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Essays on Political Risk in Supply Chain and Operations Management Practices

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ESSAYS ON POLITICAL RISK IN SUPPLY CHAIN AND OPERATIONS MANAGEMENT PRACTICES

A Dissertation
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy
Management

by
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ABSTRACT

This dissertation investigates the influence of political risk on firms’ operations and supply chain practices. Since 2008, the enactment of nearly 10,000 government interventions discriminating foreign commercial interests have pushed firms to reconsider their supply chain design and strategy. This research anchors political risk in this recent global resurgence of country protectionism and nationalist sentiment; and it examines political risk’s effects on firms’ challenges and opportunities from a supply chain and operations management lens. The first essay builds propositions linking a country’s nationalistic goals to demand, supply, and operational risks for foreign firms, using China as an example. We contribute to the literature on supply chain risk management by offering a research agenda. We theorize contemporary political risk for operations and supply chain management at the firm and individual levels. The second essay explores the influence of China’s political environment on Western firms’ strategic supply chain partner engagement by using a multiple case field study and a grounded theory methodology. We induct a theoretical process model from which three empirical patterns emerge to show when and how firms adapt their supply chain partners’ engagement to the host national strategy. We contribute to the legitimacy-based view by showing that strategic supply chain practices can complement strategic management efforts to mitigate political risk; however, we illustrate that contingencies exist. The third essay examines the influence of political institutions on firms’ use of domestic input by using four secondary dataset and regression analyses. We contribute to the global operations literature by offering the first empirical insights with respect to the influence of political institutions on firms’ sourcing strategy.
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INTRODUCTION

This dissertation comprises three essays and uses a mixed-method approach to gain a better understanding of how a country’s political environment can be a source of supply chain risks and influence firms’ supply chain and operations management (SC/OM) practices. This research is motivated by the surge of tariff and non-tariff measures to discriminate foreign commercial interests since the 2008 economic recession. The recent political events (e.g., the commercial war between the United States and China, or the Brexit) seem to indicate that political risk has become a major concern for global supply chains. To generate new insights about political risk in SC/OM, we connect the supply chain risk management (e.g., Juttner, 2005; Kouvelis et al, 2011; Sodhi et al., 2012) and global operations (e.g., Muson & Rosenblatt, 1997; Kouvelis et al., 2004) literatures to those of international business (e.g., Zaheer, 1995; Luo, 2001; Boddewyn 2016), political science (e.g., Tsebelis, 1995; Mansfield et al., 2000; Brady, 2003), and strategic management (e.g., Henisz, 2002; Stevens et al. 2016) literatures (see Figure 0.1).

Figure 0.1: Dissertation Literature Streams
Broadly defined, political risk in management represents an event or a process that lies in the political sphere and that can potentially affect firms’ business behaviors and performances. In Essays 1 and 2, we conceptualize political risk as host national strategy – that is, the host government policies that intend to control foreign entities and their image in the host country. This conceptualization stems from my own prior work experience in China and current global nationalist and protectionist developments that pose a substantial problem to our globalized supply chain networks. In Essay 3, we rely on two different political institutions attributes that are commonly used in political economy to study political risk. Figure 0.2 illustrates how our three essays bridge various research methods and data sources to advance theory building and testing with the intent to better understand the role of SC/OM within the realm of political risk.

**Figure 0.2: Dissertation Overview**

Essay 1 introduces a conceptual framework and a research agenda for host national strategy in terms of supply chain risk management. We theorize about the political risk
sources and SC/OM risk outcomes that are embedded within a host country’s economic, diplomatic, and social environments. We draw upon institutional and socio-psychological theories to develop propositions that link nationalist host government policies to SC/OM risks for foreign firms and foreign national managers in three political domains (i.e., degrees of domestic mercantilism, country animosity, and national identity). Our study provides a comprehensive framework for researchers in supply chain risk management by taking a multi-disciplinary approach—political science, international business, strategic management, economics and socio-psychology—to describe the political risks inherent to nationalist governments, which are potential sources of SC/OM risks for foreign firms. Furthermore, our study posits that political risks not only impact foreign firms, but also foreign national managers as individuals, and in turn, the decisions they make at the operational level. Finally, to enhance the practical relevance of our research and offer guidance to empirical researchers on how to assess these emerging SC/OM risks, we illustrate our theoretical model using China.

Essay 2 explores whether host national strategy influences foreign firms’ strategic choices relative to their supply chain partner engagement. Given the scant empirical research in SC/OM in the political risk domain, we appropriately use a grounded theory approach and design a multiple case field study of western firms in China to induce how foreign executives perceive host national strategy and its influence on their firms’ SC/OM strategies. Our research strategy enabled us to draw directly upon the perceptions of foreign national executives, on which we induced a three-phase, theoretical model depicting variation in how foreign firms perceive, make sense, and respond to Chinese host national
strategy. Based on our conceptual model, we constructed three empirical paths from our data. These paths describe the type of engagement strategies that foreign firms enacted with their supply chain partners, which we termed (1) self-centered, (2) collaborative, and (3) socially responsible. Generally, the greater the need for the firms to become more “valuable” to the host government, the more their strategic engagement with their supply chain partners is tied to strengthening broader societal goods (e.g., pollution reduction). Our work pushes the boundaries of the legitimacy-based view of political risk from strategic management to SC/OM by gaining empirical evidence that nationalistic policies do indeed influence foreign firms’ SC/OM strategies. This is the first empirical study that connects organizational legitimacy theory to firms’ global supply chain strategies. Specifically, we observed this: firms at the host country operational level, seek to achieve different degrees of legitimacy to the host government by engaging with their strategic partners in distinctive ways, according to their perceived need to mitigate host national strategy as a major source of political risk. Furthermore, we delineate potential benefits of these strategic engagement initiatives for the host country’s economic and social development—and for the firm, the potential long-term negative effects. Our exploratory work establishes a critical foundation for future research on the many facets of short-term opportunities and long-term challenges of political risk at the SC/OM-strategic management interface.

Essay 3 examines the influence of political institutions on one aspect of a firm’s sourcing strategy, namely its use of domestic versus foreign input. In Essay 3, we conceptualize political risk as the ability for a government to enact policy change. Firms
face a greater political risk when they operate in countries where their leaders face little resistance in attempting to modify existing policies (Henisz, 2000). Thus, we ask if certain political institutions’ features—political hazard and autocracy—operationalized as their country’s level of political constraints and level of autocracy facilitate the implementation of protectionist policies that act to reduce the firms’ usage of foreign input. Accordingly, we use four secondary data sources from political science literature and the World Bank to assess the influence that political hazard and level of autocracy have on firms’ use of domestic input in 88 countries. We use a zero one inflated beta (zoib) regression analysis to deal with the specificity of modeling proportional data (i.e., the proportion of domestic input that varies continuously on the interval [0,1]). Zoib allows us to analyze the effects of political risk on firms’ use of domestic input based on the firms’ specific sourcing strategy; e.g., (1) whether the firm uses exclusively domestic input, (2) does not use any domestic input, or (3) uses an amount in between these two extremes. We find that political risk affects firms’ use of domestic input in distinct ways depending on the firms’ sourcing strategy. Overall, use of domestic input decreases when the level of autocracy increases, and foreign firms use less domestic input than their domestic counterparts. This study is the first to subject to empirical scrutiny the influence of the political environment on firms’ sourcing strategy across a wide range of countries. This research has important implications as it can help firms determine which types of political institutional attributes are more likely to influence firms’ use of domestic input, and thereby indicate the necessity of devoting resources to the design of adequate contingency plans to mitigate the capacity, quality, inventory, and cost risks associated with a change in firms’ sourcing strategy.
CHAPTER ONE
HOST NATIONAL STRATEGY AS POLITICAL RISK FOR SUPPLY CHAIN
AND OPERATIONS STRATEGY

“Our politicians have aggressively pursued a policy of globalization - moving our
jobs, our wealth and our factories to Mexico and overseas. ... This wave of
globalization has wiped out our middle class. It doesn't have to be this way. We
can turn it all around - and we can turn it around fast. ... On trade, on
immigration, on foreign policy, we are going to put America First again.”

Excerpted from Donald Trump’s campaign speech in Monessen, PA (Politico, 2016).

1.1 INTRODUCTION

This paper aims to identify the political risk processes that host governments adopt
with respect to nationalist and protectionist issues and their repercussions for supply
chain and operations management (SC/OM) at both the firm and individual levels.
Nationalism refers to the citizens’ attachment to their nation (i.e., patriotism) associated to
the belief that their nation is superior to other nations (Kosterman & Feshbach, 1989), while
protectionism denotes a government’s willingness to shield its domestic industry from
foreign competition (Krugman, 1995). Nationalist and protectionist postures are related to
outgroup hostility, so they can be sources of political risk for foreign entities located in a
host country. Political risk is a multi-disciplinary ill-defined construct that can be
conceptualized in a variety of ways (Jarvis, 2008). For semantic clarity in this study, we
conceptualize political risk as a “host country’s national strategy towards foreign entities”
(hereafter, host national strategy) that we operationally define as the host government’s
actions and policies with respect to nationalist goals towards both foreign entities (i.e.,
individuals and firms) and the resultant perceptions the host society (i.e., citizens, media, business and legal community) has of these foreign entities, which act to incur a liability of foreignness for foreign constituents operating in the host country. In simple terms, host national strategy is the reflection of how a government treats and shapes the image of foreign firms and individuals on its territory with respect to nationalist issues at the economic, diplomatic and social levels. Accordingly, we pose the following two questions: (1) What types of political processes can a host government engender to achieve its nationalistic goals? (2) What types of supply chain risks emanate from those political processes?

We specifically explore both political risk stemming from the recent nationalist and protectionist stances taken by citizens and governments in several countries, whether they be overt (well-known government articulated policies) or covert (unstated government policies which influence host societies). However, we note that these risks have historical precedence; and we demonstrate that in many countries, like China, they have been under the radar screen of the SC/OM literature. Boddewyn and Craco (1972) revealed that nationalist issues, such as national economic interest, sovereignty and identity, were posing serious political risk to multinational corporations (MNCs) in the late 1960s within emerging economies. However, in the past three decades of rising globalization, the SC/OM risks inherent within these nationalist issues appeared to have declined significantly, and not surprisingly, there is a dearth of SC/OM information in this area. Nonetheless, the rate and magnitude of recent protectionist trends in developed countries, including the United States (U.S.), Great Britain and France, are a clarion call for new
SC/OM strategy research in this area. Coupled with nationalistic developments in lesser developed countries, these trends pose many unaddressed challenges to our globally integrated supply chains.

Indeed, fresh political events such as the Brexit or the 2016 U.S. presidential election have witnessed the victories of politicians vouching for greater independence from deemed harmful foreign influences. The results of these elections are in line with a more global protectionist movement that has intensified after the 2008 financial crisis, the biggest economic downturn since the great depression, as G20 members have been implementing more than 3,500 protectionist measures (The Guardian, 2016a).

The main reasons behind this trend are the ability for the politicians enacting the measures to instantly provide jobs and be perceived as defenders of the nation, and the support from host nationals who want to ensure that government stimulus benefit local economies and create jobs at home rather than abroad (Hufbauer et al., 2013). Nationalist issues are also on the rise in emerging countries (e.g., the Philippines) that wish to play a more important role in the world political spectrum as well as in developed countries whose many citizens’ have had their sense of national identity and financial safety threatened by mass migration and growing economic deregulations. Politicians surfing on this wave are apt to promise more direct government intervention in the national economies and greater regulations over the influence that foreign entities have on the fate of their nations. Therefore, it is not surprising that the latest studies surveying senior executives showed that political risk and the firms’ external affairs function to manage those risks have become more important
recently (Giambona et al., 2017) and are going to be top priorities in the coming years (Erdmann et al., 2016; Marchi et al., 2016).

If firms want to stay ahead of the curve and use appropriate SC/OM strategies to mitigate those political risks, it is first crucial to identify and assess them (Kouvelis et al., 2011). The international business and strategic management fields have long recognized the role played by governments on business practices (e.g., Ring et al., 2005; Boddewyn, 2016), the impact of political risk instability (e.g., Click, 2005; Bekaert et al., 2014) and nationalist issues (Boddewyn & Cracco, 1972; Jakobsen & Jakobsen, 2011) on foreign direct investment. However, little is known about the influence of political processes stemming from nationalist issues on supply chain risk management (SCRM). In this study we do not focus on whether firms should or should not invest in a foreign market based on an index of political instability. Instead, we draw upon institutional theory to develop propositions and build a conceptual framework that links a country’s nationalist goals to three continua of risk sources (i.e., degrees of domestic mercantilism, country animosity, and national identity) and their risk outcomes for foreign entities at the supply chain level. Furthermore, we draw on self-categorization and social identity theories to argue that not only foreign firms, but also their foreign national managers’ decision-making behaviors can be adversely influenced by the degree of political risk within a host country.

Our study contributes to SC/OM strategy by integrating theories from multiple literatures (e.g., political science, international business, strategy, economics and organizational behavior) to explore and re-conceptualize political risks that are associated with the rising tide of protectionist and nationalist developments. First, we conceptualize
political risk in terms of a host national strategy that is fueled by the host government, and in turn, creates supply chain and operational risks for foreign firms. Second, our framework considers both the foreign firm and foreign national individuals as distinct, but associated units of analyses. We posit that political risk could influence the firm’s supply chain design as well as manager’s decision-making at the operational level. Finally, we demonstrate our theoretical conceptualizations by using China as one example and offer an agenda for future research. The remainder of this article is organized as follows: In Section 2, the literature on supply chain risk management and political risk identification is reviewed. Section 3 introduces our conceptualization of political risk and our propositions. In Section 4, we exemplify host national strategy with China’s context. In Section 5, we present the implications of our conceptualization of political risk and offer suggestions to empirically test our propositions. We conclude in section 6.

1.2 LITERATURE REVIEW

1.2.1 Supply Chain Risk Management

Outsourcing strategies to lower costs, expand markets, and garner intellectual property are among the primary competitive reasons that have led to expansions of domestic and international exchanges (Giffi et al., 1990; Gray et al., 2011). Furthermore; with globalization, firms have become increasingly specialized and dependent on their supply chain business partners (Harland et al., 2003; Christopher, 2005). Consequently, the business focus shifted from the firm to the supply chain in terms of competitive advantage and risk management (Swaminathan & Tayur, 2003; Christopher, 2005). This shift
suggests that firms must not only account for the risks endogenous to their firm, but also for the exogenous ones tied to their upstream and downstream partners as well as the business environment where those business units operate. SCRM defines risk as “an undesirable possible consequence of uncertainty” (Kouvelis et al., 2011:14). Figure 1.1 depicts the three layers of supply chain risk sources and the risk categories that are usually used in the literature to describe them. Supply chain risk sources are articulated around three meta pillars (Juttner, 2005; Schoenherr et al., 2008; Sodhi et al., 2012): (1) process and control risks (e.g., quality failures) impact the firm’s operations internally; (2) supply and demand risks (e.g. sourcing and demand volatility) are external to the firm and internal to the supply chain; and (3) environmental risks are external to and influence the firm’s supply chain and operations (Christopher, 2005).

**Figure 1.1: Supply Chain Risk Management Framework**

![Figure 1.1: Supply Chain Risk Management Framework](image)

Adapted from Mason-Jones and Towill (1998)

---

1 Shaded cells are the areas of interest in this study.
Environmental risks are of utmost importance since they supersede supply chain and operations functions; hence, they can impact any of the other business risks borne by the firm. We classify environmental risks into three broad categories: (1) natural (e.g., earthquake, flood), (2) political (e.g., policy change, riots, host national strategy), and macro for all other external risks (e.g., exchange rate, economic crisis).

Notably, political risk has emerged recently as an important concern for business executives (Erdmann et al., 2016) and international business scholars (e.g., Darendeli & Hill 2016; Giambona et al., 2017; Stevens & Newenham-Kahindi, 2017), but it has received little attention in the SC/OM literature. Indeed, a search of the term “political risk” in six major SC/OM journals 2 only returns a couple of studies featuring political risk as a central theme. Bunn and Mustafaoglu (1978) attempted to forecast political risk using Bayesian methodology, which derives probabilities of political risk event occurrences from a panel of experts’ assessment. Davarzani and colleagues (2015) used a case study to operationalize political risk as the economic sanctions imposed on a Middle-Eastern country, and assess how supply chain managers perceive and mitigate them. Another exception is an empirical identification of political risk in offshoring engagements based on practitioners’ perceptions (Hansen et al., 2017). Other SC/OM studies listed some types of political risks in their SCRM framework but did not provide depth or theoretical perspectives about their conceptualization (e.g., Giunipero & Eltantawy, 2004; Kleindorfer & Saad, 2005; Tang & Tomlin, 2008). In contrast, we contribute to the literature by

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focusing on (1) political risk as it may have severe consequences for SC/OM according to the supply chain vulnerability map (Kouvelis et al., 2011), and (2) its theoretical identification since identification is a complex step that has received less attention than risk mitigation strategies in the SCRM literature (Kouvelis et al., 2011).

1.2.2 Political Risk Dimensions

We draw from the international business literature and review four critical political risk’s dimensions to help us identify its scope and the boundaries used in this study. First, political risk can be internal or external (Simon, 1984; Stevens et al., 2016). Internal risks stem from the host country where the MNC has placed its overseas operations (e.g., nationalization), while external political risk can originate from the MNC’s home country (e.g., restrictions on technology transfer), the global environment (e.g., codes on MNC conduct), or the international environment (e.g., diplomatic tensions). Second, political risk can be direct or indirect. Direct risks involve the MNC with a host agent (e.g., government), and indirect risks pass through a third party before reaching the MNC (e.g., government generates risk for the MNC through the media or another agent) (Simon, 1984). Third, political risk can stem from either political instability (i.e., change in government) or policy instability (i.e., change in policies), which are not necessarily dependent on each other (Robock, 1971; Kobrin, 1982; Miller, 1992) as change in government leadership might not result in a policy change that would automatically affect international business (Robock, 1971). Finally, political risk can be either of macro nature (i.e., targeting all firms) or micro nature (i.e., targeting firms of a specific industry) (Robock, 1971; Alon & Herbert, 2009). We focus in this study on political risk stemming from the host government’s policies and
actions (i.e., direct internal), and from the influence that the host government has on other
host agents (e.g., citizens, media) that could generate risks for foreign entities (i.e., indirect
internal). We also consider the impact of the international environment on the host
constituents’ policies and actions (indirect external). Additionally, we consider both
political and policy instability as long as they concern a change in the host national strategy.
Finally, in this study, macro type political risks have repercussions for all foreign entities
in the host country, while micro ones concern only entities from a specific country; hence,
our micro political risk classifies by country of origin as opposed to industry in Robock’s
(1971) study.

1.2.3 Political Risk Process

Robock (1971:7) operationalized political risk as “discontinuities in the business
environment that are difficult to anticipate and result from a political change.” Kobrin
(1982) and Fitzpatrick (1983) noted that similarly most political risk definitions identify it
as a consequence of discontinuity and capture political instability instead of political risk.
Thus, the two phenomena are distinct. Fitzpatrick (1983: 250-252) contends that the
continuous change processes, which are present in the political environment where foreign
firms operate, have been ignored:

“On closer examination, however, the literature is found to define political event
risk rather than political risk. Such a definitional situation is unsatisfactory. The
character of politics is a continuous process rather than a discrete event series.
The definition of political risk would be improved if it were evolved in terms of
process variables rather than event variables.” [...] “By focusing on potential
instabilities, the models imply that the everyday foreign political environment is
a stable one that does not contain any risks other than those normally present in
its domestic counterpart.”
In a recent political risk literature review, Hansen et al. (2017) showed that political risk still revolves largely around the concept of instability that has either political, legal or economic roots. We depart from this ideology, as the political risk events that lead to extreme consequences for foreign firms, such as expropriations or nationalizations, have become rare occurrences nowadays (Jensen, 2005; Henisz & Zelner, 2010) since host governments compete to attract foreign direct investment and are bound to respect transnational regulations (e.g., see World Trade Organization (WTO) agreements). Although a country may experience political or economic instability, host governments try to preserve the interests of foreign companies in order to demonstrate that their countries are safe places for foreign direct investment and prevent financial and human capital outflows (Henisz & Zelner, 2010). Thus, our research concurs with Fitzpatrick (1983) that political risk might originate in subtler, continuous, and long-term processes rather than radical political risk events. Furthermore, political instability is likely to impact domestic firms as well. In this study, we concentrate on the processes that are fueled by host government to fulfill political purposes and that primarily have potential consequences for foreign firms at the SC/OM levels.

1.3 THEORY DEVELOPMENT: HOST NATIONAL STRATEGY

Host national strategy, as a risk source, is related to institutional theory (North, 1990; Williamson, 2000) since the strategy is driven by the host government, which is embedded at the national level within its institutional environment (Kostova, 1996). The institutional environment defines the “humanly devised constraints that shape human
behavior” (North, 1990:3) and is composed of formal and informal institutions. For the host national strategy, we equate formal institutions with the government that sets the rules and laws to be enforced in the regulatory domains, while the informal institutions are rooted in the cultural heritage of the society that devises the norms and cognitive processes that individuals share to reduce their environmental uncertainty (North, 1990; Scott, 1995). We posit that host national strategy represents a political risk for foreign entities as it impacts them directly through formal institutions, and indirectly through informal institutions.

Formal and informal institutions interact with each other, and much has been written about how informal institutions shape formal institutions through long-term cultural and political processes (North, 1990; Williamson, 2000; Holmes et al., 2013). Informal institutions can pressure formal institutions via elections and lobbies to modify their host national strategy. Even though informal institutions are deemed to be resilient when formal institutions change (North, 1990; Williamson, 2000), formal institutions (e.g., government) can also influence informal institutions (e.g., civil society) for political purposes. Political leaders can manipulate nationalism (e.g., Reilly, 2013, Cho & Choi, 2016) to win office position and retain power, or reinforce internal cohesion in times of domestic hardship according to the diversionary theory (Solt, 2011). Thus, we posit that government entities can influence social norms and cognitive processes as they devise the rule of the games, oversee education programs and media, and sanction social behaviors that are deemed incompatible with the governments’ goals. Take the following for example. Consider how the cognitive domain of some U.S. citizens towards France changed (e.g., boycott of French products) when the U.S. Congress decided to rename the
French fries “freedom fries” after France declined to support the U.S. military intervention in Iraq in 2003. It is unlikely that as many U.S. citizens (i.e., informal institutions) would have demonstrated as much anti-French sentiments if the government had not directly launched the campaign, and indirectly encouraged its citizens to do so through the media. An opposite example would be the ban by the French government of boycott campaigns targeting Israeli’s products during the summer 2014, since the social initiative went against its geopolitical agenda. In the same way, Weiss (2013) reports that the authorization or repression of anti-foreign protests in China highly depends on the willingness of the government to show resolve or favor economic cooperation with a foreign government when an international dispute occurs. These examples highlight that governments have the power to influence the actions of the society towards the desired host national strategy.

Host national strategy has the government as a focal point and aims at capturing the potential political risk that will vary according to the nationalist policies use to achieve different economic, political, and social goals. Thus, it differs from institutional profile (Kostova, 1997), which describes the institutional environment of a nation with respect to a specific issue that will be assessed in terms of its regulatory, normative, and cognitive domains. Additionally, host national strategy differs from institutional distance (Kostova, 1996) as the former originates only from the host institutional environment, while the later measures the dissimilarity between the host and the foreign institutional environments. Institutional distance might not be ideal to capture political risk, since countries with low institutional distance (e.g., Japan versus South Korea) might suffer from higher political risk than countries with high institutional distance (e.g., Japan versus New Zealand).
Therefore, we believe that host national strategy is complementary to institutional distance, as it could help identify and assess difficulties that foreign firms face in a host country that go beyond the institutional and cultural ones (e.g., Kostova, 1996; Xu & Shenkar, 2002).

We argue that host national strategy represents political continua (Fitzpatrick, 1983) that are implemented by a government to respond to nationalist goals, which are supposed to fulfill the best interests of the nation (Boddewyn & Cracco, 1972), and that increase the chance of business discontinuities for foreign firms (Robock, 1971). Since political risk is rooted in economic, political (renamed diplomatic in this study), and social environments (Alon & Herbert, 2009), we develop propositions for each layers. Thus, we conceptualize SC/OM risks with respect to the three environmental layers—economic, diplomatic and social, where firms and individuals, respectively, are impacted based upon the host national strategy (See Figure 1.2). For each layer, we examine the particular host national strategy sources of risk and then the associated outcome risk for the foreign entities—liability of foreignness, liability of origin and relational hazards- and their consequences for SC/OM.

