved in (2) and (3), and not surprisingly, fixing more d_j's in (4) does not improve precision.

Simulation (5) and (6) are with the individual level lying parameter c_i estimated via:

$$c_i = inv.logit(\gamma + \sigma * UnderReport_i + \omega * \theta_i), \tag{14}$$

Both (5) and (6) preserve the trend in alpha and beta parameters, but the precision is fair with or without fixing one beta value.

VI-Appendix 4

MCMC Convergence Diagnostics

IV-Table 4: Potential Scale Reduction Factors for the first 10 Estimates

2000 (with d)	2002 (with d)	2000 (no lying)	2002 (no lying)	2000 (with c)
Est. Upper C.I.	Est. Upper C.I	Est. Upper C.I.	Est. Upper C.I	Est. Upper C.I
θ[1] 1.151 1.371	θ[1] 1.409 1.896	θ[1] 0.999 1.003	θ[1] 1.006 1.021	θ[1]1.005 1.018
θ[2] 1.004 1.015	θ[2] 1.029 1.083	θ[2] 0.998 1.001	θ[2]1.000 1.004	θ[2]1.003 1.014
θ[3] 1.072 1.192	θ[3] 1.353 1.785	θ[3] 1.007 1.021	θ[3] 1.001 1.009	θ[3]1.002 1.009
θ[4] 1.435 1.945	θ[4] 1.377 1.833	θ[4] 1.001 1.004	θ[4] 1.005 1.014	θ[4]1.002 1.009
θ[5] 1.002 1.007	θ[5] 1.157 1.382	θ[5] 0.998 1.001	θ[5] 1.000 1.002	θ[5]1.002 1.010
θ[6] 1.015 1.042	θ[6] 1.103 1.263	θ[6] 1.001 1.006	θ[6] 1.003 1.016	θ[6]1.001 1.007
θ[7] 1.042 1.112	θ[7] 1.249 1.575	θ[7] 1.006 1.021	θ[7] 1.000 1.003	θ[7]0.998 1.001
θ[8] 1.036 1.103	θ[8] 1.034 1.094	θ[8] 1.004 1.018	θ[8] 0.999 1.003	θ[8]1.000 1.003
θ[9] 1.042 1.117	θ[9] 1.007 1.024	θ[9] 1.009 1.028	θ[9] 0.999 1.004	θ[9]1.003 1.012
θ[10] 1.007 1.022	θ[10] 1.290 1.659	θ[10] 0.999 1.003	θ[10] 1.002 1.012	θ[10]1.001 1.009