

Overseas Operation, Regulatory Lobbying, and Exit Threat of US Firms

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Abstract

How does a firm's global expansion affect its political action to shape its home-country regulatory policies? This question lies at the intersection of production-globalization and money in politics, and it is becoming increasingly relevant today with the rise of anti-globalization sentiments in the US challenging the global order. I address this under-researched question with a firm-level 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 to lobby often and invest heavily in influencing the US business environment. To test this theory, I first extract large-scale text evidence from a novel repository of firm public statements to show that regulatory arbitrage claims in media are made by offshoring firms. Then I construct an offshoring panel from 2007 to 2016 to show that US firms with overseas operation in the same sector are substantially more active in lobbying on taxation, labor, and other regulations. These results suggest that international pressure for national regulatory change can also take place at the firm level, where firms' global market expansion gives strength to their domestic political strategy.

Keywords: regulatory policy, firm lobbying, foreign investment

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1 Introduction

Multinational firms' active participation in the making of US foreign economic policies has been well documented in the literature (e.g., Bombardini 2008; Osgood 2016; Kim 2017 on US international trade policy). However, how does a firm's international expansion affect its political action to shape US domestic regulations?¹ This question lies at the intersection of production-globalization and money in politics, and it is becoming increasingly relevant with the rise of anti-globalization sentiment in American society. During the 2016 presidential election race, for instance, Carrier Air Conditioner went viral in social media and election campaigns² following the company's announcement to offshore its Indianapolis operation to Monterrey, Mexico. Carrier justified its decision to move to the Mexican city as the company has "an existing, proven manufacturing footprint in Monterrey"³ since 1969⁴, and the "existing infrastructure there will allow [Carrier] to operate more cost effectively"⁵. For the 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 company⁶.

¹ In fact, among all firm lobbying activities, roughly 1/10 are on foreign economic policies, and the remaining 9/10 are mostly domestically oriented policies. The data section describes how to obtain this estimate from the lobbying reports.

² 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

³ storage.googleapis.com/sos-websvc/files/carrier-to-mexico/Carrier_Factsheet_021916.pdf

⁴ 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, 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).

⁵ storage.googleapis.com/sos-websvc/files/carrier-to-mexico/Carrier_Factsheet_021916.pdf

⁶ 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

Such instances are common in contemporary debates, but there has been little scholarly research on this topic due to both theoretical and empirical challenges (Carruthers and Lamoureaux, 2016). This paper fills this gap with a firm-level theory of regulatory arbitrage. To my best knowledge, this is the first research that combines lobbying⁷ and offshoring⁸ under an integrated framework, and then verifies it with datasets constructed from complete records of bill-level public statements, federal-level lobbying, and firm overseas expansion from 2007 to 2016. Evidence from both what firms say (i.e., public statements) and what firms do (i.e., lobbying activity) shows that firms' existing overseas operations embolden their political participation to influence US domestic regulations.

The regulatory arbitrage theory in this paper 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, lumpy investment (Rodriguez-Lopez, 2014). This paper argues that 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" of existing patterns of foreign investment at the intensive margin⁹, a concept borrowed from Horst (1980) and Caves (2007). Thus, the lo-

⁷ This paper does not incorporate other forms of corporate political action 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.

⁹ This paper focuses on the intensive margin in both its theory and empirics. It does not test regulation-induced offshoring on the extensive margin directly, as Carruthers and Lamoureaux (2016) show that firms

cational flexibility of internationalized US firms across multiple regulatory environments can serve as an advantageous bargaining position so that these firms lobby often and invest heavily in shaping the domestic business environment.

The regulatory arbitrage theory contradicts the common intuition that firms operating abroad should simultaneously become less invested in the domestic economy and less keen on domestic regulations than firms that are stuck locally¹⁰. The arbitrage theory shows a mechanism in the opposite direction: firms use their market expansion to facilitate their political efforts. Aside from the implication on firm strategy, this mechanism suggests that international pressure for national regulatory change (i.e., race to the bottom or top) can also occur at the firm-level through America's institutionalized lobbying process.

In the following pages, Section 2 presents the theoretical argument that focuses on regulatory distortion of existing offshoring patterns, fixed cost associated with initial offshoring decision, and credible threat in firm-government bargaining. Section 3 presents text evidence extracted from a novel repository of bill-level statements to show that firms with existing overseas operations are much more likely to voice the regulatory arbitrage statement. Section 4 details the bulk of empirical work for the main statistical analysis: offshoring measurement and panel construction. Section 5 presents the empirical design and findings. Section 6 discusses theory and policy implications.

deciding to go abroad in response to regulatory concerns are rare. My own impression from qualitative evidence collected for this project also supports the observation in Carruthers and Lamoureaux (2016).