1.3.1 Economic Environment

Governments pursue a wide array of socio-economic goals that aim to maximize welfare for their citizens. The achievement of these goals is mainly dependent on economic growth, which can be stimulated by protecting domestic firms from foreign competition according to protectionist and mercantilist theories (e.g., Bairoch, 1995; Shafaeddin, 1998). Thus, we contend that governments can resort to mercantilist policies to protect and support national champions and high value-added industries that are deemed (we do not claim they do) to
Figure 1.2: Host National Strategy: A Process View of Political Risk for Supply Chain Risk Management

Goals: Nationalist Issues
- Create national champions
- Develop high value-added industries

Risk Sources: Host National Strategy
- Degree of Domestic Mercantilism

Risk Outcomes for Foreign Entities
- Liability of Foreignness
  - Demand Risk
  - Supply Risk
  - Operational Risk

Economic Environment
- Defend sovereignty
- Extend international influence

Diplomatic Environment
- Degree of Country Animosity
  - P1a +
  - P1b +
  - P1c +

Social Environment
- Preserve national culture
- Foster national unity

Degree of National Identity
- P2 +
  - P2a +
  - P2b +
  - P2c +

Relational Hazards
- Mistrust
- Opportunistic Behaviors

Firm Level

Individual Level
guide the country towards full employment, trade surplus, and, more generally, economic growth.

1.3.1.1 Degree of Domestic Mercantilism. We define domestic mercantilism as the host government’s willingness to retain as much economic activity as possible on its territory by implementing behind-the-border measures that favor domestic firms over foreign ones and that coerce foreign firms into supporting the domestic economy. As a reminder; in this study, host national strategy focuses on the policies impacting foreign firms in the host country so is only a subset of a broader country’s economic strategy. We crafted the concept of domestic mercantilism for the following reasons. First, mercantilist policies are not only passive measures that intend to protect domestic firms from foreign competition (i.e., protectionism), but they also actively support them in becoming more competitive to win domestic and international market shares (Shafaeddin, 1998).

In other words, mercantilist policies encompass policies that both protect (e.g., local content requirements) and assist (e.g., export subsidies) domestic firms. Second, behind-the-border measures that provide domestic firms a competitive advantage (Porter, 1986; Hufbauer et al., 2013; Rickard & Kono, 2014) seem to be more relevant nowadays than traditional protectionist policies such as trade barriers (i.e., tariffs and quotas) and artificial currency depreciation, both of which intend to increase the price of foreign imports to make domestic firms more competitive. Indeed, these trade barriers have been greatly reduced with the expansion of free trade, the emergence of many trading blocs, and the enforcement of WTO regulations. As the median global tariff rate decreased from 26% in 1980 to 7% in 2013, the number of non-tariff measures such as localization barriers to trade have
increased rapidly to become twice as many as tariffs measures (Ezell et al., 2013). Third, there is no consensus about the terms used to define the behind-the-border policies that affect foreign firms in a host country. For instance, local content requirements have been classified as indigenous innovation policies (Hemphill & White III, 2013), non-tariffs barriers (Hufbauer et al., 2013), or localization barriers to trade (Ezell et al., 2013). Therefore, we gather under the umbrella term, domestic mercantilism, the indigenous innovation policies that favor domestic firms (e.g., financial benefits) and discriminate foreign firms (e.g., mandatory domestic standards) to provide a competitive advantage to the former, and the localization barriers to trade that coerce foreign firms to adapt their operations’ strategy to maneuver in the host country (e.g., forced technology transfer) according to the framework proposed by Ezell and colleagues (2013). Finally, general mercantilist policies aim at reducing imports and increasing exports regardless of the nationality of the firms operating within the host country (Ezell et al., 2013). In contrast, our concept domestic mercantilism focuses on policies that separate host and foreign firms and intend to provide a competitive advantage to the former.

Domestic mercantilist policies are reflected in government procurement policies, local content requirements, subsidies, regulations and standards, intellectual property rights, and state ownership in key sectors (Singh & Jose, 2016). They intend to shift profit from foreign to domestic companies (Branco, 1994; Vagstad, 1995), prevent foreign dependency in sensitive industries (e.g., defense), support local jobs, protect infant industry, and foster domestic innovation (Uttley & Hartley, 1994; Hufbauer et al., 2013;
Stephenson, 2013). Thus, our source of political risk for the economic environment is the degree of domestic mercantilism used by the host government.

**1.3.1.2 Liability of Foreignness.** We contend that these domestic mercantilist policies that favor domestic firms and discriminate foreign ones are sources of SC/OM risks for foreign firms. Indeed, foreign firms in a host country are at a disadvantage with domestic firms, ceteris paribus, since they incur costs of doing business abroad (Hymer, 1976), which is also known as liability of foreignness (LOF) (Zaheer, 1995). Similarly to Zaheer (1995: 343), who operationalizes LOF as “all additional costs a firm operating in a market overseas incurs that a local firm would not incur”, we define LOF for foreign firms as all the additional demand, supply, and operational risks stemming from the degree of domestic mercantilism that a firm operating in a market overseas incurs that a local firm would not incur. LOF put all foreign firms at a competitive disadvantage since LOF concerns firms that bear a liability for not being from the host country (Ramachandran & Pant, 2010). Thus; in this study, LOF targets all foreign firms regardless of the potential moderating effects of cultural, administrative, geographic, and economic distances (Ghemawat, 2001) with their home country. Additionally, at the investment stage, foreign firms may be considered as an asset by host governments since they bring capital and technology. In this study, we focus on the post-investment stage and its related liability for foreign firms.

*Proposition 1: The higher the degree of domestic mercantilism in a host country, the greater the foreign firms’ liability of foreignness.*

Here, demand risk may represent unexpected shifts in customers’ preferences that can decrease a foreign firm’s revenue. Demand risk can manifest through discriminatory public
procurement policies and product standards regulations. On the one hand, government procurement policies might favor domestic firms at the expense of foreign firms for public procurement and government-financed projects (e.g., Buy American Act). The demand risk is subsequent for foreign firms that entered a host country with a market-seeking strategy since the government procurement market accounts for 10 to 15 percent of an industrialized country’s GDP (Trionfetti, 2000; Hufbauer et al., 2013). Discriminatory procurement practices can be explicit, but are more often implicit, so it is harder for foreign firms to provide evidence of a tacit discrimination (Trionfetti, 2000; Ssennoga, 2006). Indeed, the different multilateral agreements (e.g., Government Procurement Agreement) that are supposed to prevent these arbitrary and discriminatory practices have not yet proved to be effective as home-biased procurement is significant (Trionfetti, 2000; Rickard & Kono, 2014) and has increased by more than 10% on average since the 2008 crisis (Hufbauer et al., 2013). Moreover, these public discriminatory practices, if they are institutionalized, have potential spillover risks into the private sector; which tend to lean towards government’s conduct (Shimp & Sharma, 1987; OECD, 2008). On the other hand, the establishment of domestic technical standards that are not harmonized with international ones can shift foreign firms’ market shares to domestic firms since foreign firms incur additional costs to meet domestic standards and are more scrutinized when it comes to compliance (Hemphill & White III, 2013; Singh & Jose, 2016). Therefore, we contend that governments that implement domestic mercantilist policies to reinforce domestic firms’ market shares are sources of demand risk for foreign firms.
**Proposition 1a:** The higher the degree of domestic mercantilism in a host country, the greater the demand risk for foreign firms associated with liability of foreignness.

Here supply risk represents uncertainties within the supply network that could result in supply disruptions or a negative change in inputs’ expected cost or quality. Domestic mercantilist policies encourage local content requirements (LCRs), which are fast growing non-tariff barriers widely used as protectionist measures in both developing and developed countries as they are deemed to have affected USD2.7 trillion of world trade since the 2008 economic crisis (Hufbauer et al., 2013; Stephenson, 2013). LCRs aim to encourage foreign firms to purchase domestic intermediate goods and services through quantity and price signals (Hufbauer et al., 2013). Quantity signals indicate to foreign firms the mandatory portion of production inputs they must source from domestic suppliers, while price signals through import licenses and subsidies intend to make domestic inputs more attractive (Hufbauer et al., 2013). The term “content” in LCRs varies from the share of parts that are produced locally and used in the final product’s assembly to the percentage of local intellectual property embodied in the product’s design (Ezell et al., 2013).

Although LCRs violate some of the WTO provisions, they have been expanding quickly due to several loopholes in WTO agreements and the complexity to initiate and enforce a dispute (Hufbauer et al., 2013; Singh & Jose, 2016). LCRs pose several supply risks to foreign firms that have to modify their supply base or their product to comply with local regulations. LCRs might raise production costs and delays due to a lack of competition in the host market (Hufbauer et al., 2013; Stephenson, 2013), decrease overall quality since firms may have to alter the composition of their products (Block & McGee,
1997), and increase corruption issues through local favoritism (Hufbauer et al., 2013). Moreover, replacing original suppliers by domestic ones might incur a quality risk if the latter are not mature enough. Thus, the domestic mercantilist policies that encourage foreign firms to source locally may enhance supply risk.

**Proposition 1b:** The higher the degree of domestic mercantilism in a host country, the greater the supply risk for foreign firms associated with liability of foreignness.

Here, operational risks represent the uncertainties that could affect negatively a firm’s processes and its related competitiveness. Governments may use LCRs to restrict foreign ownership in certain key sectoral industries to pursue current national interest (Hufbauer et al., 2013). To operate in these sectors, foreign firms are forced to outsource all or part of their processes to domestic firms, so might incur involuntary knowledge spillovers towards potential future competitors as well as quality risks since the firm is not directly overseeing the processes anymore. While, these restrictions might create implicit knowledge spillovers, governments can also force foreign firms to transfer their technology as a condition to market access (Ezell et al., 2013). LCRs can restrict data flow by requiring foreign firms to localize their data storage and analysis (Hufbauer et al., 2013). This might affect the effectiveness of the firm and generate security and intellectual property concerns as firms are sometimes asked to share their proprietary source codes and data encryption keys under the claim of national security concerns (e.g., Wong & Dou, 2015). More broadly, host governments can use national policies to give a competitive advantage to domestic firms by restricting foreign firms’ operations under the claim of national security or competition issues (e.g., Hemphill & White III, 2013). For instance, in the
pharmaceutical industry, governments can issue compulsory licenses to their domestic manufacturers so they can produce medicines under patents; but the WTO does not explicitly state how the patent holders should be compensated, nor can they prevent those countries from exporting some of the medicines at lower costs to lesser developed countries lacking the production capacity (Ezell et al., 2013).

*Proposition 1c: The higher the degree of domestic mercantilism in a host country, the greater the operational risks for foreign firms associated with liability of foreignness.*

### 1.3.2 Diplomatic Environment

Tensions among nations can grow from territory, economic, diplomatic, and religious conflicts (Riefler & Diamantopoulos, 2007:87). To justify the legitimacy of the state, governments strive to demonstrate to their citizens that they can handle these tensions by preserving the nation’s political and territorial sovereignty as well as carrying weight internationally. The ability to defend the nation’s best interests in international politics primes especially for countries whose elites built their legitimacy on protecting the country from foreign threats or got elected by constituents supporting nationalistic views. Nationalism tends to support aggressive foreign policies (Druckman, 1994), which can lead to conflict and animosity. We argue that governments can enhance the degree of animosity towards specific nations in order to rally their citizens behind their nationalist foreign policies, which can have historical (e.g., country that suffered colonialism), political (e.g., distraction from domestic socio-economic issues), or geopolitical (e.g., gain leverage in international feuds) justifications.
1.3.2.1 Degree of country animosity. Animosity is defined as “the remnants of antipathy related to previous or ongoing military, political, or economic events” (Klein et al., 1998: 90). According to Jung and colleagues (2002), animosity can be stable when it results from multiple provocations over time (e.g., Cold War) or situational when it originates from a specific or current event (e.g., 1997 Asian financial crisis). Animosity can have war, economic, mentality, and religion antecedents (Riefler & Diamantopoulos, 2007) and is correlated to external attribution and controllability (Leong et al., 2008) according to the attribution theory (Weiner, 1986). Animosity can potentially affect any members in a society since it can be transmitted to individuals who have not been exposed to the adverse events themselves (Jung et al., 2002).

In this paper, we do not focus on the conflicts themselves, which are political risk events, but on the continuous processes that fuel animosity and could lead to SC/OM risks after the occurrence of a diplomatic incident. Stable animosity is a predictor of situational animosity (Leong et al., 2008) since long-term feelings of resentment towards a foreign nation can bolster the current animosity when an incident ensues. To decrease this stable animosity and embrace reconciliation, societies must change different societal beliefs that determine the conflictive ethos (Bar-Tal, 2000). Bar-Tal (2000:360) argues that “the mobilized cultural, educational, social, and political institutions disseminate these beliefs and help maintain them”; so governments play a tremendous role in the reduction, sustainability, and magnification of stable animosity, which in turn increases SC/OM risks for foreign firms when situational animosity tied to an international conflict is aroused. Since these societal beliefs are transmitted through “communication channels and
institutions” (Bar-Tal, 2000: 354), we argue that governments may impact animosity via mass education and mass media, which are planned at the national level (Smith, 1992). On the one hand, the media plays a key role in shaping individuals’ perceptions of a foreign country’s image, especially when it is negative (Kotler & Gertner, 2002). The constant reminder of negative events can increase animosity over time (Scherer et al., 1975; Jung et al., 2002). The media may mass broadcast a foreign country’s supposed wrongdoing to fulfill nationalist political goals and fuel animosity. In several experiments, Russell and Russell (2006) showed how the media can manipulate animosity by using press releases. On the other hand, governments play a great role in regulating animosity via education programs that teach younger generations about the potential enmity of other nations (Bar-Tal, 2000). For instance, the efforts undertaken by the French and German governments to use education to improve the perceptions of each other (Smith, 1992) clash with the content of Japan’s education textbooks regarding World War II, which is considered controversial and offensive by China (McGregor, 2010; Gao et al., 2017). Therefore, our source of political risk for the diplomatic environment is the degree of animosity driven by the host government towards a given foreign country.

1.3.2.2 Liability of Origin. Klein and colleagues (1998) and Klein and Ettenson (1999) showed that consumer animosity is distinct from ethnocentrism; that is, when consumers have animosity towards a country, they do not deter buying foreign products in general, but rather avoid buying products from that specific country. While demand, supply, and operational risk outcomes stemming from domestic mercantilism are concerning all foreign firms, country animosity risk outcomes are idiosyncratic since they
are related to the relationship held by the host country with a specific country. Consequently, instead of bearing a liability for not being from the host country (LOF), foreign firms suffer a liability for being from a specific country, which Ramachandran and Pant (2010) label liability of origin (LOO). This LOO is associated with the same demand, supply, and operational risks that we defined earlier.

*Proposition 2: The higher the host country animosity towards a foreign country, the higher the foreign country firms’ liability of origin.*

Demand risk stems from the reluctance of consumers with a high animosity to purchase products from a foreign country which has been or is involved in war and economic conflicts with their home country (e.g., Klein et al., 1998; Klein & Ettenson, 1999; Jung et al., 2002). While stable animosity is deemed to reduce the consumption of products from that country, situational animosity has more drastic effects as consumers can organize boycotts; which have more severe impacts on sales, employee morale, and marketing strategy (Ettenson & Klein, 2005). For example, to protest against the French government and its nuclear testing program in the South Pacific Ocean, citizens of Australia and neighboring countries organized boycotts that significantly impacted French-related businesses located there (Ettenson & Klein, 2005). The key point is that stable animosity reinforces situational animosity (Leong et al., 2008); hence, foreign firms that come from a country that has a high animosity with the host country are more likely to suffer lost sales and for a longer period when a diplomatic incident occurs. Chinese consumers’ animosity towards Japan reduced their willingness to buy Japanese products and was negatively related to the ownership of Japanese products independent of their quality more than 60 years after the end of the war (Klein et al., 1998). Thus, we posit that a government can
fulfill its political agenda by using media and education programs to fuel both stable and situational animosity towards a foreign country that are sources of demand risk for foreign firms in the host country.

Proposition 2a: The higher the host country animosity towards a foreign country, the higher the demand risk for the foreign country’s firms associated with liability of origin.

On the supply side, foreign firms in the host country could face supply disruptions if the host country was the target of economic-political sanctions restricting trade, especially imports. Sanctions have concerned more than half the worldwide population since WWII, and are usually imposed by developed countries or international players (e.g., United Nations Organization) on emerging countries requiring them to change their domestic or international policies (Eyler, 2007). Sanctions can impact material, financial, and knowledge flows between the country imposing the sanction and the firms located in the target country (Davarzani et al., 2015). For instance, members of automotive supply chains rely a lot on imported parts and are affected by sanctions regarding logistics and procurement activities (Davarzani et al., 2015). Davarzani and colleagues (2015:1578) found that the import restrictions on military material imposed more “follow-up checks” on parts’ utilization that were suspected to have a “dual use,” and random cargo inspections delayed export shipments by several weeks. The effects of these sanctions could deter suppliers from renewing their contracts; hence, reducing the bargaining power of the firm and lead to cost increase or quality issues if the firm decided to replace the foreign supplier by a local one (Davarzani et al., 2015). We believe that foreign firms have a greater chance to source material, knowledge, and finances from their home country (e.g., BMW plant in
South Carolina imports engines from Germany), so they should be more impacted by sanctions originating from their home country rather than from other foreign countries or organizations. Indeed, while the sanctions imposed by one country could cut off the supplies for all firms in the target country, we focus here only on the firms from the country that is imposing the sanction due to the idiosyncratic aspect of LOO. Additionally, we argue that country animosity enhances the likelihood of sanctions between two countries. For instance, many questioned the arbitrary decision of the U.S. administration to impose a travel ban on Iranians and not Saudis, as the latter were deemed to represent a higher threat with respect to potential terrorist attacks in the U.S. (Blaine & Horowitz, 2017; Neier, 2017). This ban disrupted communication, flows of knowledge, especially between the targeted countries’ firms that are located in the U.S. and their employees who were unable to re-enter the U.S. We posit that the arbitrariness in selecting the target countries may be linked to the degree of animosity.

Proposition 2b: The higher the host country animosity towards a foreign country, the higher the supply risk for the foreign country’s firms associated with liability of origin.

Foreign firms’ operations in a host country could suffer a LOO when the relationships between the host and the foreign firms’ home country get tense. On the one hand, the host population could disrupt foreign firms’ operations via riots and protests. Firms coming from countries that are associated with negative stereotypes have less legitimacy to operate in the host country (Kostova & Zaheer, 1999), so they are more exposed to the potential host anger. This legitimacy is greatly impacted by historical conflicts such as war, colonization or foreign dominance (Kostova & Zaheer, 1999; Gao et al., 2017), which are
sources of long-term resentment and can trigger riots towards foreign interests in the host country—especially firms that are highly visible assets. For instance, a dispute between China and Vietnam over an oil rig in a contested territory led to dozens of Chinese casualties and the destruction of industrial parks and Chinese factories (Hodal & Keiman, 2014). The violence of these attacks can be partly explained by the long period of domination that China exerted over Vietnam in the past, which exacerbated the host population animosity towards China. On the other hand, cyberattacks have been increasing exponentially, affecting 75% of the Fortune 500 companies, which spent more than USD75 billion on cybersecurity in 2015 (Limbago, 2016). A study of 237 firms in 6 countries showed that cybercrime cost companies an estimated USD9.5 million on average in 2016, a 21% increase from the previous year (Ponemon Institute, 2016). Thus, cyberattacks currently represent one of the most serious operational risk, as hackers primarily try to steal information or disrupt companies’ processes (Ponemon Institute, 2016). Some of the most sophisticated attacks are state-sponsored and aim to give a competitive advantage to the firms from the country launching the attack. China’s government is regularly accused of launching attacks to steal trade secrets from U.S. companies, and the U.S intelligence was suspected of industrial espionage against Airbus. Governments fear that state-sponsored attacks could spread to the private sectors and target foreign firms in a host country as a result of rising tensions. The U.S. government warned that an escalation in cyber conflicts at the state level with China could increase cyber-attacks against U.S. firms located in China (Sanger, 2015). Overall, we argue that if the animosity between two countries is
significant, the likelihood of violent retaliation from the population or the state against the foreign firms’ operations will be higher.

*Proposition 2c: The higher the host country animosity towards a foreign country, the higher the operational risk for the foreign country’s firms associated with liability of origin.*

1.3.3 Social Environment

Nations represent a “cultural and political bond which unites a community of prestige all those who share the same myths, memories, symbols and traditions,” while the state “refers to autonomous public institutions which are differentiated from other, social institutions by their exercise of a monopoly of coercion and extraction within a given territory” (Smith, 1992:61-62). Thus, to justify the legitimacy of the state, a government must create a sense of common membership among heterogeneous citizens who have multiple individual and collective identities (Smith, 1992; Solt, 2011). We claim that governments can shape a national identity that transcends society members’ religious, ethnic, and cultural identities.

### 1.3.3.1 Degree of National Identity

We define national identity as the feeling of belongingness to one nation. In the era of globalization, this task has become harder as the integration of immigrants from extremely different backgrounds is challenging the notion of a joint national identity (Beck, 1992; Ozkan, 2016). While post-nationalists advocate separating identity from politics (Spinner-Halev, 2008), Smith (1992: 56) claims that “for nationalists, the nation is the sole criterion of legitimate government and of political community,” so nationalist governments use national identity to create and sustain a “uniform” society (Ozkan, 2016). Although national identities may have developed before
the existence of the state, they are sustained and modified; through history books, media and education; by governments to fulfill political purposes (Spinner-Halev, 2008). The main goal was to coordinate groups featuring different identities so they could identify as a unique group sharing common values that distinguish them from foreign nationals. Given this backdrop, we argue that governments can reinforce national identity by enhancing the self-categorization (Turner et al., 1987) and social identification (Tajfel & Turner, 1979) processes that are responsible for group identification and intergroup behavior.

Self-categorization theory is an extension of the social identity approach (Hogg & Terry, 2000). They both relate to social identity; but the former focuses on the group, while the latter emphasizes intergroup behavior (Turner et al., 1987). On the one hand, “self-categorization theory focuses on social cognitive processes, primarily social categorization, that cause people to identify with groups, construe themselves and others in group terms, and manifest group behaviors” Hogg and Reid (2006: 9). People depersonalize others (social categorization) and self (self-categorization) by cognitively segmenting the social environment (Ashforth & Mael, 1989) in “prototypes,” which are fuzzy sets embodying all attributes such as beliefs, attitudes, feelings, and behaviors that characterize groups and distinguish them from others (Hogg & Terry, 2000: 123). Based on the “metacontrast” principle, prototypes maximize the ratio of intergroup differences to intragroup differences (Hogg & Reid, 2006). Thus, government enhancing national identity will reinforce the difference that exists between host and foreign nationals. On the other hand, social identity represents “those aspects of an individual’s self-image that derive from the social categories to which he perceives himself as belonging” (Tajfel & Turner,
Social identity is the result of self-categorization (Gries, 2005), since individuals define and evaluate themselves based on the ingroup they have initially self-categorized with. In addition to defining and evaluating themselves in group terms, individuals make intergroup social comparisons to distinguish ingroup from outgroup (Hogg, 2000). We contend that the institutionalized distinction between host and foreign nationals and their mutual evaluation can be sources of behavioral risks for supply chain actors. Hence, our source of political risk for the social environment is the degree of national identity sustained by the host government that distinguishes host from foreign nationals.

1.3.3.2 Relational Hazards. From a LOF perspective, relational hazards are a social cost of doing business abroad that represent the “higher administrative costs of managing the relationships between the parties involved in doing business abroad” (Eden & Miller, 2004: 10-11). They are based on opportunistic behaviors and mistrust at the intra and inter-organizational levels that are more likely to occur as geographical and institutional distance increase. We posit that relational hazards manifest themselves in organizations through employees and are more likely to occur when individuals who identify to an ingroup (e.g., host nationals) interact with outgroup members (e.g., foreign nationals), because intergroup social comparisons can lead to conflicts due to the positive attachment of the individuals to the ingroup (Tajfel & Turner, 1979). Hence, the degree of national identity in the host country that distinguishes host from foreign nationals generates relational hazards for supply chain actors in terms of furthering mistrust and opportunistic behaviors, which are known to impact supply chains’ knowledge sharing (Cheng et al., 2008), responsiveness
(Handfield & Bechtel, 2002), innovativeness (Panayides & Lun, 2009), commitment (Kwon & Suh, 2005), and collaborative planning (Cai et al., 2010).