¹⁰See Desai, Foley and Hines. (2009) for a discussion of this commonly held intuition and how the authors falsify it from the aspect of firms' economic activities. This paper focuses on the implication of global operation on firms' political activities.

2 Theoretical Argument

This paper examines how firms' overseas operations embolden their effort to influence domestic regulations. This mechanism relates to two topics in the literature: first the literature on multinational firms' participation in national and international policy making (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), but there is no theorizing or testing of the "arbitrage" thesis; second, the literature on the "real options value of internationalization" for firms to deal with external risks stemming from economic, political, and exchange rate uncertainties (e.g., Feinberg and Gupta 2009; Lee and Makhija 2009; Beazer and Blake 2018). This paper differs in the sense that firms are not internationalizing to balance out location-specific risks. Instead, internalization enables them to actively manage home regulatory uncertainties.

Ideas on firm regulatory arbitrage are not new. They have been floating around since Adam Smith, and they recently gained new prominence following the rising nationalism and protectionism in the American society (Carruthers and Lamoureaux, 2016). Despite high-profile cases such as the Carrier one, there are many instances where business leaders utter the regulatory arbitrage argument explicitly in public records. Section 3 provides a systematic analysis of such qualitative evidence, but here is one example from Intel. On July 16, 2015, Intel's Vice President of Finance, Ronald D. Dickel, urged the Senate for subsidy for Intel's R&D spending,

*"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."*¹¹

¹¹<http://www.nam.org/Issues/Tax-and-Budget/R-D-Credit-Coalition-Letter-to-Senate.pdf>

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 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 consideration fits into the picture as a regulatory distortion (Horst, 1980; Caves, 2007). With that foundation, sub-section 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 two 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, instead of looking for firms that suddenly decide to offshore in the 2010s 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.

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 underestimate 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, this 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 has 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 cost 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, 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 countries un-

less 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 already globalized context. Supporting this approach, 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."¹² Such public statements are not lobbying activities per se, but they indicate that the 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

¹²Section 3 provides a systematic analysis of such text evidence extracted from a novel repository of bill-level corporate statements from Maplight.org.

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, instead of 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. This generalization 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 since all firms are subject to tax. Labor regulation is similar, but to a lesser degree since the share of labor cost varies more across industries and firms. Most other domains of regulation are somewhat industry-specific, such as environmental regulation and intellectual property rights. For this reason, the empirical analysis in Section 5 relies on three measurements of the dependent variable: lobbying on tax regulation, lobbying on labor regulation, and lobbying on all

domestic regulations combined.

2.2 Fixed Cost to 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 lumpy 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.

Cost of offshoring vary 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., e.g., Clark 2013; Gehlbach 2006).

However, Hirschman (1970) starts with some deterioration of the home environment. It is the deteriorating condition at home that motivates actors, usually citizens instead of firms in those models, to make strategic choices. In contrast, the model and argument proposed here do not require a domestic deterioration as precondition. Firm's 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 some other reasons. In addition, existing models on Drezner 1978 are on individuals/citizens (e.g., Clark 2013; Gehlbach

2006), but firms are different from individual persons in the sense that the latter are either in or out of the organization. But firms can be offshoring a portion of its operation while retaining the rest in the home environment. 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 two assumptions.

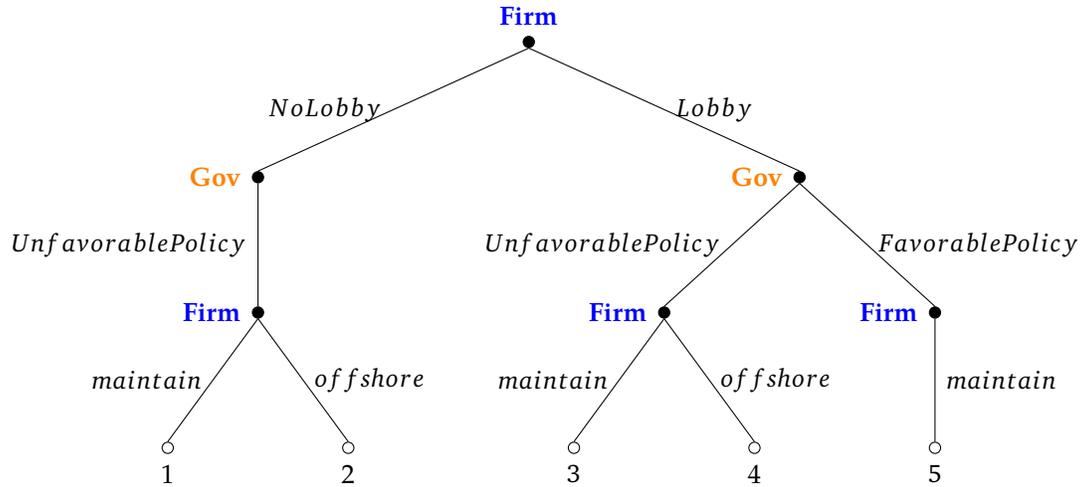
Assumption 1. For the firm, if the government offers the favorable policy to the firm, the latter will maintain the current level of offshoring. As discussed in 2.1, firms make their offshoring decision due to various non-regulatory reasons, but this model only describes offshoring induced by regulatory changes in the domestic business environment.