*Proposition 3: The higher the degree of national identity in the host country, the greater the degree of relational hazards experienced by the foreign individuals.*

We define mistrust as one’s aversion “to rely on another’s actions in a situation involving the risk of opportunism” (Williams, 2001:378) and opportunistic behavior as “self-interest seeking with guile, leading to deceit-oriented violation of implicit or explicit promises” (Cheng et al., 2008:286). Rational individuals are in a quest of certainty (Hogg, 2000), so they form and join groups (Roccas & Brewer, 2002; Farh et al., 2010) as social and self-categorization processes reduce subjective uncertainty (Hogg, 2000; Hogg & Terry, 2000). By reducing uncertainty about ingroup members’ expected behaviors, group identification should lead ingroup members to trust their peers more than outgroup members (e.g., Kramer & Brewer, 1984), a phenomenon known as ingroup bias or positive ingroup differentiation (Brown, 2000). Ingroup bias usually fosters trust among ingroup members (e.g., Kramer & Brewer, 1984), especially when they have no clues to identify outgroup members (Tanis & Postmes, 2005). However, merely identifying with one group does not consistently lead to ingroup bias (Brown, 2000), as the intergroup context must be salient and relevant to the subjects (Hinkle & Brown, 1990). Additionally, ingroup favoritism does not inevitably lead to outgroup derogation (Williams, 2001) since prejudice is more likely to occur when groups are interdependent (Brewer, 1979; Brown, 2000; Williams, 2001). Here, the social identity of interest is that of national identity, which allows host nationals to make intergroup comparisons with foreign nationals. A stronger national identification
is associated with a more positive evaluation of host nationals and a greater derogation of foreign nationals (e.g., Brown et al., 2001; Mummendey et al., 2001). This is in line with the social identity theory (Tajfel & Turner, 1979), which contends that nationalism should lead to intergroup comparisons with other nations that produce ingroup bias and outgroup derogation (Mummendey et al., 2001) since individuals derive self-esteem from their group identity, so they try to maintain or enhance the superiority of their group with respect to other groups. Thus, we argue that nationalist developments that lead to a more salient national identity for host nationals will increase mistrust and opportunistic behaviors towards foreign nationals who may be perceived as individuals competing against the interests of the host country and its constituents.

**Proposition 3a:** The higher the degree of national identity in the host country, the greater the host nationals’ mistrust towards foreign nationals.

**Proposition 3b:** The higher the degree of national identity in the host country, the greater the likelihood of opportunistic behaviors of host nationals towards foreign nationals.

According to the social identity theory (Tajfel & Turner, 1979), the introduction of a conflict or a threat should enhance the effects of identification on ingroup bias and outgroup derogation. Voci (2006) found that under a threat condition, ingroup members experienced a higher level of trust towards their peers, while their trust towards outgroup members decreased to the point where it became active mistrust. With respect to nationalism, the introduction of a conflict significantly increased xenophobic attitudes for British subjects who had a stronger national identity (Brown et al., 2001). Host nationals may experience animosity towards a foreign country which has been or is involved in an economic or war related conflict, or when that country represents a potential economic or
military threat. Therefore, we posit that host nationals that exhibit a strong national identity as well as animosity towards a foreign country will express even more mistrust and opportunistic behaviors towards nationals of that specific country.

Proposition 4a: The higher the host country animosity towards a foreign country, the stronger the positive relationship between national identity in the host country and host nationals’ mistrust towards foreign nationals from that specific country.

Proposition 4b: The higher the host country animosity towards a foreign country, the stronger the positive relationship between national identity in the host country and host nationals’ opportunistic behaviors towards foreign nationals from that specific country.

By the same token, individuals who strongly identify to their ingroup will be more likely to defend the interests and honor of their ingroup if they feel like their peers suffered from prejudice. Thus, the effects of country animosity on the liability of origin of a given country will be stronger for host countries which feature citizens having a strong national identity.

Proposition 5a: The higher the individuals’ national identity, the stronger the positive relationship between the host country animosity towards a foreign country and the demand risk suffered by the firms from this foreign country.

Proposition 5b: The higher the individuals’ national identity, the stronger the positive relationship between the host country animosity towards a foreign country and the supply risk suffered by the firms from this foreign country.

Proposition 5c: The higher the individuals’ national identity, the stronger the positive relationship between the host country animosity towards a foreign country and the operational risk suffered by the firms from this foreign country.

Thus, to achieve nationalist goals at the economic, diplomatic, and social levels, governments can take nationalist measures that are sources of supply chain risks for foreign firms and individuals. We anchor our concept of host national strategy in the context of China to explore it more deeply. We believe that China should offer important implications
for practitioners, as it has the top manufacturing output and the second-largest consumption market in the world, as well as for researchers since there are documents and literatures about China’s host national strategy that could motivate future research about this concept.

1.4 ILLUSTRATIVE EXAMPLE: CHINA AND WAISHI

The origin of *waishi* is rooted in the creation of the Chinese Communist Party (CCP) in 1921 that developed a foreign affairs system by mixing methods borrowed from the Soviet Union to its own Chinese cultural heritage (Brady, 2003) that shared both a deep discomfort with the outside world and a principle of distrusting outsiders (Fukuyama, 1995). *Waishi* is an abbreviation for *waijiao shiwu* (diplomatic matters), “which has become a term in its own right” (Brady, 2003: xi). *Waishi* has a broader scope than the traditional definition of foreign affairs referring to the diplomatic relationships held by a nation with respect to other nations. Brady (2003: xi) defines the term *waishi* as: “The full spectrum of the People’s Republic of China’s external policies, to influence and at times control foreigners, as well as Chinese citizens’ contact and perception of them and of foreign culture and technology within and outside China.” In this study, *waishi* represents China’s host national strategy. We refer to Brady’s explanations (2003: 249) to introduce *waishi* in more depth and the main reasons behind its development:

“The CCP’s *waishi* system developed out of a deliberate and calculated response to its perception of a hostile world beyond China’s borders. It is both a system for managing the foreign presence in China and China’s contacts with the outside world, as well as having an implicit role in controlling the Chinese population. It is a defensive response from a society that has felt its worldview, a sense of the greatness Chinese society and culture, profoundly challenged. […] As an approach and means to managing both foreigners and the people of China, it has
The CCP uses waishi to unify Chinese people via patriotic and nationalist feelings against potential threats from overseas, and to justify its ruling as a necessity to protect the country from those threats. With respect to our host national strategy framework, waishi intends to “use the past to serve the present, make the foreign things serve China” at the economic level, build friendships with foreign countries which endorse its political agenda at the diplomatic level, and create a distinction between insiders and outsiders at the social level (Brady, 2003). While in the Mao’s era waishi activities were mainly ideological and political, they softly switched towards economic goals in the era of economic reform (Brady, 2000; 2003). In the 1980’s, China tried to rally to its cause not only foreign senior politicians, but also foreign businesspeople; hence, demonstrating the overlap of its political and economic goals (Brady, 2000; 2003; 2009). Since waishi is used to maintain a constant awareness between insiders and outsiders among the Chinese population as well as use foreign entities to its own advantage, it is consequential to how foreign firms and foreigners will be perceived and treated in China. In 2013, the leakage of the confidential “Document 9” showed that waishi is still currently ubiquitous, as the note invited government officials to be aware of the negative influence of Western values in China and to reinforce the CCP’s ideology (China File, 2013). Thus, we reason that China’s host national strategy –waishi — represents a political risk for foreign entities by increasing their exposure to LOF, LOO, and relational hazards as given in Figure 1.2. We now

3 Slogan coined by Mao Zedong in his letter to comrade Lu (Brady, 2003)
describe for each of China’s economic, diplomatic, and social layer; first waishi goals and policies, and second their inherent SC/OM risks.

1.4.1 Economic Environment

For China’s case study, we use the term “indigenous innovation” in place of domestic mercantilism, since the former supports the same ideas and is widely used in literature to reflect China’s innovation policy, which intended to rely less on foreign technology and more on domestic innovation in order to create national champions and push industries up the value chain (McGregor, 2010; Bichler & Schmidkonz, 2012).

1.4.1.1 Indigenous innovation. As China is relying less on exports and heavy industry, and more on private consumption with services and innovations at the core, the CCP launched several industrial policies that are supposed to drive indigenous innovation; namely, as a new source of economic growth (McGregor, 2010; Bichler & Schmidkonz, 2012). The indigenous innovation campaign was officially launched in 2006 with the implementation of the Medium and Long-Range Plan (MLP) for Science and Technology Development (Amcham, 2011), which intends to rely less on foreign technology and create national champions that will compete globally (Hemphill & White III, 2013; Morrison, 2015). According to strategic trade literature (Brander & Spencer, 1984; Krugman, 1989; Yu & Eden, 2001), protecting infant industry could help China’s domestic firms to extract rents from competitors on a domestic market that has seen private consumption increasing by a staggering 8.9% annually, on average, over the past 10 years (Morrison, 2015) and use these rents to help Chinese firms export high-tech products that are not only made in China, but also designed and conceived there (USITC, 2011). These new economic
surroundings have made foreign firms operating in China more vulnerable to political risk since (1) their capital and technology are not as needed as they were in the near past; and (2) the enactment of industrial policies focusing on protecting indigenous industries appear to be leading to discriminatory policies (Alon & Herbert, 2009; Bichler & Schmidkoncz, 2012). Since the CCP’s role in China’s economy has been prominent and government intervention in foreign businesses is frequent (Osland & Bjorkman, 1998; Li et al., 2008; McGregor, 2010), many foreign firms are fearful of the latent SC/OM risks posed by this indigenous innovation campaign.

1.4.1.2 Liability of foreignness. Waishi supports indigenous innovation in different policy areas (see USITC, 2011) that may cause demand, supply, and operational risks for all foreign firms operating in China. The government’s willingness to develop national champions creates demand risks for foreign firms via discriminatory public procurement practices that aim to build market for domestic firms, and technical standards that intend to give a competitive advantage to host firms in order to dominate the domestic market and increase their export potential (USITC, 2011). The risk is substantial, as China’s public procurement market was estimated to be worth USD270 billion in 2013 (He & Guo, 2015). Under international pressure, the Chinese government assured that it will de-link its public procurement practices from its indigenous innovation catalogs (Amcham, 2010); however, foreign firms reported that provincial and municipal governments were not following the central power recommendations, as they clearly discriminated foreign firms’ products and services (Bichler & Schmidkoncz, 2012). The central government also seems to discriminate foreign suppliers, as it banned the use of Windows 8 on its computers under the claim of
energy efficiency purpose (Reuters, 2014). Moreover, China’s technical standards that differ from international standards can shut out foreign firms or deter them to enter the market because of the additional costs and time needed to develop Chinese-specific versions (USITC, 2011). These policies affect different sectors according to the political needs of the time, so they are hard to mitigate for foreign firms which may have already made substantial investments and allow domestic companies to grow shielded from foreign competition. For instance, the blocking of U.S. firms such as Facebook, Twitter, and Youtube allowed a smooth development of Chinese competitors Wechat, Weibo, and Youku that might not have been as successful if they had to compete with their foreign counterparts.

*Waishi* is not anti-foreign per se, and has a more utilitarian view that aims at maximizing the economic benefits to China that are provided by foreign firms. From a supply perspective, it is more interesting for China to have foreign firms settle on its soil, as it can help boost local economies and encourage technology spillovers. China owns about 94% of the worldwide production of rare earth elements (REE) and should remain the major player for another decade until other countries’ mines become efficient (Bilsborough, 2012). Instead of exporting the raw materials, China would rather have foreign firms transform the minerals in China, as it creates high-paid jobs in less economically developed regions and generates foreign direct investments and technology spillovers in the industry. Consequently, export quotas and several taxes have been implemented on the raw materials rather than the downstream product in order to force foreign firms to move their operations to China and team up with Chinese firms so they
could have access to the supplies both in quantity and at a competitive price (Bradsher, 2010; Bilsborough, 2012). The related technology spillovers represent intellectual property risks for foreign firms (Bradsher, 2011), which might have their supply networks cut off if they do not comply with laws that appear to drive indirect knowledge spillovers. Similar spillovers are sought in the automotive industry where the share of imported auto parts for cars produced in China is five times smaller than in the West due to LCRs that incentivize foreign automakers to source locally (Hufbauer et al., 2013). These LCRs create knowledge spillovers and also quality risks, as it is complex to transfer organizational practices in countries that have a different cognitive institutional profile (Kostova & Roth, 2002).

From an operational standpoint, foreign firms in a host country suffer a LOF with respect to unfamiliarity hazards since they have to spend extra resources to gain market information to which domestic firms have easy access. The costs related to these unfamiliarity hazards should fade as the firm’s presence in the host country increases (Zaheer, 1995; Eden & Miller, 2004), but China allegedly keeps a low level of transparency for business regulations in order to provide a competitive advantage to its domestic firms (Haley, 2003; USCBC, 2015b). Moreover, as China is embracing a more market-oriented economy, new contested regulations have emerged, as they seem to target primarily foreign entities. In 2008, China launched the Antimonopoly Law (AML) with the intention to enforce competition regulations. Despite the official claims that Chinese and foreign firms would be treated equally under the AML, a study about competition enforcement revealed that foreign firms were fined at a higher rate than Chinese ones, and that among the few mergers and acquisitions that were not directly approved by the authorities, all of them
concerned foreign firms (USCBC, 2015b). Additionally, certain regulations (e.g., China Compulsory Certification) for the information technology sector require foreign firms to disclose their encryption methods which jeopardize their proprietary intellectual property (USITC, 2011).

1.4.2 Diplomatic Environment

1.4.2.1 Country animosity. China has built its relationships with foreign countries on the notion of friendship, labeling foreigners or foreign countries as friends of China (zhongguo pengyou) only if they were supportive of the CCP and as enemies otherwise. The friendships change according to the political needs of the time (Brady, 2003); and waishi, carried by an astute propaganda system (Brady, 2009), shapes the friendship and the inherent degree of animosity of Chinese citizens towards foreign countries. From a SC/OM lens, the dynamic of these friendships can represent political risks for foreign firms that have vested interests in China because of the high sensitivity of any issues that concern China’s sovereignty due to historical reasons (Miller, 2013). Indeed, the century of foreign domination that preceded the creation of the PRC is still perceived and portrayed by the CCP as a humiliation, and foreign interference with China’s sovereignty will not be tolerated (Brady, 2003). Since each friendship is idiosyncratic, we use the concept of LOO (Ramachandran & Pant, 2010) to outline some SC/OM risks that stem from the degree of animosity towards foreign countries that waishi stimulates.

1.4.2.2 Liability of origin. Country animosity may drive demand risk for foreign firms when the CCP boosts Chinese population’s hatred against a foreign country by highlighting its supposed wrongdoing towards China. In 2012, a diplomatic incident
involving the disputed islets between China and Japan (named Diaoyu by China and Senkaku by Japan) had direct consequences on the sales of Japanese made cars that dropped by nearly 40% the month following the event (Einhorm, 2012). Crisis can also erupt when foreign countries interfere with China’s internal politics. In 2008, incidents in France related to the situation of Tibet led to demonstrations of angry Chinese citizens and calls to boycott French supermarket Carrefour, the foreign leader in the industry. The key point is that the degree of animosity towards the firms of a specific country seems to be influenced by *waishi* (e.g., Weiss, 2013; Xuecun, 2014). Besides current territorial disputes, a potential explanation of the numerous calls to boycott Japanese products in China is the contribution of the Chinese government to fuel animosity towards Japan by, for instance, broadcasting anti-Japanese TV shows that accounted for about 30% of the total TV shows played on national channels in 2012 (Xuecun, 2014).

A degradation of political friendship between China and a foreign country could lead China to sanction the foreign country by cutting off some supplies it is sourcing from China. For example, China blocked the REE exports to Japan following the detention of a Chinese boat captain in 2010 and threatened the European Union to do the same following a diplomatic dispute. Since the WTO could sanction such a ban on exports, China decided to halt shipments loading to Japan instead (Bradsher, 2010). The degree of country animosity could explain the inflexion point that has China execute its threats. These supply risks have potential spillover effects for the other firms within the supply chain. Bradsher (2010) notes that due to inefficiency in its home industry, American firms rely exclusively on Japanese companies to process REE and would be in great trouble if supplies to Japan
were halted. While China intends to show itself as a reliable supplier of REE to prevent foreign countries to mine their own reserves, it will not hesitate to restrict access to key resources when it comes to territorial issues.

Operationally, companies coming from countries that have a high animosity with China can be greatly impacted by cyber-attacks and social unrest (e.g., riots, strikes). U.S. high-tech firms reported that they modified the way they operate in China due to the increasing uncertainties they face because of the ongoing digital cold war that takes place between the two countries (Ante & Clark, 2013; Ovide, 2014). The diplomatic dispute affects not only official relations, but also foreign companies operating in both countries (Ovide, 2014). Chinese high-tech firms ZTE and Huawei have been restricted to build networks in the U.S. due to suspicion of installing backdoors, and U.S. suppliers were removed from government approved purchase lists after the Snowden’s revelation about the U.S. National Security Agency spying program (Ante & Clark, 2013). Japanese firms also admitted that political tensions affected their business plans during the 2012 anti-Japanese riots, which saw Japanese stores closing and Japanese manufacturers halting production, as several factories were attacked with fire bombing, sabotage, and looting (Chang, 2012). Furthermore, in 2014 China passed a Counterespionage Law in an attempt to strengthen the nation’s security needs due to supposed growing political threats from overseas (Tatlow, 2014). This law has direct consequences for suspected spies and their organizations operating in China whose assets could be legally frozen or seized. Although China ensures that their counterespionage work will be carried in a legal framework, there
is growing concern that the law could be used arbitrarily against firms from countries that are deemed “unfriendly.”

1.4.3 Social Environment

1.4.3.1 National identity. The CCP has built its legitimacy on protecting Chinese citizens from foreign threats, so its main goal at the social level is to keep Chinese citizens aware of the difference that exists between themselves and foreigners (Brady, 2000; 2003). This difference is mainly rooted in the distance between Chinese and foreign cultures. However, Chinese culture is not uniform with 56 ethnic groups (Choe, 2006), and China’s cultural dimensions (Hofstede, 1980) have shown to vary more among Chinese provinces than between China and certain countries (e.g., Huo & Randall, 1991; Kwon, 2012). Thus, we posit that the ultimate markers that separate Chinese from foreigners are the national identity aspects (e.g., common language, history, primary education) that include all ethnic groups in a “state-centered national identity” (Choe, 2006). The policies towards foreigners and their relationships with China’s national identity and citizenship have evolved over time and took a more nationalist turn in the 1980s in order to foster national unity as China was opening up its borders (Choe, 2006). Accordingly, we posit that the CCP can resort to policies that enhance feelings of national identity through self-categorization and social identification processes. We analyze the role of waishi in psychological group formation and reinforcement of national identity via these processes.

Self-categorization is a function of both fit and accessibility (Oakes, 1987), with the former indicating the degree to which social categories reflect the real world for individuals and the latter revealing if individuals can reach these social categories in the
moment (Hornsey, 2008). We argue that *waishi* creates an environment suitable for individuals to perceive a high level of fit for the “foreign” and “host national” social categories, and makes these categories consistently available by maintaining a set of psychological and physical boundaries between foreigners and host nationals. For example, it is important for Chinese people to acknowledge the difference that exists between themselves and foreigners, since the collaboration with foreign dissidents is still used by the CCP as an excuse to detain citizens (Brady, 2000; 2009; McGregor, 2010). Mixing with foreigners was a crime in the Cultural Revolution (Brady, 2003), and current national security regulations contribute to a climate of spy scare by encouraging ordinary Chinese citizens to cooperate against foreign spies and their Chinese allies (Tatlow, 2014). The CCP encourages Chinese citizens to be cautious of foreigners and keep their distance with them, since they are depicted as unreliable outsiders (Brady, 2000). The 2016 “Dangerous Love” public campaign warning female state employees against information leaks if they were to date foreigners tends to substantiate this idea (The Guardian, 2016b). Physical boundaries also exist, as up to the beginning of the 2000’s, foreigners were required to live in foreign-only accommodations (Brady, 2000). The remains of these policies are still present today; as numerous foreigners still live in these historical foreign neighborhoods, hotels are required to possess a license to host foreigners, and some areas in China are still restricted to foreigners. Our intention is not to contend that foreigners are being negatively discriminated in China. On the contrary, foreigners are often offered a favorable treatment compared to Chinese citizens (Brady, 2000). The point is that both foreigners and Chinese people perceive these boundaries, which reinforces the differences that exist between them.
Regarding the impact of these policies, Brady (2000: 958) notes: “not all Chinese citizens will have been educated in the minutiae of these (waishi) regulations, but common sense and an awareness of the hyper-political role of foreigners in China is enough to guide most people.” Moreover, China features a tight culture with a high degree of social norms and sanctioning (Gelfand et al., 2006) that could explain why Chinese people would still abide by “informal” waishi regulations.

With regard to social identification, we posit that waishi nurtures a social context favorable to intergroup competition between a Chinese and common foreign ingroup. First, according to the common ingroup identity model (Gaertner & Dovidio, 2014), individuals that compose subgroups can eliminate intergroup boundaries to re-categorize into an inclusive identity, which highlights common traits among individuals (Stone & Crisp, 2007). We saw that the CCP worked on creating a common identity that includes all Chinese ethnic groups (Brady, 2013). We also believe that foreign nationals could include foreigners from other countries into a foreign superordinate group, as waishi reinforces the difference between Chinese and all foreigners who are believed to share a common fate. Re-categorization allows both subgroup and superordinate group identification (Stone & Crisp, 2007). Individuals do not need to share the group’s goals to identify, but only to perceive themselves as tied with the fate of the group (Ashforth & Mael, 1989). Waishi is critical in the development and maintenance of these superordinate identities because authorities can impact the environmental context (described in the self-categorization section) that socially influences individuals to identify as a superordinate group (Gaertner & Dovidio, 2014). In addition, Gries (2005) argues that international comparisons would
only lead to intergroup competition and possibly intergroup conflicts if the comparisons are salient, consequential, and zero-sum. *Waishi*, by reinforcing the awareness of the difference between Chinese citizens and foreigners, makes the social comparison salient. The regular deliberate recall by the CCP of Chinese past humiliations about foreign imperialism makes these social comparisons consequential for Chinese people. Finally, status, the outcome of social comparison (Tajfel & Turner, 1979), is important for any person in search of positive self-esteem. The loss of status in a competition or conflict can be considered a zero-sum game by the participants, especially in a country like China where the concept of “face” is important. Thus, *waishi* crafts an environment for intergroup competition between host and foreign nationals.

### 1.4.3.2 Relational hazards

We contend that *waishi* policies enhancing self-categorization and social identity processes are sources of relational hazards for foreign nationals. On the one hand, *waishi* can lead to opportunistic behaviors, which are more likely to be triggered when two social categories perceive themselves as being dissimilar (Williams, 2001) and when competitive interdependence is present (Brewer, 1979). Our analysis showed that self-categorization shapes the dissimilarity between foreign and host nationals while social identification leads to intergroup conflicts. Midler (2007) observed that when a foreign firm suffered a contract breach and a related price increase in China, it could not look for an alternative supplier due to a high degree of collusion among Chinese suppliers. *Waishi* is also a vector of opportunistic behaviors since political hazards can encourage relational hazards (Henisz & Williamson, 1999). Indeed, the institutionalized lack of intellectual property rights can encourage counterfeiting and intellectual piracy.
(Eden & Miller, 2004; Bichler & Schmidkonz, 2012) and spread to the private sector as government agencies who are supposed to enforce the rules are reported to download updates for unlicensed products (Leonhardt, 2011). While China is the second market for computer hardware sales, it is only the eighth in terms of software sales (Leonhardt, 2011). On the other hand, *waishi* enhances mistrust between host and foreign nationals by reinforcing the social and self-categorization processes, which “are the primary psychological mechanisms through which group membership influences trust development” (Williams, 2001:380). Since it is harder for ingroup members to forgive outgroup misbehavior (Williams, 2001), trust between the two groups will be seriously damaged when an ingroup member suffers an opportunistic behavior. Relational hazards can spread to other ingroup members through legitimacy spillovers (Kostova & Zaheer, 1999), as even the members who have not been affected by an issue will evaluate the outgroup based on stereotypes that were shaped by other group members’ experiences. For instance, Midler (2007) reports that foreign firms have little faith in the quality inspection of their Chinese manufacturers and usually hire a third party to perform an additional inspection; and U.S. executives are increasingly concerned about transferring technology to China, so they limit their operations and the launch of innovations (USCBC, 2014, 2015a).