Assumption 2. This model does not incorporate the trivial case where 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 unfavorable policy is bigger than the benefit of giving the firm favorable policy, but the behavior of the firm can change this calculation.

Combining these considerations, the model describes a world where a firm will get unfavorable policy if it chooses not to engage with the government, so it has an incentive to

voice. The tension comes from the fact that lobby may or may not bring the desired policy outcome, and the propensity between the favorable and unfavorable outcomes depends on the firm’s offshoring cost being communicated to the government via lobbying. The game tree is shown below in Graph 1.

Graph 1. Lobbying and Offshoring Game



Variable Definitions in the model are in **Table 1**:

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

Combining the game tree and the variables, we arrive at the following table of payoffs for the two players in Table 2.

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

Under sequential rationality, the model is solved through backward induction in Appendix I. The key insight is that for firms with large offshoring cost, offshoring is a costly option for them and thus 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. But for firms with small offshoring cost, their threat to offshore is credible. These firms will lobby, get favorable policy, and maintain the current level of offshoring as in scenario 5. 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.

Before taking this theoretical prediction to empirical verification, however, it is necessary to consider whether one should expect this arbitrage mechanism to apply for all kinds of firms. Probably no. Most notably, 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. For instance, a US firm's registered office in tax havens such as the Cayman Islands does not require significant lumpy investment to establish, nor can it absorb the parent's production from the US. For this concern, the empirical analysis in Section 4 and Section 5 limits its scope to industrial firms: US firms and their

foreign subsidiaries in goods-producing industries and non-financial services-producing industries.

3 Firms Making the Regulatory Arbitrage Statement

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 voice the regulatory arbitrage statement, as shown in Graph 2-A. 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 money in politics comes from such statements in media.

Kollman (1998) terms such firm statements "outside lobbying", and shows how firms strategically utilize it to complement their formal lobbying efforts. Following 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 support 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 on interest groups' public statements on specific Congressional bills, compiled by transparency organization Maplight.¹³ MapLight incorporates all bill-level statements made by interest groups¹⁴, but it does not include general policy stances that are not tied to specific bills

¹³ Access to the repository requires an API key from maplight.org. I thank Jesse M. Crosson and Geoffrey Lorenz, scholars in American politics at the University of Michigan, for their generous help with obtaining and processing reports from Maplight.

¹⁴ Details on Maplight's search methods can be found here: <http://classic.maplight.org/us->

(e.g., Firm A opposes trade protectionism in general). Relaxing this bill-specific restriction 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 RAs 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 RA 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 is passed.
- For each report identified as containing the regulatory arbitrage argument, a second RA will re-read it for verification. Each verified report was recorded and coded for later analysis.

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

[congress/guide/data/support-opposition](#)

of these firms made similar statements multiple times on different bills. The results are summarized in Graph 2, where firms making the regulatory arbitrage statement on the left are compared with all US firms on the right.¹⁵

Graph 2.

Characteristics of Firms Making the Regulatory Arbitrage Statement

A. Distribution by Offshoring versus Non-Offshoring Status

Firms Making Regulatory Arbitrage Statement

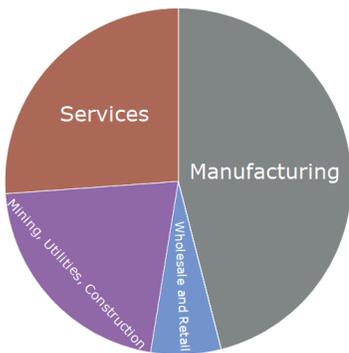


All US Firms

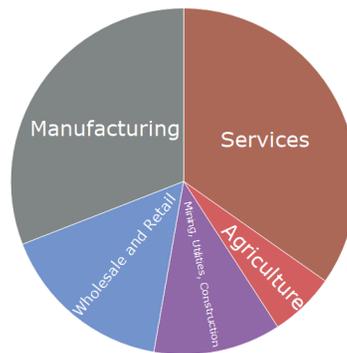


B. Distribution by Major Sectors

Firms Making Regulatory Arbitrage Statement



All US Firms



¹⁵Details on the construction of the representative sample of all US firms and their offshoring status are in Section 4. Graph 2-A focuses on whether the firm is an offshoring firm, and Graph 2-B focuses on the distribution of major sectors.