### 1.5 DISCUSSION

In this study, we identified political risk as host national strategy, which reflects the protectionist and nationalist stances that a government can take by regulating and shaping
the perceptions of foreign entities at the economic, diplomatic, and social levels. This research contributes to the business literature on political risk as we present a model underlying continuous processes (i.e., degrees of domestic mercantilism, country animosity, and national identity) that a host government can influence according to the degree of protectionism it wants to set with respect to several nationalist issues. We also contribute to the SCRM field, since we link these processes to potential demand, supply, and operational risks that foreign firms face in a host country and detail them for China. Finally, we contribute to behavioral operations by using socio-psychological theories to show how a government’s nationalist orientation could drive opportunistic behaviors and mistrust towards foreign nationals at the individual level. We now review the implications of our study for future research and suggestions for empirical testing.

1.5.1 Domestic Mercantilism

To maximize economic and social welfare, nationalist governments may resort to domestic mercantilism to push domestic innovation for two main reasons. First, internationally competitive domestic firms can sell superior products at home and abroad; hence, improving the balance of payments. Second, high-tech industries are sources of productivity gains and job creations. Indeed, innovation has been the main vector of economic growth and national progress since the Industrial Revolution (OECD, 2007) and is a “key driver of sustainable competitive advantage” (Zhou et al., 2017:1). Additionally, innovation is necessary to warrant that the protected firms remain efficient and effective in order to keep attracting foreign direct investment (Singh & Jose, 2016) and not penalize domestic competitiveness. This type of industrial policy played a big part in China’s host
national strategy towards national progress and international competitiveness, and inspired other emerging countries (e.g., Argentina, Brazil India, Russia) to implement similar strategies (Donohue & Garfield, 2012). Emerging countries want to protect their infant industry by having domestic firms capture rents from foreign competitors so they can become robust enough to expand internationally and try to catch up to the industry leaders (Brander & Spencer, 1984; Krugman, 1989; Yu & Eden, 2001). Not to be outdone, developed countries widely use mercantilist policies to give a competitive advantage to their domestic firms as well. In fact, the U.S. is reported to be the country that has implemented the most protectionist policies since the 2008 economic crisis (Global Trade Alert, 2017). Moreover, the promise of the Industry 4.0 has brought back industrial policies as a competitive weapon to create jobs, markets, and exports since the free trade model failed to satisfy jobs and wages needs (Schwab, 2017; Vaughan, 2017). Indeed, most advanced countries are on the verge of re-industrializing and re-shoring some part of their supply chains, given the prospects that the Industry 4.0 has for productivity and growth (Foerstl et al., 2016; Moser, 2016).

Overall, there is a “renaissance” of industrial policies that intend to push innovation aiming at creating jobs and high value-added industries (Vaughan, 2017); hence, many governments have devised plans to help their private sector become top notch future industry centers that will both design and manufacture locally. Consider, for instance, “The Alliance for the Future of Industry” in Germany, “The Productive Pact for Competitiveness” in France, “Make in India,” “MAKE: An American Manufacturing Movement,” and the “Made in China 2025” campaigns; which will all generate
protectionist barriers for foreign firms that will have to modify their supply chain accordingly. As more free-trade agreements are being signed and are in the books (e.g., CETA, TAFTA, TPPA), governments that want to use protectionist policies to lift their citizens’ fear of international competition must find other ways than raising trade barriers.

Domestic mercantilist policies seem to be the trend causing SC/OM risks for firms that have already made their move abroad. There is a need for empirical research about countries’ industrial policies (Roth et al., 2016) to find out if national preference policies increase demand uncertainty, if local content requirements impact a foreign firm’s performance, if knowledge spillovers to access a market enables a firm’s own competition in the long run, and if a foreign firm’s operations suffers disruptions from national security policies. A database such as the NGO Global Trade Alert Website reporting State measures that affect foreign commerce in real time could be used to measure protectionist trends and effects on foreign firms’ performance. It could also help practitioners refining their decisions regarding supply chain design.

1.5.2 Country Animosity

Nowadays international disputes are taking more economic (e.g., economic sanctions) and technological (e.g., cyber-attacks) orientations than military interventions; hence, the role of country animosity has important theoretical and practical implications. Indeed, foreign firms that are culturally adapted to a host country can still lack legitimacy (Kostova & Zaheer, 1999). On the one hand, countries that are close culturally speaking due to their geographic proximity also have high chances to have been or be involved in war conflicts and disputes over land and resources. On the other hand, foreign MNCs that
have successfully adapted to the host environment can still be perceived as exploiting national resources at the expense of domestic entities. The degree of animosity between the host country and the foreign firm’s home country makes this lack of legitimacy even more salient. While cultural distance and institutional distance greatly influence supply chain collaboration issues (e.g., knowledge transfer), country animosity fuels latent processes that can trigger supply chain risks of a more disruptive nature (e.g., boycotts, riots, cyber-attacks). The marketing literature showed us that country animosity can deter consumers to buy products of a specific country (e.g., Klein et al., 1998; Etterson & Klein, 2005), and the international business literature revealed that country animosity impacts decisions related to foreign direct investment (Arikan & Shenkar, 2013; Gao et al., 2017). By the same token, we contend that a firm should assess country animosity when it chooses a place to set its operations in order to reduce operational risks stemming from a lack of legitimacy. Country animosity also impacts supply chain design, as selecting supply chain partners from countries that have a high degree of animosity with the host country can foster supply chain risks. For instance, relying on a single American supplier in the Middle-East or a Japanese supplier in China might exacerbate supply risks. While demand risk tied to animosity is more marked for business-to-consumer than business-to-business markets (B2B), Edwards and colleagues (2007) found that firms in the B2B markets suffered loss sales as well. Therefore, although market and relationship-based strategies prevail when selecting a business partner, its country of origin and the inherent potential animosity that exists with the host country entities must be accounted for when assessing supply chain risks.
Future research could measure empirically the effects of country animosity on supply chain risks for foreign firms by relying on survey measures that capture the host country citizens’ animosity towards a foreign country (e.g., Klein, 1998) or secondary data that reflect historical conflicts (e.g., Gao et al., 2017). There is also a need to study the continuous processes that fuel country animosity. Content analysis could be used to examine press releases and academic history textbooks that would depict a foreign country as a “threat.” Yang and Liu (2012) empirically examined the emergence and diffusion of the “China threat” in the U.S. printed press. Data analytics methods to gather social media content offer us even more opportunities to follow trends, shares and likes that could help measuring a public opinion towards a foreign country or an issue involving a foreign firm’s project (Henisz & Zelner, 2010) and its potential supply chain risk implications in real time (e.g., boycotts, riots).

1.5.3 National Identity

National identity and social identities more generally play a great role in the development of trust and conflicts among groups. The idea that foreigners should build social networks in host countries to improve a firm’s performance is widely spread, especially in countries where informal institutions still have a prominent role in shaping business relationships. However, it is unclear if those efforts should be made in countries that feature a strong sense of national identity. For instance, in China, building guanxi—a system of personal connections built and maintained on a reciprocal exchange of favors is a must-do in the business literature (e.g., Lee & Dawes, 2005). However, it seems to be at odds with waishi which may hinder the development of personal interactions between host
and foreign nationals. These personal interactions are the key for building guanxi (Chen & Chen, 2004). This raises the question of whether foreign managers as individuals should try to build guanxi. Tsang (1998: 70) provides a rather straightforward answer: “Westerners working in China should be prepared to remain outside the Chinese guanxi arena. They had better not pretend to be Chinese – they can never be.” This is in line with the waishi ideology that aims at separating insiders and outsiders; and, more generally, with the idea that foreigners should not necessarily use local practices in a host country (Eden & Miller, 2004).

Future research using measures of collective identity (Ashmore et al., 2004) could help in assessing if the degree of national identity in a host country affects a foreign manager’s perception of risks and their related SC/OM decisions, such as supplier selections. For instance, Giambona and colleagues (2017) used survey data to show that financial managers’ perceptions of political risk were significantly correlated with their firm’s avoidance to invest in a specific country. Moreover, since it requires time and effort to build social network with host nationals that have a strong national identity, future research could study if foreign nationals prefer developing foreign networks instead of local ones in order to improve supply chain collaboration and decrease supply chain risks that stem from political risks. For instance, the knowledge benefits of hiring host national managers are offset by their costs when corruption is significant in the host country (Muellner et al., 2017). Measures of managerial ties (Li et al., 2008) could be adapted to foreign networks in the host country. However, one should be cautious with the use of survey instruments, since the national identity issue remains taboo in many countries. The
results of the U.S. presidential election or the Brexit showed a clear discrepancy with the opinion polls, stressing the presence of a social desirability bias when attempting to measure such sensitive issues. Experiments may offer better prospects to research about national identity, which has promising grounds for the behavioral operations field since social preferences (e.g., trust, fairness) are believed to guide the future of the field (Devlin & Gupta, 2016).

1.6 CONCLUSION

Since we introduced a general framework, our study has limitations. First, we restricted our study to the foreign entities in the host country and did not extend the SC/OM risks for the other firms (e.g., domestic firms) present in their supply chains. Second, we focused on the challenge aspect of risk and not the potential opportunities that host national strategy can offer. Third, foreign firms in a host country could also endure supply chain risks stemming from their home country’s host national strategy. These limitations offer plenty of opportunities for future research to extend our initial effort. As SC/OM scholars have tremendously helped firms in their quest of global supply chain efficiency in a world that has become increasingly integrated over the past half century due to the unleashing of significant free trade treaties and deregulations, our study calls for more research considering the current protectionist and nationalist trends and their impact on supply chain and operations strategies at both the firm and individual levels.
CHAPTER TWO

THE INFLUENCE OF HOST NATIONAL STRATEGY ON STRATEGIC SUPPLY CHAIN PARTNER ENGAGEMENT: QUALITATIVE EVIDENCE FROM CHINA

“Use the past to serve the present, make the foreign things serve China”
Mao Zedong (in Brady, 2003)

2.1 INTRODUCTION

This study examines relationships between a nationalist government and foreign firms operating on its soil through a supply chain and operations management (SC/OM) lens, a growing imperative in light of recent global political trends. Governments shape business environments and, in turn, influence firms’ strategic decisions and competitiveness (North, 1990; Ring et al., 2005). Their influence on foreign firms operating in their country often is tied to political risk, or “the unexpected, adverse impacts on [firms’] performance due to the host country’s political environment” (Stevens & Newenham-Kahindi, 2017: 11). While political risk can have a variety of sources, a recent resurgence in heightened nationalism and industry protectionism (e.g., in the United States and Western Europe) highlights the key role host governments play in regulating foreign entities on their soil. Nationalist governments are characterized by emotional attachment (i.e., patriotism) and a perception of relative superiority to other countries (Kosterman & Feshbach, 1989); and in turn, often lead to protectionism, specifically a willingness to shield domestic firms from foreign competition (Krugman, 1995).

Charpin and Roth (2018) recently theorized the concept of “host national strategy toward foreign entities,” (hereafter “host national strategy” or abbreviated as HNS) in the
context of SC/OM strategy. HNS constitutes the various ways in which a host government implements policies to control foreign entities and shape their image for host nationals. Host national strategy varies along different continua at the economic, diplomatic, and social levels—depending on the political needs of the time. It generates a complex array of SC/OM risks for foreign firms and their managers as policies grow increasingly nationalistic (i.e., as the government treats foreign and domestic entities more differently). For instance, foreign firms can incur a demand risk (e.g., volatility) under discriminatory government procurement policies or when consumers decide to boycott products from a certain country following a diplomatic crisis. Supply risks (e.g., uncertainty in inputs quality, costs, or delivery) could arise with the implementation of local content requirements or economic sanctions. Finally, operational risks can stem from ownership restrictions (e.g., knowledge spillovers), riots and sabotage, or state-sponsored cyberattacks that could lead to shutdowns. All these risks are highly dependent on the host national strategy and are rooted in long term processes that reflect the host government’s willingness to treat and shape the image of foreign entities according to a defined political agenda. This paper answers, in part, the following questions: Do, in fact, firms perceive host national strategy as a source of risk? If so, how does a host national strategy influence foreign firms’ SC/OM engagement with strategic supply chain partners?

Adopting Charpin and Roth’s (2018) conceptualization, we operationalize national strategy as a government’s overt and covert policies supporting its national goals with respect to economic and social development. Host national strategy comprises government policies and tactics that can influence foreign entities to support its national strategy.
Underscoring the importance of these conceptual underpinnings are recent developments in the field of international business. Governments have enacted nearly 10,000 protectionist measures since the 2008 economic crisis (Global Trade Alert, 2018). This protectionism is tightly coupled with the resurgence of industrial policies worldwide, making governments increasingly prone to intervene in the economy to fulfill their own national political goals (Vaughan, 2017; Charpin & Roth, 2018). The fields of strategic management (e.g., Delios & Henisz, 2003; Chen et al., 2010) and international business (e.g., Boddewyn, 1988; 2016) have devoted substantial effort to studying the impact of host political environments on foreign multinational corporations (MNCs). Yet, scant empirical research exists that examines their impact on “realized,” deliberate (Mintzberg, 1978: 935) SC/OM strategy.

Our work helps establish a foundation for employing a SC/OM—strategic management interface to the theory of multinational corporations—host government relations (hereafter MGRs) (Luo, 2001) by (1) identifying the criteria foreign firms use to understand host national strategy; (2) studying the processes by which they interpret the influence of host national strategy on their operations; (3) analyzing how they respond to host national strategy cues from a SC/OM perspective; and (4) offering insights for conducting future research on SC/OM strategy related to short- and long-term tradeoffs, opportunities and challenges in addressing HNS. Given the lack of empirical research on this important and contemporary topic, we use a grounded theory methodology to conduct an exploratory, multiple-case study (Eisenhardt, 1989; Yin, 2003) of foreign firms in China based on extensive primary and secondary data collection. Drawing from our field study,
we induct a three-phase process model showing varied ways in which host national strategy influences foreign firms strategic supply chain partner engagement choices.

Our qualitative, inducted findings revealed that firms perceive HNS to be more or less salient based on two factors: the foreign market’s importance to the firm’s own business strategy (i.e., market criticality) and the importance of the firm’s industry to the host government’s strategy (i.e., industry criticality). Firms’ sensemaking regarding the influence of the host national strategy on their role and legitimacy—in our context, this implies a “license to stay” (Darendeli & Hill, 2016) and operate in the host country—suggests that firms facing greater political risk both desire and strive for legitimacy. By integrating SC/OM-strategic management perspectives, we have discovered strategic roles exist from a SC/OM viewpoint. Namely, firms in need of legitimacy engage in strategic supply chain partner engagement initiatives, intended to support the national strategy and demonstrate that their actions benefit the host society. Thus, we uncovered that for some firms, but not all, supply chain partnerships can be useful in mitigating political risks; and therefore, our results point to a contingency theory of the legitimacy-based view for SC/OM.

The remainder of this paper is organized as follows. First, we review the MGRs literature and its potential connections with SC/OM. Then, we detail our inductive approach as well as our conceptual and empirical findings related to HNS and strategic supply chain partner engagement. Finally, we present our theoretical contribution to the legitimacy-based view of political risk at the interface of SC/OM—strategic management and its implications for future research.
2.2. THEORETICAL BACKGROUND

2.2.1 Multinational Corporations – Host Government Relations (MGRs)

Multinational corporations are influenced by different factors in their institutional environment (Cantwell et al., 2010), with governments long acknowledged as a driver of decision making and strategies (Ring et al., 2005). Growth in MNCs’ foreign investment after World War II prompted the international business–government relations field to focus more specifically on foreign firm-host government relationships (Moran, 2009). These encompass MNCs’ desire to reduce government interference in their affairs and the host government’s resolve to regulate them (Dunning, 1998). Consequently, the international business and strategic management literatures have studied the influence of host government policies on foreign subsidiaries from pre- and post-entry perspectives. Pre-entry, host government policies can influence MNCs’ decisions on entry mode (e.g., Delios & Henisz, 2000), location choice (e.g., Henisz & Delios, 2001), and partner choice (e.g., Roy & Oliver, 2009). Post-entry, host governments can impact international joint ventures through contract renegotiation (Blodgett, 1992) and management control (Chen et al., 2010). At present, SC/OM literature says very little about MNCs’ post-entry strategic supply chain decisions processes and even less about host national strategy risk.

The SC/OM literature does include a growing number of industry and public policy studies that “traditionally have involved the linkage between observed industrial practice and the public policies that affect those practices” (Joglekar et al., 2016: 1977). For instance, the Extended Producer Responsibility (EPR) legislation has influenced new

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4 See Boddewyn (2016) for a thorough literature review of the field from 1945 to 2015.
product introduction (Plambeck & Wang, 2009) and manufacturer’s design for product recovery (Atasu & Subramanian, 2012). However, SC/OM industry and public policy studies have not covered the context of foreign firms operating on foreign soil (i.e., MGRs).

The influence of host government on foreign firms’ post-entry decisions is critical given that host government policies can seek to restrict foreign firms’ market influence or incentivize these firms to act in alignment with government interests (Chen et al., 2010). Thus, host governments create various types of risk and opportunity for foreign firms while exercising their sovereignty and pursuing their national interests (Boddewyn & Cracco, 1972; Boddewyn, 2016). These notions may explain, in part, why MGRs often are analyzed through the prism of political risk (Stevens et al., 2016)—government actions that explicitly have positive or negative effects on foreign firms’ performance. While risk is a popular topic in supply chain management (Kouvelis et al., 2011), we found no empirical SC/OM studies of political risks specifically addressing MGRs nor explicitly considering a host national strategy as a source of political risk that can potentially influence certain foreign firms’ strategic SC/OM choices.

2.2.2 Political Risk Theories and MGRs

Three main complementary theories have been proposed to explain the interactions between political risk and MGRs in strategic management and international business. The bargaining power and political institution theories highlight the government’s ability to intervene in foreign firms’ affairs, while the legitimacy-based view focuses on what motivates the government to intervene in the first place (Stevens et al., 2016). The bargaining power model (Vernon, 1971) describes the MNC–host government relationship
as a struggle in which each party attempts to access the other party’s resources while minimizing the other’s influence on their own goals and the means to achieve them. This model relies mainly on a conflictive view of MGRs principally derived from political and economic theories (Luo, 2001) and tied to pre-entry decisions, such as entry mode and investment scale. Political institutions can become the host government’s tools to modify the initial bargain at the expense of the foreign firm—and the existence of fewer checks and balances means foreign firms have less protection from political risk (Henisz, 2000).

The legitimacy-based view, in contrast, relies on strategic and sociological theories to support a cooperative perspective on MGRs, wherein host governments and MNCs can collaborate to achieve their own goals (Luo, 2001). Following the liberalization of trade, MGRs switched from an adversarial stance to a cooperative one as host governments realized that foreign investment could benefit their national agenda (Dunning, 1998). A foreign firm’s ability to prove itself, as an asset to the host country, enhances its legitimacy in the eyes of the government, and thereby, reduces its exposure to political risk (Kostova & Zaheer, 1999). This cooperative perspective is more concerned with post-entry decisions, specifically how foreign firms can improve host government relations by leveraging factors that simultaneously improve their perceived legitimacy and financial performance (Luo, 2001).

Given that multinational corporations–host government relations have yet to be explored in SC/OM strategies, it is not surprising that political risk has not been empirically examined in the SC/OM literature. Rather, political risk has been mostly theorized as political instability (e.g., Kleindorfer & Saad, 2005) and/or environment uncertainty (e.g.,
Juttner, 2005,) and is typically discussed conceptually within the extant supply chain risk management frameworks. An empirical exception is the case study of Davarzani and colleagues (2015) that identified political risk as the economic sanctions imposed on a country. With increasing country nationalism, conceptualizations of political risk in SC/OM must go beyond traditional notions of “epic” events like government instability (i.e., government changes and expropriations). SC/OM should also consider subtler long-term strategies that aim to reduce foreign firms’ profits via discriminatory regulations (Henisz & Zelner, 2010). Our study begins, in part, to fill this void (1) by clearly identifying host national strategy—an emergent source of (potential) political risk for foreign firms today and by (2) considering how our findings relate to political risk theories in more mature disciplines such as strategic management and political science.

2.2.3 Firms’ Strategic Responses to Political Risk

Firms can interact with governments via non-market strategies, which are rooted in political and social domains (Frynas et al., 2017). The interdependence of politics and business has pushed certain firms to develop an external affairs function that deals specifically with political and regulatory authorities (Hillman et al., 2004). Corporate political activity (CPA) seeks to shape government policies in ways favorable to firm objectives (Hillman & Hitt, 1999). Through CPA, firms can lobby governments to retain their bargaining power or implement continuous actions that will earn favor. MNC subsidiaries can use CPA to decrease political risk and increase legitimacy (Banerjee & Venaik, 2017). Firms also can indirectly lobby governments by showing the positive impact they have on the society with corporate social responsibility (CSR) initiatives. MNC
subsidiaries can use such initiatives to gain the host government’s favor by helping to sustain its country’s needs (Kostova & Zaheer, 1999).

In SC/OM strategy, risk mitigation strategies are applied to a wide array of supply chain disruptions, including those generated by political risk stemming from our HNS concept (e.g., discriminatory public procurement policies could suddenly reduce demand). Firms can hedge supply chain disruptions through operational (e.g., Chopra & Sodhi, 2004) and financial (e.g., Gaur & Seshadri, 2005) tactics. The SC/OM field benefits from a plethora of research at the tactical levels regarding supply chain risk management. Little is known, however, about strategically (e.g., structural, infrastructural, and/or integration choices [see Hayes & Wheelright, 1984; Giffi et al., 1990]) responding to HNS as a source of political risk at the SC/OM level to reduce risk in the first place. Figure 2.1 illustrates the ways we extend various topics covered by the strategic management-international business and the SC/OM literatures.
Figure 2.1: Illustrations of Strategic Management/International Business and SC/OM Literatures

<table>
<thead>
<tr>
<th>International Business / Strategic Management Literatures*</th>
<th>Topics covered by our study</th>
<th>Supply Chain / Operations Management Literatures*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MNCs – Host Government Relations (MGRs)</strong></td>
<td>Influence of MGRs in SC/OM</td>
<td><strong>MNCs – Government Relations</strong></td>
</tr>
<tr>
<td><strong>Political Risk Theories and MGRs</strong></td>
<td>Host national strategy</td>
<td><strong>Political Risk Identification</strong></td>
</tr>
<tr>
<td>• Bargaining Power: Vernon 1971, Kobrin 1987</td>
<td>as source of political risk and theory building</td>
<td>• Political instability: Juttner 2005, Kleindorfer &amp; Saad 2005</td>
</tr>
<tr>
<td>• Political Institutions: Henisz 2000</td>
<td></td>
<td>• Economic sanctions: Davarzani et al. 2015</td>
</tr>
<tr>
<td>• Legitimacy-based View: Stevens et al. 2016</td>
<td></td>
<td><strong>Firms’ Operational Responses to Risk</strong></td>
</tr>
<tr>
<td><strong>Firms’ Strategic Responses to Political Risk</strong></td>
<td>Firms’ strategic response at the SC/OM level</td>
<td>• Operational hedging: Chopra &amp; Sodhi 2004</td>
</tr>
</tbody>
</table>

*Illustrative examples
2.3 EMPIRICAL SETTING AND METHODS

In light of the paucity of theoretical and empirical research pertaining to the accelerating importance of host national strategy that is gaining more scrutiny and concern in the business community (Mann, 2017), we have designed an exploratory, multiple-case study to generate novel insights about the impact of HNS on a foreign firm’s operations strategy. The use of a multiple-case field study is well suited to answer the “how” and “why” questions of a poorly understood contemporary event (Yin, 2003) still in the beginning stages of examination (Eisenhardt, 1989). This is in line with the call by Roth and colleagues (2016) for more exploratory studies to uncover new and emerging phenomena important to the dynamism inherent within the SC/OM field. Consistent with contemporary studies using similar methods (e.g., Powell & Baker, 2014), we follow a grounded theory approach by simultaneously collecting and analyzing data through an iterative process (Glaser & Strauss, 1967; Strauss & Corbin, 1998).