The most interesting finding lies in Graph 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 intra-industry divide in distributional consequences and policy preferences.

Graph 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

So far the paper has discussed the regulatory arbitrage theory and showed qualitative evidence from firms' public statements. This section starts the main 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 Appendix II.

4.1 Lobbying on US Domestic Regulations

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.¹⁶ Both branches of the Congress keep the complete records of lobbying activity, and this paper uses the Senate's version compiled by Center for Responsive Politics (CRP).¹⁷ Out of the total of 943,431¹⁸ lobbying reports from CRP, I identified over seventeen thousand unique lobbying firms - many firms lobby multiple times and other forms of social organizations also lobby.

This paper focuses on US firms lobbying on 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.¹⁹ This sample of lobbying reports forms the population of domestic regulatory lobbying in this paper, and Appendix III provides its summary statistics based on the "lobbying issue codes".

For the lobbying activities on US domestic regulations, I also identify and tease out lobbying on taxation and labor regulations. These two issue areas are singled out because of their relevance for firms in all industries. For taxation, I combine the CRP classifica-

¹⁶The official guide on filing can be found at

lda.congress.gov/LD/help/default.htm?turl=Documents%2FApCodes.htm

¹⁷<https://www.opensecrets.org/>

¹⁸Downloaded on June 7, 2018. CRP constantly updates its lobbying database with most recent reports from the Senate.

¹⁹Because 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.

tion on taxation and lobbying description in the reports. The latter is employed to tease out 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 2,046 labor bills is matched with lobby reports, plus reports that listed Department of Labor as the lobbying agency²⁰, 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.²¹ 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 latest worldwide version of Orbis that includes 208,096,202 organizations,²² 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 first screening the ownership structure of US firms to identify their subsidiaries in foreign countries. Second, each ownership link iden-

²⁰See You (2017, N.d.) for a discussion on the relationship between lobbying in the legislature and lobbying in the administrative agencies

²¹See 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)

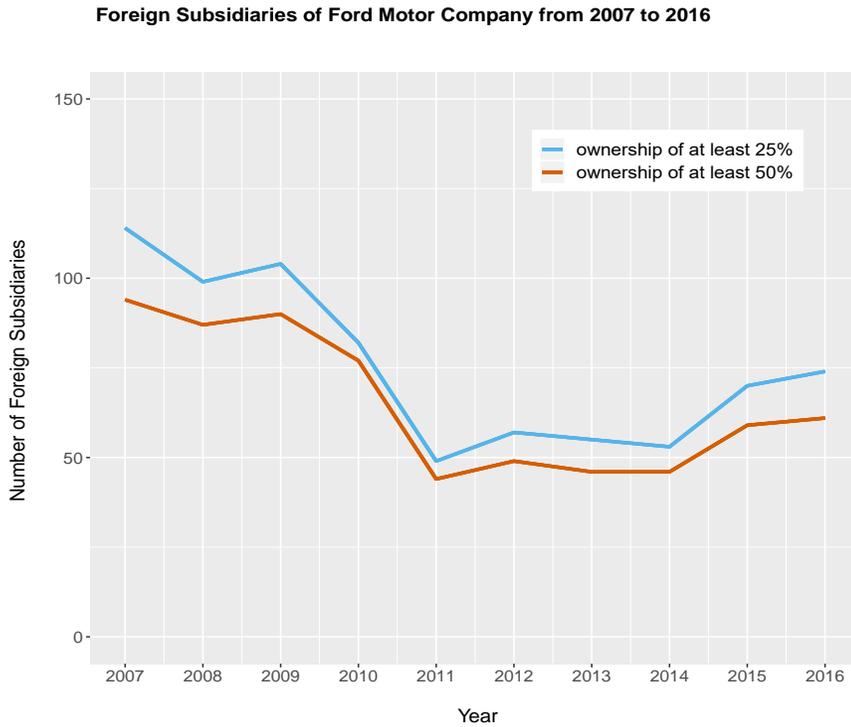
²²Orbis database comes in different versions and different formats that cannot be merged easily. See discussion in (Kalemli-Ozcan, 2015)