2.3.1 Research Context and Sampling

We selected China as our strategic research site because of its influence as a global supply chain hub and its political environment that features several elements that allow us to observe its host national strategy. The Chinese government plays a major role in the economy, often intervening in domestic and foreign firms’ affairs (Osland & Björkman, 1998) as documented in multiple industry and trade reports (e.g., USCBC, 2015a). Consistent with political risk case studies (e.g., Davarzani et al., 2015; Darendeli & Hill, 2016) and the importance of context (Mattos et al., 2004), we use a single host country as a research site. A single site allows us to ensure that the observed differences in the firms’
behaviors are not influenced by potential differences among host countries’ institutional, legal, and political environments. With 436,800 foreign-funded companies operating on its soil in 2012 (Xinhua, 2012), China represents a meaningful research site for studying MNC-host government relationships (Luo, 2001).

We began by generating a list of potential firms to study by using China’s foreign enterprise directory as well as our professional connections through The Conference Board (https://www.conference-board.org/) in the United States. Once in the field, we gained a more localized understanding of 15 candidate firms by conducting exploratory interviews with Chinese-based foreign national executives. Of these 15 candidate firms, and in line with our intent to build theory, we chose a theoretical sample (Glaser & Strauss, 1967) of five firms. While statistical (i.e., random or stratified) samples allow researcher to test theory and generalize the findings to the respective representative populations, theoretical samples permit the combination of literal (i.e., corroboration) and theoretical (i.e., extension) replications (Yin, 2003) to take full advantage of the theory building approach. Similar to a laboratory experiment, a theoretical sample allows us to gain theoretical insights about the focal phenomenon (Eisenhardt & Graebner, 2007) as well as “eliminate or account for extraneous variation” (Eisenhardt et al., 2016: 1114).

Accordingly, our theoretical sample comprises firms whose business headquarters were located in a western country in order to reduce potential cultural differences among cases. Selecting western firms also heightens the relevance of our focal phenomenon because China perceives “the West” as its main competitor in the race toward worldwide leadership (Brady, 2003). Based on this prior research, we posit that China’s host national
strategy is more likely to be a concern to western firms and a potential source of political risk. We selected firms similar in size (annual revenues > 1 billion USD), operations (four manufacturing sector firms), and ownership (wholly-owned enterprises). Because we expected the influence of the host national strategy to vary in additional ways (Robock, 1971), we also included “polar” cases (i.e., one small MNC, one service sector firm, one mandatory joint-venture) to “more easily observe contrasting patterns in the data” (Eisenhardt & Graebner, 2007). Finally, our theoretical sample ensured that participants from each firm would be available to conduct two rounds of interviews in order to accommodate our evolving theoretical sensitivities (Strauss & Corbin, 1998) throughout the data collection period. It also ensured that multiple respondents at each firm were available in order to gain multiple perspectives from different important vantage points within the firm and reduce potential retrospective bias in our interview data (Eisenhardt & Graebner, 2007). The case descriptions are given in Table 2.1.
Table 2.1: Case Descriptions of Sample Companies

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>AUTOMNC</th>
<th>COMPMNC</th>
<th>PHARMNC</th>
<th>PACKMNC</th>
<th>SENSMNC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td>Europe*</td>
<td>United States</td>
<td>United States</td>
<td>Sweden</td>
<td>Germany</td>
</tr>
<tr>
<td>Sector</td>
<td>Manufacturing</td>
<td>Manufacturing</td>
<td>Manufacturing</td>
<td>Service</td>
<td>Manufacturing</td>
</tr>
<tr>
<td>Industry</td>
<td>Automotive</td>
<td>Consumer Electronics</td>
<td>Pharmaceutical</td>
<td>Packaging</td>
<td>Industrial Sensors</td>
</tr>
<tr>
<td>Ownership</td>
<td>Public</td>
<td>Private</td>
<td>Public</td>
<td>Public</td>
<td>Private</td>
</tr>
<tr>
<td>Legal Structure</td>
<td>Joint venture</td>
<td>Wholly owned</td>
<td>Wholly owned</td>
<td>Wholly owned</td>
<td>Wholly owned</td>
</tr>
<tr>
<td>Sales</td>
<td>&gt;$1 billion</td>
<td>&gt;$1 billion</td>
<td>&gt;$1 billion</td>
<td>&gt;$1 billion</td>
<td>&gt;$50 million</td>
</tr>
<tr>
<td>Years in China</td>
<td>&gt;20</td>
<td>&gt;10</td>
<td>&gt;20</td>
<td>&gt;20</td>
<td>&gt;10</td>
</tr>
<tr>
<td>Number of interviews</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Number of respondents</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Respondents’ domains</td>
<td>R&amp;D Procurement Quality</td>
<td>Logistics Procurement Quality</td>
<td>R&amp;D Procurement</td>
<td>R&amp;D Procurement Operations</td>
<td>Operations Sales</td>
</tr>
<tr>
<td>Archival data</td>
<td>460 pages</td>
<td>300 pages</td>
<td>250 pages</td>
<td>150 pages</td>
<td>70 pages</td>
</tr>
</tbody>
</table>

*Note: Names and inconsequential details have been modified to preserve anonymity.

*Country name is not provided to preserve anonymity.

2.3.2 Data Collection

The first author, who previously had worked in China for two years in supply chain–related activities, conducted face-to-face, in-country interviews from March to July 2016. We required respondents in the first round of interviews to be foreign executives or managers (i.e., non–Chinese citizens) working in SC/OM-related functions (e.g., procurement, quality, production, or product development). These respondents had the requisite experience and deep knowledge of SC/OM workings in China. We designed a
semi-structured interview protocol to retain a similar format of questions for all respondents (Yin, 2003) and allowed for additional probing questions to clarify respondents’ viewpoints. Our initial interview protocol included questions on broad topics, including the respondent’s previous and current work experience, firms’ SC/OM challenges and opportunities in China, and the respondent’s own personal experience as a foreigner in China. Respondents’ answers on the latter two topics helped us understand the impact of host national strategy on SC/OM strategy. We also asked respondents about the implications of the Chinese government’s five-year plan and indigenous innovation campaign.

We subsequently developed a set of follow-up questions based on themes emerging from the initial interviews, field notes, memos, and expert interviews. Supplier development was the most prominent emergent theme from the data. Next, we selected second-round participants to interview on this theme, regardless of citizenship. In total, we conducted 22 interviews with 18 respondents (of whom 15 were foreign nationals and three were Chinese), averaging 68 minutes and ranging from 45 minutes to three hours in length. Researchers recorded, professionally transcribed, and proofread all interviews, generating approximately 450 single-spaced pages of text. Field notes were taken during each interview and annotated with additional reflections and ideas occurring within a few hours of each interview. We complemented the interview data with internal and archival data. Finally, to deepen our emerging theory, we interviewed three chamber of commerce directors, a Chinese management professor specializing in domestic politics, and four experts working for foreign or Chinese consulting companies.
2.3.3 Data Analysis

We began our analysis by manually coding each transcript to grow familiar with our data and identify emerging themes within and across interview records (Ryan & Bernard, 2003). We used a qualitative analysis computer software (Nvivo 11) to maintain our records of manual coding and our “trail of evidence” from data to theory (Yin, 2003). Consistent with an exploratory approach, we used a holistic coding method (Saldaña, 2015) by assigning codes to phrases or sentence strings describing the topic the respondent discussed. Based on our initial codes and field notes, we created a table outlining the challenges, solutions, and opportunities each respondent perceived.

Next, we grouped primary and secondary data sources to create firm-level case reports to compare and contrast across cases (Eisenhardt, 1989; Yin, 2003). We further analyzed our data for patterns specific to host national strategy, using theoretical coding (Miles et al., 2013) by iteratively connecting the data in our tables to our evolving research question. We discovered that respondents from all firms perceived an “informal contract” (hereafter “perceiving”) that linked them to the Chinese political environment and defined their firms’ SC/OM role within that political ecosystem. We then conducted axial coding (Miles et al., 2013) to connect our theoretical codes to the emerging phases in our model. We discovered patterns indicating that market and industry factors clearly shaped firms’ perceptions of this contract, consistent with the “micro” approach of political risk (Robock, 1971). The more salient the contract, the more challenges and opportunities the firms encountered.
During our iterative data analysis process and literature review (Glaser & Strauss, 1967), we discovered the legitimacy-based view of political risk (Stevens et al., 2016). Through this lens, we could interpret firms’ efforts to increase their legitimacy when the host national strategy was more salient. We, therefore, recoded the second phase of our model to “sensemaking,” based on how firms perceived their role and legitimacy in light of the host national strategy. We also recoded our third phase to “responding,” as we focused on firms’ different approaches to engagement with their strategic supply chain partners. Our final theoretical process model reflects these three phases: the executives’ perceptions of their firm’s informal SC/OM contracts; their sensemaking regarding host national strategy–driven opportunities and challenges; and variations in engagement with their supply chain partners in responding to these opportunities and challenges.

2.4 FINDINGS

Figure 2.2 depicts our theoretical process model. First, we found that respondents perceived host national strategy as relatively more or less salient depending on their industry’s importance to the Chinese government and the Chinese market’s importance to their firms’ overall business strategy. Further, we observed a great deal of variation in how respondents assigned meaning to this socially constructed perception in terms of their firms’ role and legitimacy vis-à-vis the host government. Finally, we discovered that respondents—based on their sensemaking of the host national strategy—varied in terms of their firms’ engagement with strategic supply chain partners. We inducted three empirical patterns from our data to form our overarching theory, reporting our findings by case in
Table 2.2. We offer a summary of the supporting illustrative data in Appendix A.1. In the following sections, we illustrate the phases of our model using data from each case.

**Figure 2.2: Process Model of Host National Strategy Influence on Strategic Supply Chain Partner Engagement**

<table>
<thead>
<tr>
<th>Perceiving (Salience)</th>
<th>Sensemaking (Meaning)</th>
<th>Responding (Strategy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry Criticality</td>
<td>Firm Role</td>
<td>Strategic Supply Chain Partner Engagement</td>
</tr>
<tr>
<td>Market Criticality</td>
<td>Firm Legitimacy</td>
<td></td>
</tr>
</tbody>
</table>

**Table 2.2: Emerging Empirical Patterns**

<table>
<thead>
<tr>
<th>Firm</th>
<th>Industry Criticality</th>
<th>Market Criticality</th>
<th>Firm Role</th>
<th>Firm Legitimacy</th>
<th>Engagement with Strategic Supply Chain Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTOMNC</td>
<td>High</td>
<td>Promising</td>
<td>Explicit</td>
<td>Acquired</td>
<td>Collaborative</td>
</tr>
<tr>
<td>COMPMNC</td>
<td>Moderate</td>
<td>Substantial</td>
<td>Implicit</td>
<td>Desired</td>
<td>Socially Responsible</td>
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<tr>
<td>PHARMNC</td>
<td>Moderate</td>
<td>Substantial</td>
<td>Implicit</td>
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<td>Socially Responsible</td>
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<tr>
<td>PACKMNC</td>
<td>Low</td>
<td>Temporary</td>
<td>Trivial</td>
<td>Overlooked</td>
<td>Self-centered</td>
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<tr>
<td>SENSMMNC</td>
<td>Low</td>
<td>Temporary</td>
<td>Trivial</td>
<td>Overlooked</td>
<td>Self-centered</td>
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2.4.1 Perceiving (Salience)

The first phase of our conceptual model comprises factors influencing variations among respondents’ perceptions of host national strategy. Just as political risk can range from “micro” (impacting only firms in a specific industry) to “macro” (impacting all firms in the host country) (Robock, 1971), host national strategy risks to SC/OM vary in impact depending on the industries the host government decides to target in light of its own...
political and economic priorities. Across our firms, we found that respondents perceived host national strategy through two different lenses: industry criticality, their firms’ views of the importance of their industry relative to host government goals and strategies; and market criticality, their firms’ views of the host market’s importance to their firm’s overall business strategy. Appendix A.2 provides detailed ratings.

2.4.1.1 Industry Criticality. We define industry criticality as the firm’s perception of the importance of both its industry and strategic supply chain partners’ industries to the government’s host national strategy. If industry criticality is intertwined with the host government’s economic and social development goals, then foreign firm-specific measures and underlying political risk—elements of host national strategy—are more likely to be present for the foreign companies operating in that industry (Boddewyn & Cracco, 1972). These implications logically extend to the firms’ strategic supply chain partners as well. Thus, firms may also be able to perceive the host national strategy indirectly through their partners in critical industries, especially if the host national strategy impacts their intended SC/OM strategy. The Chinese government since 1995 has released various versions of China’s Foreign Investment Industries Guidance Catalogue that specifies its stance toward foreign investors by classifying industries as “prohibited,” “restricted,” “permitted,” or “encouraged.” We use secondary data drawn from the most recent publication (2015) at the time of the interviews to supplement respondents’ perceptions of their particular industry’s criticality; and then, we categorize the industries’ criticality as high, moderate, or low based on respondents’ perceptions.
Respondents at the automotive manufacturer (hereafter AUTOMNC) perceive their industry as highly critical for the government for several reasons, notably in being one of China’s chief employers. One respondent notes: “In [Country X], it is about one job out of 10 that is linked to the automotive sector, so it’s a huge source of job creation, and this is why most of the countries want to have factories within the country so they could create jobs” (AUTOMNC, Purchasing Manager). Consistent with our findings from the field, the Chinese government has classified car assembly as a restricted industry in terms of foreign investment. As such, foreign carmakers “are forced” to work with a domestic joint venture partner to “build cars in China” and “are limited to two joint ventures per foreign firm” (AUTOMNC, R&D Team Leader). Behind these regulations, the firm’s Purchasing Manager noted, lies the Chinese government’s willingness to protect its “own market” and its “1.3 billion potential customers” by ensuring that domestic carmakers play an important role and create local jobs.

AUTOMNC respondents tend to perceive certain industries within its supply chain as highly critical for the Chinese government, whose involvement appears to be a double-edged sword. On the one hand, regulations that prohibit foreign firms from participating in certain industries impact AUTOMNC’s strategic SC/OM decisions for supplier selection and product design. Some telecommunications-related activities, for example, are not accessible to foreign firms, and certain components/subassemblies must be sourced from Chinese suppliers. “[Digital] map suppliers is something critical so ... it should belong to Chinese companies so you cannot have a TOM-TOM [in your supplier portfolio]” (AUTOMNC, Product Development Manager). On the other hand, the government is
proactive in supporting activities aligned with national interests to garner intellectual property by direct knowledge transfer, such as with electric vehicle development: “There are enormous subsidies in the electric car field in China. ... There are grants from everywhere, in all the universities; all the start-ups which would like to get in there are helped” (AUTOMNC, R&D Team Leader). Consequently, AUTOMNC perceives its industry, as well as some key suppliers’ industries, to be highly critical to the government, which significantly impacts its realized SC/OM strategies due to restrictive regulations and domestic subsidies.

In contrast, respondents at the consumer electronics maker (hereafter COMPMNC) and the pharmaceutical firm (hereafter PHARMNC) perceive their industries as only moderately critical for the government. COMPMNC perceives technological development as important to China’s agenda: “If you look at some of the direction with China, there is a lot of investment by the government. There are technology funds to invest. There’s a transition going on to higher technology types of manufacturing, and there’s an interest in how China wants to grow the economy” (COMPMNC, Supplier Quality Director). COMPMNC’s Supplier Development Manager referenced inviting a government officer to the firm’s summit “because this is also aligned with government’s strategy to develop the industry 4.0 strategy.” According to the foreign investment guidance catalog, much of COMPMNC’s supply base is involved in high-end manufacturing, an encouraged industry sector. Nonetheless, COMPMNC’s industry is perceived to be only moderately critical, because consumer electronics manufacturing is a permitted industry with no particular
restrictions with respect to foreign ownership or supply chain partner selection. As COMPMNC’s Supplier Quality Director explained:

We don’t have government requirements. . . . We don’t have a specific regulations about what we can or cannot input or use our local content requirements, or if you think of a place like Brazil and those things that are written in the tax code and other really big part of how you decide, how you set up your supply chain.

PHARMNC, meanwhile, is in the health care sphere, a growing government priority in the face of an aging population and burgeoning medical service needs that grow along with state spending. PHARMNC’s Procurement Director noted: “You know that a lot of discussion is now on the price of a medicine because of the pressure on healthcare.” PHARMNC’s industry is permitted and even encouraged for some of its activities, including new drug compounding, which is typically outsourced to domestic contract manufacturers. Nonetheless, the firm must fight numerous government regulations to get its new medicines approved and launched on the Chinese market amid constraints that appear to apply to both domestic and foreign firms. It is within the supply chain context that PHARMNC executives tend to perceive host national strategy as moderately critical, given that it must deal with industries operating under specific guidelines for foreign firms. A PHARMNC Procurement Director noted, “China government is not open to have foreign companies participating in agriculture in China, so that’s more or less a sector that is off bounds, and that can create some complexity in securing your supply chain because your options are limited.” In sum, COMPMNC and PHARMNC operate in industries that are important to the government but not restricted. Some industries in their supply chain, meanwhile, are of varying importance to the government, driving respondents’ general perceptions of moderate industry criticality.
Respondents from the remaining two firms in our sample—a packaging services firm (hereafter PACKMNC) and an industrial sensor manufacturer (hereafter SENSMNC), perceive their industries as having low government criticality. PACKMNC respondents, in particular, offer little support to China’s strategic goals: “The government today, the five-year planning, the 10-year planning, they are talking about more the mega-structure, the mega-economics. Packaging is never the mega-economics” (PACKMNC, Sourcing Manager). In the same vein, SENSMNC perceives their products as nonessential for technological development in the country: “Unfortunately the products that we are making are not very complicated and there [are] hundreds of small Chinese manufacturers all around; this is not anything secret. We can just be better and have a better brand, but it’s not any technology that the Chinese didn't have since 20 years [ago]” (SENSMNC, Sales Manager). The Chinese government permits both PACKMNC and SENSMNC industries, and their supply chain partners’ industries are not believed to play a critical part in the national strategy either.

2.4.1.2 Market Criticality. A foreign firm unhappy with the impact of China’s host national strategy on its supply chain could, in theory, simply avoid the market. Yet market criticality—the firm’s perception of China’s importance with respect to its overall business strategy—can play a powerful role in the firm’s SC/OM strategy for penetrating foreign markets. Firms typically invest abroad as part of market-seeking, resource-seeking, efficiency-seeking, and strategic asset-seeking strategies (Dunning & Lundan, 1993)—a quest for which SC/OM has long advocated (Roth et al., 2008). If the host country is critical to any of these strategies, the firms inevitably may encounter adverse effects from the HNS.
Thus, the more critical the market for the firm, the more difficult it will be for its SC/OM strategy to ignore the salience of the host national strategy and its effects on their industries in the supply chain. We found that firms perceived high market criticality based on criteria mainly related to market-seeking (e.g., sales) and efficiency-seeking (e.g., sourcing) strategies. Respondents appeared to consider the sunk costs involved in an exit strategy as a proxy for market criticality. We categorized perceptions as a *temporary*, *promising*, or *substantial* market depending on the current importance that China has in a firm’s overall strategy.

AUTOMNC respondents perceive the market criticality of China to be *promising* because China is “the first automotive market [in the world]” (AUTOMNC, Purchasing Manager), representing a moderate proportion of the firm’s annual sales, according to industry reports. Current sales and sourcing conditions suggest that AUTOMNC perceives market criticality as more *promising* in the future: “Our joint venture and all automotive players are looking for how China could be a good base to export cars to all the Asian zone” (AUTOMNC, Product Development Manager). Accordingly, AUTOMNC plans on increasing sourcing activities in China to eventually supply its global operations: “What the company believes is that you can make real partnerships with the Chinese until you find Chinese suppliers capable to supply the global network of parts. ... I think we are a little ahead of time” (AUTOMNC, R&D Team Leader). AUTOMNC “now has three factories and one under construction ... It’s too much investment [to exit],” said its Purchasing Manager, indicating that this large investment points to long-term goals in China.
COMPMNC and PHARMNC respondents, by contrast, perceive market criticality as *substantial* for both market- and efficiency-seeking strategies. COMPMNC’s Chinese sales are rapidly growing, up 50 percent from the previous year and representing a sizeable portion of global sales, according to industry reports. If the Chinese market is significant in terms of COMPMNC’s sales—prospects of increased domestic consumption signal tremendous opportunity—it is even more so with respect to sourcing. Local, cost-efficient, and advanced manufacturing capabilities have given COMPMNC a “very large sourcing presence in China” (COMPMNC, Supplier Quality Director) that is key to global supply. “When we’re buying and making a product here, we sell it around the world” (COMPMNC, Supplier Quality Director). Supporting the *substantial* categorization of market criticality, a Procurement Director said he does not believe he could find a short-term alternative to China as its main supply base: “There is only one China from a supply-based point of view. ... There is no another place like that.” We similarly categorize PHARMNC’s market criticality perceptions as *substantial* both in terms of sales and sourcing: “If you look from a business perspective, also from a sourcing perspective, China is really primarily our focus or where we have an interest” (PHARMNC, Procurement Director). PHARMNC’s sales in China experienced double-digit percentage growth from 2014 to 2015, and the firm locates “the majority of its Asian suppliers in China” (PHARMNC, Procurement Director), from which it sources more than half of its active pharmaceutical ingredients to supply its global network. Consequently, PHARMNC runs a significant operation in China with “four . . . reasonably sized plants” and “probably 70
contract manufacturers” (PHARMNC, R&D Sourcing Director), making a short-term exit impractical.

PACKMNC and SENSMNC respondents, meanwhile, perceive their market criticality as merely temporary. Unlike the other firms, all of which sell direct to end consumers, PACKMNC and SENSMNC serve business customers. These customers are slowly exiting China due to production input cost increases and the allure of a more efficient production environment in emerging Southeast Asian markets. PACKMNC acts as a middleman between packaging manufacturers and brands, and its customers today have an exit strategy: “The brand says, ‘Because your taxation . . . or labor costs get expensive in China, I want to go to Vietnam’” (PACKMNC, Sourcing Manager). If PACKMNC wants to retain customers, it must find nearby suppliers, “because when you talk about shipping a small quantity of boxes a long distance, everybody hates it” (PACKMNC, Sourcing Manager). From a sourcing perspective, PACKMNC has a network of suppliers across Asia and does not intend to use China as a supply base: “It’s good, of course, that we had a backup ability to supply from China, but I do not see that as a sustainable longer-term solution” (PACKMNC, Project Manager). As a result, PACKMNC is only attached to China as long as its business customers are there; it fully intends to “follow the brand where the brand tell us to [go]” (PACKMNC, Sourcing Manager). This, indeed, is strategic given PACKMNC’s very small infrastructure investment in China: “That’s the big thing of this operation that we are not investing in factories, we are working with partners ... and we can easily then supply where it’s needed” (PACKMNC, Technical Director). SENSMNC’s General Manager, likewise, notes that its
business customers are leaving China: “The customer is trying to get rid of the Chinese suppliers because they're too expensive and too demanding.” SENSMNC’s sales in China are rather low, and the market is more critical in terms of sourcing for a company that exports about half of its Chinese production. Nonetheless, SENSMNC’s General Manager believes “it makes sense to be close to your customer,” and having a factory in China does not seem to affect the firm’s willingness to leave: “If they [our business customers] go West [Western part of China], well, maybe we also go West. But it also can be that if they are thinking of moving to Vietnam, that we also move to Vietnam, honestly speaking. Go with the flow.” Given that PACKMNC and SENSMNC appear poised to follow their business customers in the near future, we categorized their market criticality perceptions as temporary.

2.4.2 Sensemaking (Meaning)

The second step of our process model is the sensemaking phase, in which individuals assign meaning to their perceptions. Sensemaking includes but goes beyond interpretation (Weick, 1995), which is derived from a rational individual’s understanding of a situation. Individuals construct situations not only by interpreting them, but also as they select specific elements—a process referred to as bracketing—to bring meaning to the situation they are trying to define (Weick, 1995). In this section, we show how respondents constructed a story to make sense of the impact of host national strategy on their respective firms. In attempting to make sense of their environment, respondents tended to rely on cues derived from their firm’s role and the nature of the legitimacy that their firms were seeking with respect to host national strategy.
2.4.2.1 Role. We define role as respondents’ perceptions of behavioral expectations for their firms with respect to host national strategy. Respondents exhibited a sense of responsibility regarding host national strategy and what they believed to be their government-assigned role. Attempting to understand their situation within the host national strategy context, they sought to answer: “What does the host government want from us?” Our respondents understood that their firms played more or less defined roles, which we categorize as explicit, implicit, or trivial.