tified between a US firm and a non-US firm needs to meet three 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. Here industrial entities include all companies that are not banks, financial companies, or insurance companies. So it is not just manufacturing entities but can also includes non-financial services providers, such as wholesalers and retailers. This requirement is imposed because of the theoretical discussion from 2.2.
- The US parent firm needs to be a shareholder of the foreign subsidiary above a certain threshold. This requirement is imposed to ensure the US parent has sufficient control over the foreign subsidiary so that when regulatory changes occur in the US, the parent can indeed offshore to the foreign subsidiary smoothly. The 50% threshold guarantees such control, though it is restrictive. For instance, developing countries such as China may have restrictions that foreign ownership of domestic firms cannot exceed 50% in certain industries such as automobile. In the following pages of the paper, the main analysis in Section 5 uses the 25% threshold, and Appendix III includes results from the 50% threshold. A single case comparison of the two thresholds are presented in Graph 3.

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

Graph 3.



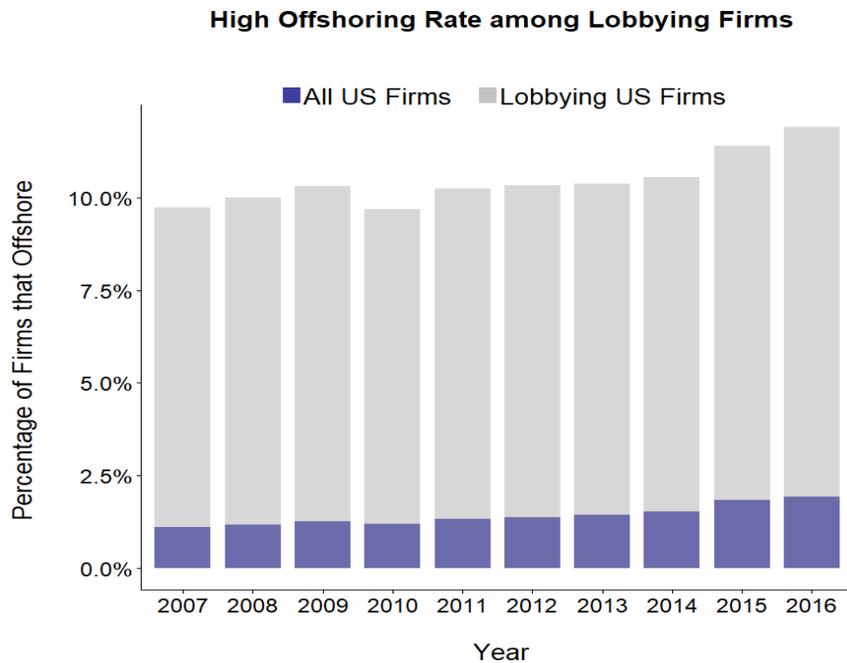
Graph 3 is a case example of the offshoring panel for Ford Motor Company. The x-axis denotes the years, and the y-axis denotes the number of foreign subsidiaries Ford has. The upper curve shows its changing foreign subsidiary number in the past ten years based on the 25% ownership threshold, and the lower curve based on the 50% ownership threshold shows the same trend. 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 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 Ford company website’s Operations Worldwide section: 7 transmission plants, 26 assembly plants,

2 forging plants, and 12 engine plants.²³ In comparison, the constructed subsidiary data lists 74 foreign subsidiaries of Ford with over 25% share.

Graph 4 shows an aggregate overview of US firm offshoring and lobbying from 2007 to 2016. The darker bars are the annual percentages of offshoring firms among all US firms, averaging at 1.4%, the same rate as in the right-hand pie in Graph 2-A. In comparison, lighter bars showing offshoring rate among lobbying US firms 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 Graph 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 Graph 3, suggesting the widespread impact of global trends, such as the 2008-2009 Financial Crisis.

Graph 4.



Source: Orbis Worldwide, Center for Responsive Politics

²³ See corporate.ford.com/company/operation-list.html#s4f17

5 Empirical Design and Findings

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. Recall the discussion in Section 2 and Section 3, 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. Even in the same industry, larger firms of course trade more, offshore more, and lobby more due to available resources and fixed cost 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 (e.g., industry variation shown in Graph 2-B). In addition, from Graph 3 and Graph 4, firm offshoring exhibit temporal trends from 2007 to 2016.