AUTOMNC understands its role as explicit. Government restrictions forcing foreign automakers to form joint ventures with Chinese companies include a contract that explicitly informs AUTOMNC of expectations: “The sharing of technology is pretty clear. It is written in our joint venture contract” (AUTOMNC, Product Development Manager). Respondents also understand their firm’s role at a more general level outside of the contract: “The foreign OEM is in charge of bringing the engineering of the product as well as the brand, and the Chinese partner is in charge of producing the car as well as commercialization of the car into their networks” (AUTOMNC, Purchasing Manager). In its quest for China to become and remain one of the most advanced nations, the Chinese government understands the importance of the automobile industry in terms of its economic and broader technological benefits, including state-of-the-art materials, components, software, and systems. China also knows its domestic carmakers fall far behind their foreign counterparts. The host national strategy, by way of these international joint ventures, intends to transfer capabilities from foreign to domestic automakers in hopes
of the latter becoming internationally competitive. As AUTOMNC’s Purchasing Manager explained:

The target of the joint venture policy from the Chinese government was, “OK, we don’t know how to produce cars . . . so we’re going to force our Chinese OEMs to be in joint venture.” . . . So Chinese OEMs could get skills and competence, and then the target of the Chinese government since the beginning is to create automotive champions that can go abroad and be as well-known as [competitors]. That’s what the Chinese government wants. It wants to have international player for Chinese brands.

In contrast, COMPMNC and PHARMNC perceive their role as implicit. Absent clear expectations, respondents speculated about their role based on what they were able to sense in their external environment, especially a national preference for domestic firms that threatens “a level playing field” (COMPMNC, Procurement Director) for foreign firms in China. Although foreign firm–specific regulations did not directly impact COMPMNC’s industry, its Supplier Quality Director saw covert goals in the host national strategy: “There is certainly a desire, or you can feel some pressure and intent that Chinese state-owned enterprises and China government organizations will begin to show a preference for companies that are either Chinese or have an impact on China company development.” By sensing impending preferential treatment for domestic firms, COMPMNC is effectively playing the role of a firm that actively promotes their development. By the same token, PHARMNC also senses a preference for Chinese domestic firms, coupled with implicit pressure on foreign firms to cooperate with the government in order to stay out of trouble: “Again, the local companies, they do have an advantage; they have the government backing them up. So for foreign companies, it is just a matter of making sure that they have a good relationship to ensure that at the end of the day they don’t get s**** over” (PHARMNC,
Procurement Manager). Absent clear instructions on supporting the national strategy, PHARMNMC echoes COMPMNMC in believing it should contribute to the development of China’s domestic firms. These expectations stem from a government preference for foreign firms that enable domestic capabilities, along with its efforts to attract higher value-added manufacturing that ultimately boosts labor skills and reduces the environmental burden.

As PHARMNMC’s Procurement Director noted:

I hear more and more that they [the host country] will put import restriction. Like intermediate products, you will not be able to cross the border with. I think they will be more selective in taking a harder position where the technology is cutting edge. . . . If they can choose to build a new facility for doing chemical synthesis or will choose to build a biologics facility then for sure they will go for a biologics facility. . . . In the end, China also wants to move up the value chain because the pollution and the challenges of being the factory of the world is not sustainable. . . . I think for China government is more interesting to have a local company growing and doing more rather than a foreign company putting a facility here, because that foreign company, maybe in the initial stage, the workforce, you will bring in foreigners so you will employ less local people and only for the less key positions.

As they recognize the growing national preferences for local players, COMPMNMC and PHARMNMC can sense their *implicit* role in fostering China’s domestic company development and supporting other national interests.

We categorize PACKMNC’s and SENSMNC’s perceptions of their roles as *trivial* because these firms do not sense defined overt or covert host government expectations. PACKMNC, for example, believes that the national strategy has little influence on its own business strategy: “The five-year planning . . . doesn’t affect us that much” (PACKMNC, Sourcing Manager). Thus, PACKMNC does not perceive it should fulfill any specific expectations to gain government favor. SENSMNC respondents, meanwhile, sense their company role as slightly more important yet nonetheless trivial, as it is tied only to the
initial investment and relies on financial considerations rather than on specific expectations related to national strategy. As SENSMNC’s General Manager observed:

I saw the development within the last 15 years. . . . ‘Please come invest your money.’ . . . So this is how the Chinese government treated foreign companies in the past, and also still that’s right now. So as long as you’re investing, you’re mostly welcome, and if you complain too much, then they will say, ‘You can go if you don’t like [your situation].’

Beyond contributing financially to the local economy, SENSMNC does not sense a role in supporting the host national strategy—and the government would be unlikely to come running were the investment to stop.

2.4.2.2 Legitimacy. Based on work by Suchman (1995: 574), we define legitimacy as respondents’ perceptions that their firms’ actions are viewed as “desirable, proper, or appropriate” for the national strategy. In addition to assessing their firm’s role, respondents make sense of their firm’s situation in the host national strategy context in terms of whether their presence is wanted in the host country. Accordingly, we focus on the legitimacy of not the whole multinational enterprise (MNE), but the foreign subsidiary: “the acceptance of the MNE subunit by the specific host country institutional environment” (Kostova & Zaheer, 1999: 65). We categorize respondents’ perceptions of their firms’ legitimacy with regard to the national strategy as acquired, desired, or overlooked.

AUTOMNC understands its legitimacy as acquired, believing its actions and presence are necessary to support the national strategy’s automotive industry-related aspects. AUTOMNC interprets the joint venture mandate as an indication that their presence is indispensable to the host firm: “Why do [Chinese firms] get into a joint venture today? Because they do not know, they do not have the know-how, today they do not know,
they need us, when we remove the [expatriates], there is nothing working” (AUTOMNC, Quality Manager). AUTOMNC acquired and maintains its legitimacy by supporting its joint venture partner from a technological standpoint: “They are more and more willing to make their own decisions, which is quite natural, but they still need to rely [on us] technologically” (AUTOMNC, Product Development Manager).

Unlike AUTOMNC, both COMPMNC and PHARMNC respondents understand their legitimacy as desired—in other words, they want the government to view them as legitimate. Here, market criticality plays an important role, as losing access to China would be catastrophic to their sourcing and sales operations. Consequently, both firms actively strive to demonstrate their legitimacy. COMPMNC wants to ensure its actions are desirable as the HNS evolves, as the Supplier Quality Director noted:

I think that’s a part of this. You need to look at the 13th five-year plan and you need to think about how to make sure your company is important, and needed, and valued in the direction of this plan. Another example of that is in environmental initiatives, because that’s a very big part of that 13th five-year plan.

COMPMNC is fully aware of a national bias for domestic firms: “We would never be number one in China because there is another guy [a Chinese competitor] that’s going to be number one, right?” (COMPMNC, Procurement Director). Consequently, COMPMNC is resolute in demonstrating that its presence and actions can be useful to the national strategy: “We’re not a Chinese company, but we can cooperate with Chinese companies to have a positive impact and to be important in this trend of the development in China” (COMPMNC, Supplier Quality Director). PHARMNC needs legitimacy to reduce this potential political risk. To this end, it attempts to assert its role in the national interest to Chinese authorities at prominent meetings on imminent health care issues such as fighting
lung cancer, highlighting its expertise and capabilities in the context of government goals (PHARMNC, Executive). PHARMNC believes the government can perceive its actions as desirable and appropriate for the national strategy amid attempts to reduce health care spending. PHARMNC’s Procurement Director explained:

If you can take a drug against blood clotting, an oil tablet, once a day that allows you to be dismissed two days earlier in the hospital, than every day have to take an IV and spend two days longer in the hospital, then the value of that drug you should factor in. That patient is two days less in the hospital and that's, for the government, two days less of hospital costs as a burden. That's more and more how we want to position ourselves.

PACKMNC and SENSMNC, by comparison, sense their legitimacy is overlooked. These firms do not see themselves as useful for the HNS, nor do they consider the China market essential given potential departures on the horizon. Ultimately, PACKMNC and SENSMNC have little incentive to build legitimacy like PHARMNC and COMPMNC, nor have they achieved legitimacy like AUTOMNC. PACKMNC’s Sourcing Manager confirmed this when asked whether the firm should support the HNS in order to benefit from government incentives: “No, not in our industry, because our industry is not the tier-one product. Nobody recognizes a paper packaging supplier. They will recognize [a major manufacturer] because they are producing a tier one line. We are the tier two, sometimes our supplier is tier three, so all the focus is only on the tier one side.” SENSMNC senses that the host government does not necessarily desire its activities, given the many other foreign firms that could replace them: “Because there are many companies who would like to come to China. . . . So if you go, other people will come and use your place [factory location]” (SENSMNC, General Manager). Additionally, SENSMNC appears to ignore the opportunity to pursue host government desirability through boosting indigenous
innovations, according to its General Manager: “Either [the innovations are] foreign or local, to show what can be done in China.” SENSMNC could try to gain legitimacy by developing patented innovations because “they [the government] will use you as an advertisement and say, ‘You see, this company can produce such difficult products here in China.’” Instead, SENSMNC appears to focus primarily on the financial incentives that come with having technological capabilities.

2.4.3 Strategic Supply Chain Partner Engagement

The third step of our process model captures how firms engage with their strategic supply chain partners. In the SC/OM literatures, supplier development typically refers to “any effort by a buying firm to improve a supplier’s performance and/or capabilities to meet the buying firm’s short- and/or long-term supply needs” (Krause, 1999). Supplier development thus is an area of exploration that could facilitate the understanding of firms’ response at the SC/OM level to HNS. Here, we expand the term supplier development to include the other supply chain partners that play the most essential roles in our cases. For instance, AUTOMNC perceived its relationship with the joint venture partner as more important than its relationships with its suppliers. Accounting for firms’ different situations, we use the term strategic supply chain partners to refer to the firm’s most significant business partners in terms of host national strategy. Additionally, we use the term engagement in place of development, as firms were engaged in activities with a broader scope than the traditional SC/OM view of supplier development (e.g., Krause, 1997). We found that firms seemed to take part in different types of engagement with their
strategic partners—namely collaborative, socially responsible, and self-centered activities—depending on how they made sense of their role and legitimacy.

The nature of AUTOMNC’s engagement with its joint venture partner is collaborative. AUTOMNC uses traditional supplier development activities to improve its supplier performance: “Supplier development in this company is very price oriented. ... I have two main activities. The first one is on quality. The second aspect is monozukuri; it’s an approach to look at cost from different aspects” (AUTOMNC, Supplier Development Manager). However, AUTOMNC is also engaged in relationships to be a “teacher,” showing the joint venture partner how to build cars—a requirement from the HNS. “For sure, the Chinese partner in the joint venture, they are here to learn and get some know-how from us, which is hard for them to get” (AUTOMNC, Product Development Manager). AUTOMNC’s close collaboration with its joint venture partner is illustrated by its intent to do real R&D in China. Some foreign counterparts, meanwhile, seemed to use collaboration as a smokescreen to gain legitimacy. AUTOMNC’s R&D Team Leader explained:

As the R&D center we have in [city], the others [foreign competitors] do not have that. You have been told about R&D centers but all the R&D that is produced in China, it is not actually kept. It is to have good contacts with the government, to give people jobs in China, to have good relations, but the projects are not necessarily kept. . . . They give the same projects in China and [country] with equivalent budgets to compare a little bit and in the end they will never retain the Chinese project. They will always find something to complain about, so it allows them to make people believe that they do development in China. In the end, they control everything from [country], so the part developed in [country] will be the one used worldwide. It allows them to keep a little know-how. . . . I do not know how they compare the projects, but it is a bit of a façade. . . . For us: no. We decided to trust the Chinese and there are projects that are completely done here, even implemented in other places in the world. In Europe, a little bit but mostly in South
America. We really do R&D in China; not everybody in the automobile [industry] can say that.

AUTOMNC engages to transmit knowledge and is not afraid of sharing information: “When I explain technical things sometimes, I put my knowledge, I deliver without—I cannot say, ‘Oh no, since you are Chinese I just give you half the info.’ No, I know how to explain, I answer all the questions, all I can” (AUTOMNC, Quality Manager). This sharing attitude prevails even in sensitive areas such as R&D: “In our case, in our special area of digital and connected cars, we are quite open and we are quite pushing [to share technology]” (AUTOMNC, Product Development Manager).

By contrast, COMPMNC and PHARMNC exhibit socially responsible types of engagement with their strategic supply chain partners. While these firms also implement supplier development practices to benefit from improved supplier performance, they also voluntarily engage in practices that enhance their strategic partners in ways that support important but non-required aspects of the national strategy. COMPMNC orchestrates a win-win relationship with its supply chain partners, helping them improve their capabilities: “A few things that we do are different is we probably do more with this new technology enablement than a typical quality organization. We do a lot of supplier development, lean activities” (COMPMNC, Supplier Quality Director). Hopes hinge on gaining competitive advantage: “There obviously will be a capacity and pricing opportunity” (COMPMNC, Procurement Director). COMPMNC leverages the aspects of the national strategy relevant to its activities and cooperates with its strategic partners for mutual benefit. As COMPMNC’s Supplier Quality Director explained:
That’s the 13th five-year plan, where there’s technology development in China. . . There are more and more options for Chinese suppliers that did not exist in the past. . . You have to find the right places where it makes sense to work with those suppliers to help them move forward and how to take advantage of that trend. . . If we apply some effort and advancement, we can help those choices get better and better . . . and there’s a very clear distinct benefit from that.

COMPMNC not only develops its suppliers for the sake of performance gains, but also perceives its engagement as good for China: “We feel like we're having a positive impact. We have a very high-quality standard. We can work with suppliers to meet that quality span standard so we can bring their [China’s] levels up” (COMPMNC, Supplier Quality Director). COMPMNC adds value and shows that its actions can be desirable by cooperating with local actors, aligning with an increasingly reliant national strategy: “We can also have a very healthy mix of Chinese suppliers in our supply chain” (COMPMNC, Supplier Quality Director). By the same token, COMPMNC engages in socially responsible supplier development (Lu et al., 2012) in order to align its supplier development goals with those of the national strategy, such as manufacturing pollution reduction. As COMPMNC’s Supplier Quality Director explained:

We have been a leader in reducing volatile organic compounds [VOCs] for three years. Some cities require plans for handling hazardous chemicals. For our high-risk suppliers, we help them design a plan so we can keep the government happy. COMPMNC is reducing VOC emissions before it eventually becomes enforced, so is trying to be proactive. We need to look at where China is going and try to anticipate what they need.

Similarly to COMPMNC, PHARMNC tries to be proactive in helping suppliers to become more socially responsible as Chinese regulations shift toward international standards. As PHARMNC’s Procurement Director noted:

Requirements that you have in the Western world at some point in time, they are going to be implemented here also. It should not be a big surprise. I was fortunate
with PHARMNC and we have [program name], which has strong guidelines: You should be responsible for your employees, for the environment, for your shareholder, for the patient. We tried to install that in our own company in China that the PHARMNC employees here feel the same, but also our suppliers. Every supplier I go I show them, for example, patient video. What is the impact of what you are doing here? Even though they may be all the way up front in the supply chain, they need to understand they are doing something that goes into a drug that somebody is injecting in their arm, and if it doesn’t work, the positive effect is not there.

PHARMNC encourages its suppliers to become more sustainable—“Our key suppliers, as part of our supply and management program, we do ask them to commit to a sustainability effort” (PHARMNC, Procurement Manager)—in the hope that the authorities will notice their help. PHARMNC’s Procurement Director explained:

> Often local governments or local agencies want to drive the improvement. If you have a supplier that is far ahead, whether in terms of manufacturing technology or EHS [environmental health and safety], the local government or local health authority will use that example as a motivator to the other factories in the same zone to get to that standard. Those are a couple of things that you can do to probe the climate and you want to stay ahead of the curve.

Overall, PHARMNC believes its engagement with its strategic partners has had a positive impact with respect to both the national strategy and PHARMNC’s inherent goals for China development: “When we talk about community engagement, we mean, let’s engage the local suppliers, let’s engage the local people to work in our manufacturing sites, let’s offer facilities to the community, that everyone can enjoy” (PHARMNC, Procurement Manager). In sum, the firms in this category act as “good Samaritans.” They fulfill their implicit roles to offset their lack of legitimacy by demonstrating an engagement that goes beyond operational performance metrics. These firms have a strong willingness to demonstrate that their voluntary engagement is beneficial to the national strategy.
PACKMNC and SENSMNC’s engagement with their strategic partners appears to be *self-centered*, of a “lone wolf” nature. Firms in this category mainly engage in supplier development practices intended to improve suppliers’ performance for their own direct benefit. These firms’ trivial role with regard to national strategy and their disregard for legitimacy leads them to engage in activities that are oriented only toward operational performance. As a consulting company, PACKMNC must ensure strategic partners have the right capabilities to serve customers. “We would tell them what you need to do in terms of the equipment material, service quality, customer service side to lift you up because it is the only way that I can rely on the production partner to service my international customers” (PACKMNC, Sourcing Manager). Focusing only on production partner development for competitive advantage, PACKMNC does not push their suppliers to be more socially responsible than current laws require, indicating little interest in demonstratively supporting national goals. As PACKMNC’s Sourcing Manager explained:

> We would not try to impose something with the supplier that we trust to do something which is not necessary. . . . We will provide them, of course, with as much information training as needed so that they can fulfill the minimum requirement. Yes, we do provide training, but we are not forcing them. . . . Well, there are some standards; you cannot break these standards. No child labor, no bribery, no corruption—that’s the basics.

In the same vein, SENSMNC cooperates with suppliers in order to increase their quality level: “It takes time and I can see the improvement, because right now . . . 95 percent is the OK rate of the cheap supplier, which is quite OK. Of course, we are pushing him to improve more, but I can see from 80 percent to 95 percent it is already a large improvement” (SENSMNC, General Manager). The engagement is not related to pressure from the host
national strategy, and SENSMNC’s willingness to help domestic firms has distinct limits: “After a certain extent, we have to say, ‘Sorry, you are too stupid to improve’” (SENSMNC, General Manager). Indeed, SENSMNC does not want to engage in developing its partners unless it is reaping the primary benefits: “I’m not willing to invest [in extra development initiatives] . . . because I don’t want to train him to become better and to sell to my competitor” (SENSMNC, General Manager).

2.5 DISCUSSION

In this study, we sought to gain a deeper understanding of “if” and “how” a host national strategy influences SC/OM strategy for foreign firms. By examining western firms located in China, we found that firms at the SC/OM level respond to host national strategy by engaging with their strategic supply chain partners in different ways. Patterns from our data constituted a general theoretical process model incorporating the firm’s perception, sensemaking, and strategic engagement responses with supply chain partners. Our empirical findings suggest that firms’ strategic partner engagement does indeed vary according to their perceptions of the HNS’s salience and how they make sense of their role and legitimacy to the host.

2.5.1 Theoretical Implications of the Legitimacy-Based View for SC/OM Strategy

Our main contribution is the extension of the legitimacy-based view of political risk from the strategic and international business fields to the SC/OM strategy discipline. In previous research, Stevens and colleagues (2016) suggested the need to explore strategies that firms might use to manage (i.e., gain, maintain, and repair) their legitimacy in a host
country. Generally, the greater the need for gaining legitimacy, the more firms aligned their supply chain partner engagement with the host national strategy, a novelty at the SC/OM level. As shown in Figure 2.3, we uncovered three main types of behaviors based on the firm’s desire to gain legitimacy to mitigate political risk, thereby, extending by analogy to Suchman’s (1995) typology of pragmatic, cognitive, and moral legitimacy.

**Figure 2.3: Role of Supply Chain Strategy in Reinforcing Firm’s Legitimacy in Reducing Political Risk**

At the most basic level, “lone wolf” firms seemed to engage with strategic partners only to improve their own competitive advantage. All firms, in fact, engaged with partners to benefit from enhanced capabilities, reflecting contemporary business practices that find firms competing not only with each other but at the supply chain level (see, e.g., Krause, 1999; Modi & Mabert, 2007). However, we believe firms such as PACKMNC and SENSMNC did not engage further in developing their strategic partners because they did not perceive a strategic reason to do so. Neither firm perceived itself to play a role in host

1Charpin and Roth (2018): Discriminatory treatment towards foreign entities

2Suchman (1995)
national strategy. This observation is in line with their industries’ low criticality in the eyes of the government and the lack of market criticality in their respective global strategies; hence the absence of political risk. Firms tried to operate with pragmatic legitimacy with their immediate stakeholders but made no efforts to satisfy others beyond themselves.

At the mid-level, “teacher” firms tried to satisfy government expectations with respect to host national strategy to mitigate this potential source of political risk. AUTOMNC perceived the industry’s high criticality to the host national strategy, and it collaborated extensively with its joint venture partner to fulfill the explicit government-imposed role of helping domestic automakers become international brands. Firms with a collaborative strategy already benefitted from some degree of cognitive legitimacy because their partnerships were of a form that the government and its host national strategy sanctioned, and to some extent, were already taken-for-granted.

Finally, “good Samaritan” firms attempted to build moral legitimacy. COMPMNC and PHARMNC, for example, further worked to support aspects of the national strategy tied to supplier improvement as well as the broader societal good (e.g., reductions in pollution and health care spending). We see two underlying factors in this “good Samaritan” behavior. First, the firms’ implicit roles in the host national strategy imply that they lack essential assets to offer the government, which therefore perceives them as merely competing with domestic firms. Second, China’s market is critical to these firms, so they cannot afford to be cut off. COMPMNC and PHARMNC also collaborated with their strategic supply chain partners, but they did so to fulfill the implicit role of enabling
domestic firms to have an impact on development in China, partly in effort to strive toward
cognitive legitimacy.

COMPMNC’s and PHARMNC’s efforts toward moral legitimacy engagement strategies required arguably more effort. They were, perhaps, more challenging in many ways compared to AUTOMNC’s cognitive legitimacy, already taken for granted in the joint venture. The cognitive legitimacy for AUTOMNC did not require engagement beyond helping its partner and the firm did not feel obligated to support unassigned national goals. For instance, AUTOMNC did not proactively support the government’s commitment to developing electric vehicle (EV) technology, a key tenet of the national strategy: “The point is that AUTOMNC was not able to develop a full EV car in this schedule for a lot of reasons” (AUTOMNC, Product Development Manager). AUTOMNC’s R&D Team Leader implied that the firm’s lack of involvement could be tied to its own strategy: “We do not perceive electric vehicles to be sold like that tomorrow without a big change in laws.” This finding is somewhat counterintuitive. Firms in the most critical industries would seem most affected by HNS but insulated from political risk, given their “taken for granted” legitimacy. Firms operating in less-critical industries, however, might have to compete with domestic firms, exposing themselves to political risk and creating a greater need to demonstrate legitimacy – including the use of extra supplier development activities as a mean toward this goal.

We posit that the firms in our study that intended to show their actions to be useful (i.e., pragmatic) and laden with good intentions (i.e., moral) over the long term were ultimately seeking cognitive legitimacy—that is, that the host society considered their
presence as taken for granted (Suchman, 1995). Foreign firms may strive to achieve this sort of positioning in order to minimize the political risk in critical markets for two main reasons. First, it is more difficult for a government to single out a foreign firm deemed as legitimate (Stevens et al., 2016). Second, in attaining pragmatic legitimacy with a host government a foreign firm may expose itself to a backlash if the government is replaced, especially in countries with a weak institutional environment and/or an unpopular government (e.g., Bucheli & Salvaj, 2013). Darandeli and Hill (2016), for instance, found that Turkish firms in Libya that had benefited society the most but had not exclusively built ties with the Qadhafi regime survived the best after that regime’s overthrow.

Host national strategy, therefore, can shift due to changes in governments or external events. As such, firms must be cautious when courting government favor by supporting the national strategy in seeking only pragmatic legitimacy. These firms must ensure they also gain moral legitimacy, so that their actions align not just with competitive goals and government expectations, but also with host community perceptions of the societal good. PHARMNC’s former CEO points out that his company has grown along with China and is perceived in many ways as a Chinese firm. This supports the idea that firms evolving in a nationalistic environment must strive for cognitive legitimacy and recognize the crucial role that SC/OM strategy plays in achieving this legitimacy.

**2.5.2 Boundary Conditions, Implications, and Future Research**

Our conceptual model theorizes a number of ways in which host national strategy influences foreign firms’ SC/OM engagement with their strategic supply chain partners. However, our empirical patterns are context dependent, and as such they are not directly
empirically generalizable, as is common in the development of grounded theory. Extending the spectrum of our study to firms from other regions and industries (e.g., more generic services sectors like retail banking or retail food chains) might generate new insights. Furthermore, our grounded theory approach helped us build theory from the respondents’ perspectives. By interviewing experienced senior executives in key positions to understand their firms’ decisions with regard to supply chain partners, we were also able to deepen our findings with other knowledgeable individuals (e.g., consultants). Yet, respondents’ opinions may have reflected only their personal perspectives, and not those of their firms and/or consultants may be giving “company speak.” Focusing on a specific firm and collecting more detailed data could perhaps extend the mechanisms in our model.