For the dependent variable, there is no single best way to measure "lobbying participation", thus I use four dependent variable measurements in each table. Firstly, a continuous measure of a firm's total spending on domestic regulatory lobbying in a given year. Secondly, a continuous count of domestic regulatory issues lobbied by a firm in a given year. Thirdly, all firms are subject to taxation on their revenues 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 4.1, so labor regulation is singled out as the dependent variable in the fourth column in each table. 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.²⁴

To construct an appropriate sample for regression analysis, observations used in the empirical models are the same as the one used in Graph 1 and Graph 2: a combination of all lobbying firms and a stratified sample of all US firms. As mentioned previously on page 3, 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, 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.

$$\text{lobbying}_{it} = \text{OverseasOperation}_{it}\beta_1 + \text{size}_{it}\beta_2 + \alpha_i + \gamma_t + u_{it}, \quad (1)$$

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 Table 4, overseas operation is a binary indicator for whether

²⁴See detailed guidance on LDA reports filing at lda.congress.gov/LD/help/default.htm?turl=Documents%2FAppCodes.htm

Table 4. Firms with Overseas Operation in the Same Sectors Are More Active in Lobbying

<i>DV: Firm lobbying on:</i>	Taxation log(frequency) (1)	Labor log(frequency) (2)	All Regulations log(frequency) (3)	All Regulations log(expenditure) (4)
Overseas Operation	0.091*** (0.000)	0.046*** (0.000)	0.115*** (0.000)	0.192* (0.013)
log(revenue)	-0.001*** (0.000)	0.001** (0.001)	0.015*** (0.000)	0.110*** (0.000)
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
R squared	0.849	0.804	0.863	0.791
N	270,671	270,671	270,671	270,671
<i>Note:</i>	*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 is that, for instance, General Motor’s threat to leave the US is greater when GM has a Canadian subsidiary company producing cars in Ontario than GM having a subsidiary company primarily investing in Toronto’s real estate market. The latter is not a substitute of GM’s US automobile production, thus posing a smaller threat to GM’s US jobs. As shown in 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 operation in the same sectors are substantially more active in lobbying.

The bargaining model in Section 2 only looks at the lobbying behavior of single firms. Aside from individual firm lobbying, firms may pressure the government via industry associations and other collective means. However, preference formation for associations is usually difficult to disentangle in a systematic fashion. For instance, the US Chamber of Commerce claims to have over three million members as of August 2018²⁵, but the Cham-

²⁵ www.uschamber.com/about/about-the-us-chamber

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

<i>DV: Firm lobbying on:</i>	Taxation log(frequency) (1)	Labor log(frequency) (2)	All Regulations log(frequency) (3)	All Regulations log(expenditure) (4)
Overseas Operation	0.075*** (0.000)	0.022 (0.220)	0.168*** (0.000)	0.712*** (0.000)
log(revenue)	-0.001 (0.122)	0.000 (0.399)	0.005** (0.002)	0.055*** (0.000)
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
R squared	0.848	0.776	0.873	0.711
N	50,048	50,048	50,048	50,048
<i>Note:</i>	*p<0.05; **p<0.01; ***p<0.001			

ber’s lobbying 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, Table 6 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 impact of regulations is more firm-specific. This industry exclusion takes out 80% of the firms in the sample, and the results hold in Table 5. ²⁶

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. Firm’s relative size in an industry is commonly measured by the Herfindahl index(Hirschman, 1964), and this implies larger firms in an

²⁶For 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

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.

The above two sets of tests verify whether having overseas operation 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 Table 6 follow the specification below,

$$lobbying_{it} = ForeignSubsidiary_{it}\beta_1 + size_{it}\beta_2 + \alpha_i + \gamma_t + u_{it}, \quad (2)$$

where $ForeignSubsidiary_{it}$ is the number of active foreign subsidiaries that firm_{*i*} has in year_{*t*}. As shown by the results in Table 6, lobbying activities increase with the number of foreign subsidiaries.

Table 7 has the same model specification as Table 6, except for a different conceptualization of fixed cost in offshoring. Here the key explanatory variable is a country-level factor, counting how many unique countries in which a US firm has subsidiary with majority control. Compared to the establishment-level measure in Table 6, this country-level measure highlights the institutional and cultural barriers, as well as international shipping cost, associated with overseas operation²⁷. As shown in Table 7, the results from this alternative conceptualization of offshoring cost does not change the baseline results.