Through our exploratory inductive approach, we found tentative evidence that host national strategy can influence a firm’s SC/OM strategy in ways that can greatly benefit the country in terms of economic and social development. While host national strategy can involve political risk arising from government preference toward domestic firms, foreign firms can mitigate this risk by engaging in non-market strategies, as seen in the strategic management literature (e.g., Kostova & Zaheer, 1999). CSR initiatives show goodwill and contribute to sustainable development, while maintaining the underlying goal of currying favor in policymaking (Scherer & Palazzo, 2007). Firms’ CSR efforts at a strategic level can include financial donations, sponsored activities, and infrastructure investments geared toward improving social conditions in the communities in which they operate. These actions do not in and of themselves, however, contribute to continuous or future growth in the host country.
To overcome the nonrenewable effect of philanthropy, governments with a nationalistic strategy sometimes have imposed local content requirements (LCRs) on foreign firms, which force them to source their inputs from local suppliers either via quantity (e.g., minimum percentage) or price signals (e.g., import license) (Hufbauer et al., 2013). This strategy has gained traction around the world, especially since the 2008 economic crisis, as it offers politicians a quick avenue for boosting local economies and increasing employment. While the short-term gains for local communities are undeniable in terms of employment, the long-term effects seem detrimental to overall economic growth. Indeed, LCRs have been found to have several harmful consequences: forcing manufacturers to use local suppliers has driven up input prices, increased corruption, hampered tax revenues, and sparked World Trade Organization disputes (Ezell et al., 2013).

Given these risks, SC/OM strategies, which are associated with deliberate supply chain partner engagement, can play a significant role in contributing to host country economic development. Indeed, recent studies have indicated that supplier development practices support industrial policies more effectively than LCRs (e.g., Sauvé, 2016). By tapping into supplier development initiatives, local companies have a pathway to global value chains, as a number of respondents noted. As the host country’s supply base becomes better able to produce consistent quality, it can serve the domestic market, including its foreign firms, without harming their productivity. These same suppliers can then expand their horizons and sell products abroad with greater value added, helping the country
improve its balance of payments. Future research should keep investigating the potential benefits SC/OM practices can bring to a host country.

This is a key implication for foreign firms, which may want to put supply chain partner engagement at the forefront of their strategies to reduce political risk since a host country’s economic and social development can greatly benefit from supplier development activities. This apparent short-term win-win situation between the host government and the foreign firm might create hidden risks for foreign firms in the long run. Indeed, the collaborative type of strategic supply chain partner engagement could enable foreign firms’ own competition. For instance, AUTOMNC employees were unsure about what information should be restricted to protect core intellectual property. Its Product Development Manager saying: “I remember in the past we should share that and not this. Now it’s kind of a grey zone so we don’t have really strict rules that say ‘Don’t share’”

This quote indicates a possible disconnect between senior foreign national SC/OM and strategy executives at home. Furthermore, several respondents did not consider their strategic partners a serious competitive threat, despite numerous cautionary tales of foreign manufacturers losing intellectual competitive advantage and market share in China (Arrunada & Vazquez, 2006). Berry (2017) has suggested that the use of expatriates is most effective in preventing intellectual property leakage in low-enforcement countries. Our respondents noted a decrease in in-country expatriates amid heavy localization strategies—a legitimacy-seeking strategy—and high turnover among those who stayed. Future research should investigate competition issues stemming from strategic partner
engagement, specifically the potential silo effects between operations and strategy that might expose collaborative-type firms to serious risks.

2.6 CONCLUSION

Our process model and theory demonstrates that even in a country featuring a nationalistic host national strategy, great variation exists in how political risk affects firms. Foreign firms must constantly monitor their market and industry criticalities in order to align their firms’ business strategy with the host national strategy. SC/OM practices - such as strategic supply chain partner engagement, we found, can complement existing non-market strategies (CPA and CSR) in order to gain legitimacy and reduce political risk. In fact, SC/OM practices might offer greater leverage than traditional philanthropic and lobbying initiatives to achieve cognitive legitimacy – that is, the firm’s acceptance not only by the government but by the whole society. Thus, our study helps establish an overall foundation for future research on these issues in terms of framing, methods and findings. It also shows the necessity for executive dialogue between SC/OM and other disciplines in designing coherent strategies to reduce political risk. We hope that our study motivates much needed empirical political risk research at the SC/OM-strategic management interface.
CHAPTER 3
THE INFLUENCE OF POLITICAL INSTITUTIONS ON FIRMS’ USE OF DOMESTIC INPUT

“Trade itself is becoming less of a driver of global growth, and is confronted by a resurgence of protectionism across nearly all major markets. … The rise of protectionism, both in terms of formal trade-restrictive measures and public sentiment, present a challenge for both global trade and global supply chain resilience.”

Council on Foreign Relations (2016)

3.1 INTRODUCTION

Over the last decade, out of the 13,829 government interventions aimed at regulating global trade, 70% discriminated foreign commercial interests (Global Trade Alert, 2018). Driven by politicians’ considerations and/or voters’ demands, recent political events such as the commercial war between the United States and China, and the Brexit, indicate that protectionism seems to be here to stay (Kirk, 2017). Clearly, firms are increasingly under great pressure to adjust their operations and supply chain strategies. In this context, we broadly define political risk as the ability for political institutions and/or government interventions to affect a firm’s practices and/or performance. Specifically, we focus on one aspect of firms’ sourcing strategy, namely whether to use input of domestic or foreign origin. The recent observed global expansion in country governments’ willingness to favor local content at the expense of foreign input (Hufbauer et al., 2013; Stone et al., 2015) encourages us to ask the following question: How do country-level,
political institutional attributes influence firms’ sourcing strategy with respect to the use of domestic versus foreign input?

It is no surprise that firms’ operations and supply chains have become increasingly global in the last decades as companies are looking for strategic (Dunning & Lundan, 1993) and operational (Roth et al., 2008) opportunities abroad that could improve their financial performance. With respect to a host country sourcing strategy, firms often decide to use foreign input when it offers superior cost, quality, or technological attributes (Hausman et al., 2005). Government interventions that influence the availability of foreign input in an economy are of great interest for operations management since a change in the ratio of the use of domestic versus foreign input can impact capacity, lead time and inventory levels (Cachon & Terwiesch, 2009), and inventory investment (Jain et al., 2014), as well as input costs and quality (Hufbauer et al., 2013). The global operations literature offers various strategic sourcing models (e.g., Munson & Rosenblatt, 1997; Kouvelis et al., 2004; Wang et al., 2011; Mariel & Minner, 2017) to deal with the complexity and multiplications of tariffs and non-tariffs measures (NTMs). While these studies have modeled the policies, they have not yet considered at a higher level the fact that the political institutions implementing these policies can affect firms’ sourcing strategy. Understanding how governments influence firms’ use of domestic input offers insights to design resilient and flexible sourcing strategies prior the enactment of potential distortive trade regulations.

To study this phenomenon, we merge four secondary cross-sectional datasets and use a zero one inflated beta (zoib) regression model to explore the influence of political risk on firms’ use of domestic input across 88 countries. We operationalize political risk
stemming from institutions as the political constraints faced by national leaders and the country’s level of autocracy. This study makes two significant contributions to the SC/OM sourcing strategy literature. First, it is the first empirical paper studying the influence of salient political institutional features on firms’ sourcing strategy across a wide range of countries. Second, our regression model allows us to analyze the effects of political risk on firms’ use of domestic input based on firms’ specific sourcing strategy, namely, whether firms (1) use exclusively domestic input, (2) do not use any domestic input, or (3) use an amount in between these two extremes.

The remainder of this paper is organized as follows: In Section 2, we review the literature about trade policies and global sourcing decisions at the macroeconomic and microeconomic levels. In Section 3, we present our theoretical arguments and develop our hypotheses. In Section 4, we explain our methodological approach to model proportional data. In Section 5, we present our results. In Section 6, we discuss the results and their implications, and we list the limitations of this study and avenues for future research. We conclude in Section 7.

3.2 LITERATURE REVIEW

The literature that examines the effect of political risk on global sourcing decisions can be decomposed into two streams. The first stream includes the economics and international trade literatures that study the influence of tariff and non-tariff measures at the macroeconomic level (i.e., country or industry level). NTMs can have both positive and negative effects on a country’s welfare (see Magee et al., 1972; Hollander, 1987; Veloso,
Recent studies have been focusing on local content requirements (LCRs), as their implementation has increased drastically since the 2008 economic recession. Hufbauer and colleagues (2013) identified 117 local content rules in 2010 deemed to have reduced international trade by nearly 93 billion U.S. dollars. LCRs were found to decrease domestic input availability in non-LCRs industries, and reduce technologically advanced input of foreign origin preventing innovation spillovers from global value chains (Stone et al., 2015).

The second stream analyzes the effect of these policies at the microeconomic level (i.e., firm level). It is related to the global operations and supply chain literature, which has an array of analytic models for global supply chain design (Meixell & Gargeya, 2005). Of interest to us are studies that analyze the optimal sourcing and production decisions when firms must comply with local content rules. Munson and Rosenblatt (1997) use a deterministic mixed-integer program that explores how firms can effectively source their components while satisfying local content rules in a single and multi-plant settings. Wang and colleagues (2011) examine and compare the cost performance of different supply chain strategies (i.e., direct procurement, split procurement, outward processing arrangement) under stochastic NTMs. Other studies explore optimal network strategic design with respect to production facility locations when firms are embedded within trading blocs and must fulfill local content rules. Kouvelis and colleagues (2004) propose a comprehensive mathematical programming model to optimize firms’ global facility locations. They conclude that strategic network design should take into consideration government subsidies, trade tariffs, local content rules, and tax incentives. Guo and colleagues (2008)
posit that firms should leverage tariff engineering (i.e., sourcing and producing from countries involved in free trade agreements). These authors develop an algorithm to exploit free trade tariff concessions in a production sourcing problem involving multiple production stages in various locations to lower costs. While these papers are general in nature, some studies are specific to certain free trade agreements and industries. For instance, the North American Free Trade Agreement (NAFTA) in the automotive industry has been used to develop strategic network design models (Stephan, 2010; Mariel & Minner, 2017).

We observe that the extant related literature could benefit from (1) an empirical study examining the effect of political risk on firms’ sourcing strategy, and (2) determining how political institutions influence the implementation of these policies in the first place. Therefore, using an empirical approach, we intend to explore the influence that political risk that stems from political institutions has on firms’ sourcing strategy.

3.3 RESEARCH MODEL AND HYPOTHESIS DEVELOPMENT

According to institutional theory (North, 1990; Scott, 1995), firms evolve in environments featuring formal and informal institutions that influence their decision-making process and business outcomes. At the national level, formal institutions are represented by the government which sets “the rules of the game” (North, 1990: 3) to be played by economic agents. Therefore, it is not surprising that changes in political institutions and/or policies could adversely affect firms’ operations and performance. Political risk is a broad concept that can be operationalized in various ways (see Jarvis,
2008) from experts’ subjective assessments (Bunn & Mustafaoglu, 1978; de Mortanges & Allers, 1996) to more objective measures of various macroeconomic and social factors or the type of political institutions that could lead to sudden changes in government or policy (Delios & Hensiz, 2000; Jensen, 2005). In line with the political economy literature (Mansfield et al., 2000; Milner, 2005; Henisz & Mansfield, 2006), we use political hazard stemming from political constraints and level of autocracy (i.e., two attributes of political institutions that affect political risk) to develop our theoretical argument and build our hypotheses. Furthermore, since political risk is often deemed discriminating of foreign firms in a host country, we investigate the effects that foreign equity has on a firms’ use of domestic input.

3.3.1 Political Hazard

We define political hazard as a government’s ability to enact policy changes that could have an adverse effect on firms’ operations (Delios & Henisz, 2000). This ability is strongly correlated with the political institutions since changing policy requires the agreement of any political branches with a veto power. Therefore, the likelihood of policy change decreases as the number of “veto players” increases in a polity (Tsebelis, 1995; Henisz, 2000). We posit that firms should face greater “political hazard” when associated with political institutions that have a weak veto power and therefore little ability to prevent policy change. Tsebelis (1995) argues that not only does the number of veto players matter, but also their alignment in terms of policy positions. With respect to trade policy, which regulates the level of imports (i.e., foreign goods) entering the host country, having fewer veto players implies that political leaders can change trade policy with less resistance. In
their pioneer work exploring the relationship between political institutions and trade openness, Henisz and Mansfield (2006) found that when facing economic turmoil, governments with fewer checks and balances would be more likely to increase protectionism to satisfy societal demands with respect to employment. Thus, political institutions with fewer veto players would pose a greater political hazard for the firms that desire to import foreign input as the enactment of protectionist measures is facilitated when political constraints are low. We observe that the political economy literature shows that trade policies are more easily changed when the level of political constraints is low. By the same token, we argue that the enactment of protectionist policies since the 2008 economic crisis is more likely to have occurred in countries with low political constraints, so we should observe an increase in the use of domestic input in those countries.

_Hypothesis 1: Higher levels of political hazard (i.e., low political constraints) are associated with increased firms’ usage of domestic input versus foreign input, ceteris paribus._

### 3.3.2 Autocracy

A country’s level of autocracy reflects the competitiveness and openness of that country’s political leaders’ (s)election, the constraints imposed on them, and the regulations and competitiveness of the election process (Marshall et al., 2017). Political regimes can be classified as either democratic or autocratic according to how their leaders were selected. In democratic regimes, political leaders are selected during mass elections by “the part of the population that is eligible to vote” (Milner, 2005:13), whereas in autocratic regimes, leaders are not selected through universal suffrage but rather by a small group of elites, “the selectorate” (De Mesquita, 2005). The lack of competitiveness,
participation, and openness in the political election process in autocracies can also be a source of political risk (Jaggers & Gurr, 1995, Mansfield et al., 2000). Indeed, political constraints have less effect on autocratic governments since leaders cannot lose office as easily as in democratic regimes (Schumpeter, 1942).

On average autocracies are less open to trade than democracies since they are more apt to import fewer foreign goods (Mansfield et al., 2000; Aidt & Gassenber, 2010) and also are less likely to enter free trade agreements (Mansfield et al., 2007; 2008). This attitude can be explained by the fact that autocratic leaders must gain the support of a smaller political base than leaders in democracies (De Mesquita, 2005). While democratic leaders are prone to trade liberalization to spur economic growth for their electorate, politicians in autocracies prefer raising trade barriers to protect the rent of their selectorate (Mansfield et al., 2008). Protectionist measures in autocracies might not be implemented right away when the new leaders take office. Chow and Kono (2017) found that autocrats that seize office initially reduce trade barriers (especially on food imports) to gain support of the population before increasingly raising tariffs as they are consolidating their power.

Following Milner’s (2005) argument and results, we posit that autocracies will be more protective of their domestic industries than will democracies, since autocratic leaders must gain support from a rich selectorate whose goal is to protect their capital investment from imports. In contrast, democratic leaders must satisfy the welfare of a broader electorate who seek cheaper goods. Moreover, to retain their office, autocratic leaders typically try to reinforce nationalist sentiment by blaming economic turmoil and high unemployment on unfair foreign competition. As a result, they take pride in protecting
domestic industries from imports, hoping to create jobs in the short run that will keep anxious workers at bay.

_Hypothesis 2a: A Higher level of autocracy is associated with increased firms’ usage of domestic input versus foreign input, ceteris paribus._

We also anticipate that autocrats will have more leeway in implementing their protectionist policies when governing political institutions that have fewer veto players. Mansfield and colleagues (2008) report that an increase in the number of veto players forces the autocrats to satisfy a wider selectorate, which implies that it becomes more costly to protect the selectorate’s rents from foreign imports. Thus, the use of domestic input should be stronger in political institutions with high political hazard (i.e., few veto players) since the lower the number of veto players, the less costly it is for the executive to enact and sustain protectionist policies.

_Hypothesis 2b: The positive relationship between a higher level of autocracy and increased firms’ usage of domestic input is stronger when political hazard is high._

### 3.3.3 Foreign Equity

We define foreign equity as the firm’s percentage of equity owned by foreign individuals. Foreign firms are more familiar with the international factor markets than the host country factor markets; hence, these firms should integrate more foreign input into their production process (Delios & Henisz, 2000). Firms that operate in several market places often have global or regional sourcing offices that source input for the various subsidiaries. As such, subsidiaries can benefit from economies of scale if they let the sourcing offices purchase input in bulk on the international market rather than if they were to source input locally on their own. Foreign firms may also have difficulties finding local
suppliers that can reach their quality standards and/or cost targets (Ettmayr & Lloyd, 2017). In this case, foreign input purchased locally could be a solution. Thus, we contend that foreign firms will use less domestic input than domestic firms due to their superior knowledge of the international factor markets, the structure of their operations, and their potential lack of confidence in local suppliers.

*Hypothesis 3a: Foreign firms use less domestic input than domestic firms, ceteris paribus.*

Political risk is of special interest for foreign firms since host country governments often offer a national preference treatment to domestic firms because of nationalist sentiment or political election purposes. The political risk for the foreign firm lies in the discriminatory rules and policies that governments can impose to reduce their rents (Henisz & Zelner, 2010). Upon entering a foreign market, foreign firms adapt their strategy according to the political institutions in which the firms are embedded (e.g., Roy & Oliver, 2009; Chen et al., 2010). Delios and Henisz (2000) propose that it is less costly for a government to expropriate a foreign firm than a domestic one. The former uses less domestic content, and thereby offers fewer economic benefits in terms of employment and tax revenues to the host country. The authors add that host country firms can also lobby the government to expropriate foreign firms in order to protect their own rent.

The above arguments are used to explain why Japanese subsidiaries decrease their amount of equity when entering countries deemed politically hazardous (Henisz & Delios, 2000). Foreign firms can reduce those risks by gaining legitimacy in the eyes of the government and society (Kostova & Zaheer, 1999). By increasing their use of domestic content, foreign firms can mitigate political risk as they demonstrate their willingness to
contribute to the host country’s welfare by involving local suppliers in global value chains. Hence, we posit that foreign firms will increase their use of domestic content when operating in environments that are deemed high on the scale of political hazard.

*Hypothesis 3b: The negative relationship between foreign firms and use of domestic input is weaker when level of political hazard is high.*

Foreign firms are inherently subject to greater political risk when they operate in autocracies. Autocratic leaders often justify their hold on power and their advocacy of limited political and civil liberties as necessary for protecting their nation from foreign threat (Brady, 2003; Solt, 2011). Consequently, foreign firms in autocratic nations can be perceived as threatening to national sovereignty and security. Autocratic leaders can manipulate and reinforce nationalist sentiment in order to achieve their political goals and discourage revolution against the regime in times of economic hardship (Solt, 2011). We propose that foreign firms operating in these autocratic environments must demonstrate their goodwill by actively supporting host country production and employment in order to reduce potential discriminatory treatment and/or societal animosity. Accordingly, we expect foreign firms to use more domestic input when the level of autocracy is high.

*Hypothesis 3c: The negative relationship between foreign firms and use of domestic input is weaker when level of autocracy is high.*

### 3.4 METHODS

#### 3.4.1 Sample

To construct our dataset, we use four different publicly available datasets: (1) the World Bank’s Enterprise Survey (World Bank, 2017), (2) the World Bank’s World Development Indicators dataset (World Bank, 2018), (3) the Political Constraint Index
(POLCON) dataset (Henisz, 2002), and (4) the POLITY IV Project (Marshall et al., 2017). We use the World Bank’s Enterprise Survey to build our initial sample of firms. The Enterprise Survey collects data from firms in every region of the world. The survey period 2006-2016 is covered with a global methodology that allows cross-country analysis. However, the survey waves are conducted every other year in a set of different countries. Hence, our dataset has a pooled cross-sectional structure.

The firms included in the sample must have a physical location producing either services or goods and have control over their workforce and costs. Sampling stratification ensures that firm’s size, location, and business sectors are adequately represented in each country. The original dataset has 131,180 firms located in 125 countries. After merging the Enterprise Survey with the three other datasets, and after “listwise” deletion due to missing values on some of our key variables, our usable sample includes 46,369 firms spread among 88 countries. Appendix B lists the number of firms surveyed for each combination of country and year in our sample. We acknowledge that our sample suffers from a selection bias since not all countries in the world are represented in the original dataset and 37 countries were excluded due to missing data. However, the missing countries were often atypical (e.g., micro states: Tonga) or undergoing periods of instability which prevented an assessment of the political institutions (e.g., Afghanistan in 2008). Thus, the sample should not pose a serious threat regarding the generalizability of the findings for emerging countries. The Enterprise Survey original sample targets emerging countries in priority since firms in these countries are more likely to face adversity in their
environment (World Bank, 2017). The sample is consistent with our study goals as more variance in political institutions is observed in these economies (Delios & Henisz, 2000).

### 3.4.2 Measures

All our variables are measured using secondary data from the aforementioned datasets.

**3.4.2.1 Dependent Variable.** Our dependent variable *domestic input* is obtained from the World Bank’s Enterprise Survey. It measures the percentage of material inputs and supplies used by the firm to produce its goods or services. Domestic input is an imperfect measure of global sourcing since the input of foreign origin may not have been directly imported by the firm, but rather purchased domestically. Nevertheless, we believe our variable *domestic input* is a reasonable proxy to capture the availability and use of domestic and foreign input within the host country. Our study captures the firms’ decision to use domestic versus foreign input beyond their ability to import foreign input. In other words, firms that cannot directly import foreign input (e.g., no import license) still have the possibility of sourcing foreign input via another domestic firm, which should limit sample selection bias in our study.

**3.4.2.2 Independent Variables.** We use two political institutional measures to assess the degree of political risk within the host country. First, *political hazard* is adapted from the political constraint index (Henisz, 2002). Political constraint is an objective measure of the veto power on the executive and legislative branches of a government. The index captures diminishing returns for accumulating additional veto points, the alignment across government branches, and the heterogeneity of legislative branches. In sum,
political constraint measures the likelihood that a change in the preference of a government branch will lead to a policy change (Delios & Henisz, 2000). The index runs from zero, low constraints (most hazardous), to one, high constraints (less hazardous). To calculate our political hazard score, we reversed code the political constraint score to describe countries with high political risk (few constraints) as having high political hazard scores and countries with low political risk (many constraints) as having low political hazard scores. The second political risk measure, autocracy is drawn from the POLITY IV database (Marshall et al., 2017), which offers various measures characterizing the nature of states polity (i.e., authority systems at the national level). Autocracy is derived from a set of additive measures assessing the competitiveness and openness of executive recruitment, the constraints on chief executive, and the regulation and competitiveness of political participation (Marshall et al., 2017). The scale ranges from zero (not autocratic) to 10 (fully autocratic). We divide the original autocracy measure by ten for easier interpretation of our results.

Our last independent variable foreign equity was found in the Enterprise Survey and indicates the firm’s amount of foreign equity. The ownership structure with a 50% cutoff is commonly used in the literature (Delios & Henisz, 2000) to define a co-owned or foreign majority joint venture. We dummy code the variable as one if at least 50% of the firm’s equity is owned by private foreign individuals, companies, or organizations, and as zero otherwise.