Combining results from these models, data on US firm lobbying from 2007 to 2016

²⁷ An example of the country-level fixed cost in international economics: Vannoorenberghe, Wang and Yu 2016

Table 6. Firm's Lobbying Activity Increases with Its Number of Foreign Subsidiaries

<i>DV: Firm lobbying on:</i>	Taxation log(frequency) (1)	Labor log(frequency) (2)	All Regulations log(frequency) (3)	All Regulations log(expenditure) (4)
log(No. Foreign Subsidiaries)	0.026*** (0.000)	0.024*** (0.000)	0.050*** (0.000)	0.135*** (0.000)
log(revenue)	-0.001** (0.001)	0.001*** (0.000)	0.015*** (0.000)	0.112*** (0.000)
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
R squared	0.850	0.805	0.864	0.791
N	270,671	270,671	270,671	270,671
<i>Note:</i>	*p<0.05; **p<0.01; ***p<0.001			

Table 7. Firm's Lobbying Activity Increases with the Number of Foreign Countries Where It Has Subsidiaries

<i>DV: Firm lobbying on:</i>	Taxation log(frequency) (1)	Labor log(frequency) (2)	All Regulations log(frequency) (3)	All Regulations log(expenditure) (4)
log(No. Host Countries)	0.067** (0.002)	0.055*** (0.000)	0.116*** (0.000)	0.304*** (0.000)
log(revenue)	0.000 (0.066)	0.001*** (0.000)	0.015*** (0.000)	0.112*** (0.000)
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
R squared	0.851	0.805	0.864	0.792
N	270,671	270,671	270,671	270,671
<i>Note:</i>	*p<0.05; **p<0.01; ***p<0.001			

supports the theoretical prediction that firms' overseas operation lead to more lobbying participation to alter US domestic regulations. This is also consistent with the text evidence on firm public statements from Section 3.

6 Theory and Policy Implications

This paper provides the first systematic evidence on firm-level regulatory arbitrage in both public statements and lobbying activities, along with the theory that specifies when it is more likely to occur. US MNCs are not only actively influencing US international economic policies to facilitate their overseas expansion. At the same time, their overseas expansion also emboldens them to influence the US domestic regulations. This insight generates several theory and policy implications.

6.1 Firm Political Action and Regulatory Standards

The regulatory arbitrage mechanism is one way that firms combine their market operation and political action under 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 that follows. 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: firms use their market expansion to facilitate their political efforts.

However, this mechanism does not have to be 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 hosting governments for better regulations? Similarly, how do foreign firms creating jobs in US localities get their voice 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; Drezner 2006). 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 analysis of federal regulations, and to my best 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, 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 occur²⁸, 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

²⁸National 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.

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.²⁹

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 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. At the same time, current US protectionist trade policies are incurring additional costs for US firms who consume imports such as steel and aluminum.³⁰ 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

²⁹Partly 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.

³⁰For 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

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 cross 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 some other reasons. That said, US protectionism also comes with its own uncertainty because of potential reactions from other countries in the world. 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 are already motivating them to defend their invested interests abroad on the Capitol Hill.³¹

Appendix I: Solving the Model with Backward Induction

The model under complete information and sequential rationality can be solved through backward induction, as summarized in Table 8 below, where the 1st column specifies parameter conditions, columns 2,3,4 are sub-game perfect equilibria, and column 5 lists equilibrium outcomes.

³¹ A recent example is Section 301 Tariffs Hearing on Monday, August 20, 2018, where American companies voiced opposition to protectionism due to their subsidiaries in major trading partners such as China.

Table 8. 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 $B_u < B_f - C_o$, $B_u^G - C_o^G > B_f^G$	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.

This paper focuses on the first comparative statistics that links the firm's offshoring cost to the firm's lobbying activity.

Appendix II: 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 I employ research assistants to check the automated matching results manually.

A reasonably high level of confidence in the matching quality is achieved because two independent research assistants 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).

Appendix III: 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.³²

³²lda.congress.gov/LD/help/default.htm?turl=Documents%2FAppCodes.htm

Table 9. 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

Table 10. Firms with Overseas Operation in the Same Sector Are More Active in Lobbying

<i>DV: Firm lobbying on:</i>	Taxation log(frequency) (1)	Labor log(frequency) (2)	All Regulations log(frequency) (3)	All Regulations log(expenditure) (4)
Overseas Operation	0.087*** (0.000)	0.047*** (0.000)	0.089*** (0.000)	0.132. (0.081)
log(revenue)	-0.001*** (0.000)	0.001*** (0.001)	0.014*** (0.000)	0.110*** (0.000)
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
R squared	0.849	0.804	0.863	0.791
N	270,671	270,671	270,671	270,671

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

Appendix IV

Robustness Check for 50% Ownership

As mentioned previously, the majority control is a conservative threshold for the parent-subsidary relationship. It inevitably excludes some valid cases, such as the legal barrier in China prohibiting foreign joint ventures from having over 50% ownership in several key industries. Thus the main body uses the 25% threshold and this section show results with the 50% threshold. As shown below, the results remain largely unchanged.

**Table 11. Firms with Overseas Operation in the Same Sector Are More Active in Lobbying
(only include firms in differentiated industries)**

<i>DV: Firm lobbying on:</i>	Taxation log(frequency) (1)	Labor log(frequency) (2)	All Regulations log(frequency) (3)	All Regulations log(expenditure) (4)
Overseas Operation	0.055*** (0.000)	-0.007 (0.650)	0.120*** (0.000)	0.534** (0.001)
log(revenue)	-0.002 (0.138)	0.001 (0.355)	0.006** (0.001)	0.055*** (0.000)
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
R squared	0.847	0.776	0.873	0.816
N	50,048	50,048	50,048	50,048
<i>Note:</i>	*p<0.05; **p<0.01; ***p<0.001			

Table 12. Firm's Lobbying Activity Increases with Its Number of Foreign Subsidiaries

<i>DV: Firm lobbying on:</i>	Taxation log(frequency) (1)	Labor log(frequency) (2)	All Regulations log(frequency) (3)	All Regulations log(expenditure) (4)
log(No. Foreign Subsidiaries)	0.027*** (0.000)	0.017*** (0.000)	0.040*** (0.000)	0.116* (0.000)
log(revenue)	-0.001*** (0.003)	0.001*** (0.000)	0.015*** (0.000)	0.111*** (0.000)
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
R squared	0.850	0.805	0.864	0.792
N	270,671	270,671	270,671	270,671
<i>Note:</i>	*p<0.05; **p<0.01; ***p<0.001			

Table 13. Firm’s Lobbying Activity Increases with the Number of Foreign Countries Where It Has Subsidiaries

<i>DV: Firm lobbying on:</i>	Taxation	Labor	All Regulations	All Regulations
	log(frequency)	log(frequency)	log(frequency)	log(expenditure)
	(1)	(2)	(3)	(4)
log(No. Host Countries)	0.070** (0.000)	0.042*** (0.000)	0.094*** (0.000)	0.257*** (0.000)
log(revenue)	0.000 (0.010)	0.001*** (0.000)	0.015*** (0.000)	0.111*** (0.000)
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
R squared	0.850	0.804	0.863	0.792
N	270,671	270,671	270,671	270,671
<i>Note:</i>	*p<0.05; **p<0.01; ***p<0.001			

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’s 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.

- 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.
- 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* .
- Bloom, Nicholas, Aprajit Mahajan David McKenzie & John Roberts. 2010. "Why Do Firms in Developing Countries Have Low Productivity?" *American Economic Review: Papers & Proceedings* 100.
- 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.
- Buzard, Kristy and Sebastian Saiegh. 2016. Lobbying and Legislative Uncertainty. Technical report working paper.
- 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.
- Clark, William, Golder Matt & Golder Sona. 2013. "The Power and politics: insights from an exit, voice, and loyalty game." *Manuscript, University of Michigan and Penn State University* .
- 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.
- 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. 1978. "Exit, voice, and the state." *World Politics* 31.
- Drezner, Daniel W. 2006. "The race to the bottom hypothesis: An empirical and theoretical review." *The Fletcher School, Tufts University* .
- 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." *Strategy Beyond Markets*. .
- 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.
- Henisz, Witold J. and Bennet A. Zelner. 2004. "Explicating Political Hazards and Safeguards: A Transaction Cost Politics Approach." *Industrial and Corporate Change* 13.

- 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* .
- 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.

- Kim, In Song. 2017. "Political Cleavages within Industry: Firm-level Lobbying for Trade Liberalization." *American Political Science Review* 111(1):1–20.
- 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.
- 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.
- 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.
- 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 PhD thesis 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. 2016. "Globalizing the Supply Chain: Firm and Industrial Support for US Trade Agreements."
- 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.
- Rodriguez-Lopez, Antonio. 2014. "What Drives Offshoring Decisions? Selection and Escape-Competition Mechanisms." *University of California, Irvine, manuscript* .
- Shipan, Charles R and Craig Volden. 2012. "Policy diffusion: Seven lessons for scholars and practitioners." *Public Administration Review* 72(6):788–796.
- 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.

- 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.
- 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." *The Nature of the Transnational Firm* .
- You, Hye Young. 2017. "Ex post lobbying." *The Journal of Politics* 79(4):1162–1176.
- You, Hye Young, Melinda Ritchie. N.d. "Legislators as Lobbyists." *working paper*. Forthcoming.