3.4.2.3 Control Variables. We use control variables both at the national and firm levels. At the national level, we control for differences in economic wealth by including
the logged GDP (gross domestic product) per capita at purchasing power parity and GDP growth in our regression model that we obtain from the World Development Indicators dataset. Also, it is plausible that countries more opened to trade have more foreign input available in their economy. Accordingly, we control for trade openness using the ratio of total exports and imports over GDP that we compute from the World Development Indicators dataset. Since our dataset is made of several survey waves, we control for year with 2006 (the first survey wave) as our baseline. At the firm level, we use the data in the Enterprise Survey to control for firm size with logged firm sales (deflated 2009 USD), export intensity (firm exports / firm sales) as firms with more international experience are expected to use more foreign input, and firm’s sector using basic metals and metal products as our baseline. Table 3.1 summarizes the variable notations, Table 3.2 features the correlations and descriptive statistics of our measures, and Table 3.3 introduces the percentage frequencies of the sectors composing our sample.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Operational Definition</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic Input</td>
<td>Firm’s use of domestic input as a proportion on the interval [0,1].</td>
<td>Enterprise Survey (World Bank, 2017)</td>
</tr>
<tr>
<td>Political Hazard</td>
<td>Likelihood of policy change. 0 = low risk and 1 = high risk. Adapted from POLCON (Henisz 2002). Political Hazard= (1-POLCON) so index models low political constraint scores as high political hazard scores.</td>
<td>The Political Constraint Index (POLCON) Dataset (Henisz, 2002)</td>
</tr>
<tr>
<td>Autocracy</td>
<td>Reflects competitiveness and openness of the executive recruitment, constraints on chief executive, and regulation and competitiveness of participation. Index runs from 0= no autocracy to 1=pure autocracy. (we divided the original scale by 10 for ease of interpretation).</td>
<td>Polity IV Project (Marshall et al., 2017)</td>
</tr>
<tr>
<td>Foreign Equity</td>
<td>Firm’s percentage of equity owned by foreign individuals. Binary variable coded as 1 if foreign equity&gt;=50% and 0 otherwise.</td>
<td>Enterprise Survey (World Bank, 2017)</td>
</tr>
<tr>
<td>Trade Openness</td>
<td>Country’s exposure to international trade. [(imports+exports)/GDP].</td>
<td>World Development Indicators (World Bank, 2018)</td>
</tr>
<tr>
<td>Per Capita GDP</td>
<td>Country’s gross domestic product per capita in purchasing power parity. Transformed with natural logarithm.</td>
<td>World Development Indicators (World Bank, 2018)</td>
</tr>
<tr>
<td>GDP Growth</td>
<td>Country’s gross domestic product yearly growth.</td>
<td>World Development Indicators (World Bank, 2018)</td>
</tr>
<tr>
<td>Export Intensity</td>
<td>Percentage of firm’s sales that are directly exported.</td>
<td>Enterprise Survey (World Bank, 2017)</td>
</tr>
</tbody>
</table>
### Table 3.2: Correlations and Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>s.d.</th>
<th>Min</th>
<th>Max</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Domestic input</td>
<td>0.74</td>
<td>1</td>
<td>.3481</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Political hazard(^a)</td>
<td>0.64</td>
<td>.6323</td>
<td>.2104</td>
<td>.3286</td>
<td>1</td>
<td>-.12*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Autocracy(^a)</td>
<td>0.10</td>
<td>0</td>
<td>.2095</td>
<td>0</td>
<td>.9</td>
<td>.03*</td>
<td></td>
<td>.56*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Trade openness</td>
<td>67.02</td>
<td>52</td>
<td>.3380</td>
<td>22</td>
<td>225</td>
<td>-.16*</td>
<td>.14*</td>
<td>.34*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Per capita GDP(^b)</td>
<td>8.86</td>
<td>8.85</td>
<td>.8136</td>
<td>6.38</td>
<td>10.68</td>
<td>-.02*</td>
<td>-.01*</td>
<td>-.03*</td>
<td>.06*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. GDP growth</td>
<td>4.65</td>
<td>5.4</td>
<td>3.33</td>
<td>-7.66</td>
<td>12.32</td>
<td>.16*</td>
<td>.06*</td>
<td>.24*</td>
<td>-.05*</td>
<td>-.30*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Firm sales(^b)</td>
<td>13.18</td>
<td>13.12</td>
<td>2.27</td>
<td>3.90</td>
<td>21.35</td>
<td>-.16*</td>
<td>-.01</td>
<td>.07*</td>
<td>.03*</td>
<td>.32*</td>
<td>-.13*</td>
<td></td>
</tr>
<tr>
<td>8. Export intensity</td>
<td>9.72</td>
<td>0</td>
<td>24.38</td>
<td>0</td>
<td>100</td>
<td>-.17*</td>
<td>.01*</td>
<td>.03*</td>
<td>.12*</td>
<td>.08*</td>
<td>-.04*</td>
<td>.28*</td>
</tr>
</tbody>
</table>

\(N=46,369\).

\(^a\) Original variable. Variable is mean centered in model with interactions (Model 2).

\(^b\) Natural logarithm.

### Table 3.3: Sectors Frequency

<table>
<thead>
<tr>
<th>Sector</th>
<th>N</th>
<th>Percent</th>
<th>Cum.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Metals &amp; Metal Products</td>
<td>3,184</td>
<td>6.87</td>
<td>6.87</td>
</tr>
<tr>
<td>Chemicals &amp; Chemical Products</td>
<td>3,407</td>
<td>7.35</td>
<td>14.21</td>
</tr>
<tr>
<td>Construction</td>
<td>11</td>
<td>0.02</td>
<td>14.24</td>
</tr>
<tr>
<td>Electronics</td>
<td>1,365</td>
<td>2.94</td>
<td>17.18</td>
</tr>
<tr>
<td>Food</td>
<td>7,282</td>
<td>15.7</td>
<td>32.89</td>
</tr>
<tr>
<td>Hospitality &amp; Tourism</td>
<td>17</td>
<td>0.04</td>
<td>32.92</td>
</tr>
<tr>
<td>IT &amp; IT Services</td>
<td>2</td>
<td>0.01</td>
<td>32.93</td>
</tr>
<tr>
<td>Leather Products</td>
<td>184</td>
<td>0.4</td>
<td>33.32</td>
</tr>
<tr>
<td>Machinery &amp; Equipment</td>
<td>1,750</td>
<td>3.77</td>
<td>37.1</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>13,620</td>
<td>29.37</td>
<td>66.47</td>
</tr>
<tr>
<td>Minerals, Metals, Machinery &amp; Equipment</td>
<td>2,203</td>
<td>4.75</td>
<td>71.22</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sector</th>
<th>N</th>
<th>Percent</th>
<th>Cum.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor Vehicles</td>
<td>759</td>
<td>1.64</td>
<td>72.86</td>
</tr>
<tr>
<td>Printing &amp; Publishing</td>
<td>73</td>
<td>0.16</td>
<td>73.02</td>
</tr>
<tr>
<td>Rest of Universe</td>
<td>1,723</td>
<td>3.72</td>
<td>76.73</td>
</tr>
<tr>
<td>Retail</td>
<td>660</td>
<td>1.42</td>
<td>78.16</td>
</tr>
<tr>
<td>Rubber &amp; Plastics Products</td>
<td>1,570</td>
<td>3.39</td>
<td>81.54</td>
</tr>
<tr>
<td>Services</td>
<td>1,245</td>
<td>2.68</td>
<td>84.23</td>
</tr>
<tr>
<td>Textiles</td>
<td>6,692</td>
<td>14.43</td>
<td>98.66</td>
</tr>
<tr>
<td>Transport</td>
<td>2</td>
<td>0.01</td>
<td>98.66</td>
</tr>
<tr>
<td>Wholesale</td>
<td>30</td>
<td>0.06</td>
<td>98.73</td>
</tr>
<tr>
<td>Wood Products &amp; Furniture</td>
<td>590</td>
<td>1.27</td>
<td>100</td>
</tr>
</tbody>
</table>
3.4.3 Model Specification

Figure 3.1 illustrates the percentage frequency distribution (by decile) of our domestic input outcome variable. The distribution is heavily skewed to the left as 23,704 out of the 46,369 firms in our sample use 100% of domestic input. The firms that use 0% of domestic input represent the second highest frequency with 3,074 firms. Accordingly, we must use a statistical model that appropriately handles several potential specification errors associated with the modeling of proportional data that include zero and one values.

**Figure 3.1: Percentage Frequency Distribution of Domestic Input**

We review three potential errors that can lead to incorrectly specified models as outlined in Cook and colleagues’ (2008) work. First, our domestic input values are bounded between zero and one, so using traditional linear models (e.g., OLS regression) will result in having predicted values falling outside the [0,1] interval (Papke & Woolridge, 1996). Since the effects of the explanatory variables on the proportions are non-linear, the conditional mean must be a non-linear function of the predictors. Second, the conditional variance must be a function of the conditional mean because the variance in the proportion outcome decreases...
as the mean approaches the interval limits. As such, the use of censored regression models (e.g., Tobit model) that share linear regression assumptions might not be good candidates as they incorrectly specify proportional data and their inherent non-normal and heteroskedastic nature. Furthermore, censoring zero and/or one values is conceptually flawed since these boundary values are observed in our dataset (Maddala, 1991; Baum 2008). The beta regression model (Ferrari & Cribari-Neto, 2004) solves these two specification errors by assuming that the outcome is beta distributed. The beta distribution is indexed by flexible parameters that can adapt to different shapes of proportion but is bounded between zero and one, so a limit of the beta regression model is that it cannot model the zero and one values in the outcome variable (Ferrari & Cribari-Neto, 2004). Thus, we need a statistical model that can handle both the zero and the one values, as well as the continuous part of the proportion distribution.

Papke and Woolridge (1996) propose a generalized linear model using the logit link function and the binomial distribution to model a continuous proportion that includes the interval limit values. However, using this regression model may lead to a potential third specification error – the heterogeneity of decisions in our outcome variable (Cook et al., 2008). In our context, Papke and Woolridge’s (1996) approach assumes that the firm would choose to use a certain amount of domestic input (including 0% and 100%) through a single process. This regression model works for situations where the proportion (including the zeros and the ones) is determined simultaneously and the predictors affect the outcome values similarly, regardless of where the latter are located in the distribution. We believe that this approach is not adequate in our study. For instance, some firms may use 0%
domestic input because they cannot find a reliable domestic source, while other firms may use 100% domestic input because of the firm’s policies. In other words, there could be structural reasons that push firms to select an extreme value and prevent them to choose a certain amount of domestic input. Therefore, to relax the sample selection assumption, we must model as three distinct processes the two discrete choices to use either 0% or 100% of domestic input and the continuous choice of using a certain amount of it. To tackle this third specification error, Cook and colleagues (2008) propose a zero-inflated beta regression model that assumes a mixed discrete-continuous distribution allowing predicted proportions to be generated via alternative model behaviors (Baum, 2008), whether or not a firm decides to do something, and by how much. The zero-inflated beta regression models the probability of the outcome variable to take the value zero via a cumulative logistic regression (named the selection equation), and uses the beta regression for the continuous component of the proportion distribution (Cook et al., 2008).

We use the zero one inflated beta (zoib) regression (Buis, 2010) which adds a third component to the zero inflated beta regression (Cook et al., 2008) in order to model the probability that the proportion can take the value one, which in our case corresponds to a firm using 100% of domestic input. We use the command “zoib” in Stata 14 (Buis, 2010), which uses maximum likelihood to estimate the parameters in three distinct components: two logistic regressions to determine the probabilities that domestic input equals one (one inflate) or zero (zero inflate), and a beta regression (proportion) to model the firm’s use of domestic input when the proportion lies within the interval limits. To reflect the heterogeneity in the proportion outcome, the zoib regression uses a mixed discrete-
continuous distribution that allows the explanatory variables to influence differently the “firm’s choice of regime and its choice of level” (Cook et al., 2008: 863). Our regression model is given in equation 1 where \( i \) represents the firm, \( c \) the country, and \( t \) the year.

\[
\text{Domestic Input}_{i,t} = \beta_0 + \beta_1 \text{Political Hazard}_{c,t} + \beta_2 \text{Autocracy}_{c,t} + \beta_3 \text{Foreign Equity}_{i,t} \\
+ \beta_4 \text{Trade Openness}_{i,t} + \beta_5 \text{Per Capita GDP}_{c,t} + \beta_6 \text{GDP Growth}_{c,t} + \beta_7 \text{Firm Sales}_{i,t} \\
+ \beta_8 \text{Export Intensity}_{i,t} + \beta_9 \text{Autocracy}_{c,t} \times \text{Political Hazard}_{c,t} \\
+ \beta_{10} \text{Political Hazard}_{c,t} \times \text{Foreign Equity}_{i,t} + \beta_{11} \text{Autocracy}_{c,t} \times \text{Foreign Equity}_{i,t} \\
+ \beta_{12} \text{Year Dummies} + \beta_{13} \text{Sector Dummies} + \varepsilon_{i,t}
\]  

(1)

### 3.5 RESULTS

Appendix C features all the codes used to compute our results with the computer program Stata 14. We report the zoib regression estimates in Table 3.4 as follows: Model 1 includes the control variables and the explanatory variables and Model 2 adds the interaction effects. For both models, we report the coefficient estimates for each component of our regression analysis – that is, proportion for the beta regression modeling the values when \( 0 < y < 1 \), one inflate for the logistic regression modeling the probability that \( y = 1 \), and zero inflate for the logistic regression modeling the probability that \( y = 0 \). Hereafter, we identify the coefficient estimates with the superscripts \( p, o^i \), and \( z^i \) to refer to the respective proportion, one inflate, or zero inflate parts of the distribution. It is important to note that the zoib regression coefficient estimates are calculated in separate regressions for the proportion, one inflate and zero inflate parts of the distribution\(^5\). However, we can obtain

\(^5\) The same coefficient estimates would be obtained by running two independent logistic regressions for the tails and one beta regression for the central part of the distribution.

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“combined” marginal effects and predicted values since the zoib model allows explanatory variables to influence differently the outcome variable for the proportion, one inflate, and zero inflate components.

Table 3.4: ZOIB Regression Estimates

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1: Main Effects</th>
<th>Model 2: Interaction Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>proportion</td>
<td>one inflate</td>
</tr>
<tr>
<td>Political Hazard c</td>
<td>-.0384</td>
<td>-.5961**</td>
</tr>
<tr>
<td></td>
<td>(.0533)</td>
<td>(.0894)</td>
</tr>
<tr>
<td>Autocracy c</td>
<td>.2808**</td>
<td>1.3759**</td>
</tr>
<tr>
<td></td>
<td>(.0539)</td>
<td>(.0869)</td>
</tr>
<tr>
<td>Foreign Equity</td>
<td>-.2425**</td>
<td>-.8321**</td>
</tr>
<tr>
<td></td>
<td>(.0252)</td>
<td>(.0547)</td>
</tr>
<tr>
<td>Political Hazard c x</td>
<td></td>
<td>.6720^</td>
</tr>
<tr>
<td>Autocracy c</td>
<td></td>
<td>(.4006)</td>
</tr>
<tr>
<td>Political Hazard c x</td>
<td></td>
<td>-.4561**</td>
</tr>
<tr>
<td>Foreign Equity</td>
<td></td>
<td>(.1487)</td>
</tr>
<tr>
<td>Autocracy c x Foreign Equity</td>
<td>.1345</td>
<td>-.8252**</td>
</tr>
<tr>
<td></td>
<td>(.1263)</td>
<td>(.2596)</td>
</tr>
</tbody>
</table>

Control Variables

| Trade Openness             | -.0044**   | -.0066**    | .0075**      | -.0045**   | -.0064**    | .0076**      |
|                           | (.0003)    | (.0004)     | (.0007)      | (.0003)    | (.0004)     | (.0007)      |
| Per capita GDPb           | .0894**    | .0206       | -.3771**     | .0854**    | .0189       | -.3653**     |
|                           | (.0109)    | (.0178)     | (.0295)      | (.0111)    | (.0179)     | (.0303)      |
| GDP Growth                | -.0031     | .0416**     | -.0074       | -.0031     | .0419**     | -.0078       |
|                           | (.0033)    | (.0056)     | (.0090)      | (.0033)    | (.0056)     | (.0090)      |
| Firm Salesb               | -.0177**   | -.2490**    | -.0765**     | -.0179**   | -.2501**    | -.0765**     |
|                           | (.0037)    | (.0063)     | (.0104)      | (.0037)    | (.0063)     | (.0104)      |
| Export Intensity           | -.0007*    | -.0108**    | .0028**      | -.0006*    | -.0108**    | .0028**      |
|                           | (.0003)    | (.0006)     | (.0007)      | (.0003)    | (.0006)     | (.0008)      |
| Constant                  | -.1785     | 3.1248**    | 1.5576**     | -.1517     | 2.7951**    | 1.9112**     |
|                           | (.1243)    | (.1996)     | (.3450)      | (.1137)    | (.1797)     | (.3043)      |

Number of observations 46,369 46,369 46,369 46,369 46,369 46,369

a Coefficients estimates are on the logit scale. Values in parenthesis are robust standard errors. Coefficients estimates for year and sector dummies are not reported but were included in the analysis.

b Natural logarithm.

c Political Hazard and Autocracy are mean centered in Model 2.
P < 0.10 * p < 0.05 ** p < 0.01
Accordingly, we report these combined marginal effects in Model 1 and the combined predicted values in Model 2 in order to better assess the effects of the independent variables on the total expected proportion of domestic input.

3.5.1 Model 1

Table 3.5 reports the average marginal effects of our three explanatory variables on the total expected proportion of domestic input for Model 1.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>s.e.</th>
<th>p-value</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political Hazard</td>
<td>-0.0783</td>
<td>0.0100</td>
<td>&lt;.001</td>
<td>-0.0980 - 0.0587</td>
</tr>
<tr>
<td>Autocracy</td>
<td>0.1818</td>
<td>0.0096</td>
<td>&lt;.001</td>
<td>0.1631 - 0.2006</td>
</tr>
<tr>
<td>Foreign Equity</td>
<td>-0.1231</td>
<td>0.0063</td>
<td>&lt;.001</td>
<td>-0.1355 - 0.1107</td>
</tr>
</tbody>
</table>

Model 1 coefficient estimates are correctly signed and significant for the autocracy \( (\beta_2 = 0.2808, p<0.01); (\beta_2^{oi} = 1.3759, p<0.01); (\beta_2^{zi} = -1.1025, p<0.01) \) and foreign equity \( (\beta_3^{p} = -0.2425, p<0.01); (\beta_3^{oi} = -0.8321, p<0.01); (\beta_3^{zi} = 0.4717, p<0.01) \) variables for the three components of our regression model. Autocracy’s economic significance is important as on average, a one standard deviation increase in autocracy (see Table 3.2) increases the predicted use of domestic input by 3.81 percentage points \((0.1818\times0.2095)\times100\). All else constant, the predicted difference between a country with a low index of autocracy (0) such as Sweden and a country with a high index of autocracy (.9) such as Uzbekistan reaches 16 percentage points \((0.1818\times0.9)\times100\). Foreign equity’s economic significance is also substantial as foreign firms use on average 12.31 percentage points less domestic input

---

6 Average marginal effects calculated with all other covariates kept at their observed values. Average marginal effects calculated with all other covariates held at their means produced similar results.
than their domestic counterparts. Political hazard coefficient estimate signs run contrary to our expectations with an insignificant effect ($\beta_1^p = -0.0384, p=0.471$) on the proportion of domestic input and significant effects on the probabilities for the firm to be in the one inflate ($\beta_1^{oi} = -0.5961, p<0.01$) and zero inflate ($\beta_1^{zi} = 0.8005, p<0.01$) tails. The economic significance of the effect of political hazard on use of domestic input is moderate. A standard deviation increase in political hazard (see Table 3.2) decreases the predicted use of domestic input by 1.65 percentage points $[(-0.0783*.2104)*100]$. Yet, Model 1 does not give us the full picture of the results because of the presence of significant interaction effects; therefore, we focus on the results in Model 2 hereafter to review our hypothesis tests.

3.5.2 Model 2

3.5.2.1 Political Hazard. Table 3.4 results show that higher levels of political hazard have an insignificant effect ($\beta_1^p = 0.0695, p=0.295$) on the proportion of domestic input, but significant effects on the probabilities for the firm to be in the one inflate ($\beta_1^{oi} = -0.3321, p<0.01$) and zero inflate ($\beta_1^{zi} = 0.6098, p<0.01$) tails. As in Model 1, the signs run contrary to our expectations by showing that higher levels of political risk, characterized by fewer veto players in the political institutions, decrease the likelihood of using 100% domestic input and increase the odds of using only foreign input. However, when the level of autocracy increases, the effect of political hazard on the proportion of domestic input becomes significant and positive ($\beta_9^p = 0.6720; p<0.1$) and the negative effect of political hazard on the likelihood of using 100% domestic input is weakened ($\beta_9^{oi} = 3.4481; p<0.01$). Figure 3.2 shows that as political hazard increases from one standard deviation below its
mean to one standard deviation above its mean, predicted use of domestic input decreases by 5.46 percentage points when autocracy is one standard deviation below its mean, while it increases by 1.75 percentage points when autocracy is one standard deviation above its mean. This interaction effect highlights a clear interdependence of political institutional variables. Higher levels of political hazard increase the proportion of domestic input and the likelihood of using 100% domestic input only when the level of autocracy is high. Moreover, the effect of political hazard on the proportion of domestic input is significant and negative for foreign firms ($\beta_{10} = -.4561; p<0.01$). Taken together these results indicate that higher levels of political hazard are not necessarily associated with increased usage of domestic input; hence, H1 is not supported.

**Figure 3.2: Political Hazard, Autocracy, and Domestic Input Example**

<table>
<thead>
<tr>
<th>% POINT CHANGE IN DOMESTIC INPUT</th>
<th>Change in use of domestic input for a 2 s.d. increase in political hazard by level of autocracy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low Autocracy (-1 s.d.)</td>
</tr>
<tr>
<td>Change</td>
<td>-5.46</td>
</tr>
</tbody>
</table>
3.5.2.2 Autocracy. Table 3.4 results show that a higher level of autocracy does not influence the proportion of domestic input \( \beta_p^2 = 0.0822, p=0.522 \), but increases the likelihood of using 100% domestic input \( \beta_{oi}^2 = 0.4705, p<0.05 \), and decreases the likelihood of using no domestic input \( \beta_{zi}^2 = -0.6312, p<0.1 \). These three coefficient estimates are correctly signed, but are only significant for the one inflate and zero inflate parts of the distribution, so H2a is partially supported. The relationship between a higher level of autocracy and increased usage of domestic input becomes stronger when political hazard increases for the proportion \( \beta_p^9 = 0.6720; p<0.1 \) and one inflate components \( \beta_{oi}^9 = 3.4481; p<0.01 \), and almost significant for the zero inflate boundary \( \beta_{zi}^9 = -1.7964, p=0.116 \). These findings give support to H2b, which posits that when autocrats face lower political constraints, they can more easily implement protectionist policies that aim at pushing firms to use more domestic content. Figure 3.3 illustrates how political hazard positively moderates the relationship between level of autocracy and the total expected proportion of domestic input.
One would notice that when political hazard is one standard deviation below its mean, the use of domestic input slightly decreases for higher levels of autocracy. However, we rarely observe low levels of political hazard with simultaneously high levels of autocracy, so we caution against the interpretation of this range of data.

3.5.2.3 Foreign Equity. Table 3.4 results highlight that foreign firms use less domestic input ($\beta_3^p = -0.2339, p<0.01$), are less likely to use 100% of domestic input ($\beta_3^{oi} = -0.8398, p<0.01$), and are more likely to use only foreign input ($\beta_3^{zi} = 0.4520, p<0.01$) than domestic firms. The coefficient estimates for foreign equity are highly significant and correctly signed for the three parts of the distribution, thereby providing strong support for H3a. The negative relationship between foreign equity and use of domestic input is stronger when political hazard is high for the proportion of domestic input ($\beta_{10}^p = -0.4561; p<0.01$), while it is moderately significant for the one inflate ($\beta_{10}^{oi} = 0.5581; p=0.106$) and not
significant for zero inflate ($\beta_{10}^{zi} = 0.4739$, p=0.194) bounds of the interval, so H3b is not supported. Figure 3.4 shows that as political hazard increases, the total expected proportion of domestic input decreases more for foreign firms than for domestic firms.

**Figure 3.4: Political Hazard and Foreign Equity Interaction**

![Predictive Margins](image)

Figure 3.5 illustrates that when political hazard increases from one standard deviation below its mean to one standard deviation above its mean, the predicted use of domestic input decreases by 1.77 percentage points for domestic firms and by 2.93 percentage points for foreign firms.
By the same token, the negative relationship between foreign firms and use of domestic input is stronger when the level of autocracy is high. This interaction is not statistically significant for the proportion of domestic input ($\beta_{11}^p = 0.1345; \ p=0.287$) and the likelihood of using no domestic input ($\beta_{11}^{zi} = -0.089; \ p=0.784$). Yet, the interaction for the probability of using 100% domestic input is significant but with the opposite sign ($\beta_{11}^{oi} = -0.8252; \ p<0.01$). Thus, H3c is not supported since when the level of autocracy increases, the use of domestic input increases less for foreign firms than for domestic firms (see Figure 3.6).
Figure 3.6: Autocracy and Foreign Equity Interaction

Figure 3.7 illustrates that when autocracy increases from one standard deviation below its mean to one standard deviation above its mean, predicted use of domestic input decreases by 2.69 percentage points for domestic firms while it remains somewhat stable for foreign firms (0.48 percentage point).
3.5.2.4 Control Variables. Finally, Table 3.4 gives the effects of our control variables. Not surprisingly, national control variables show that firms operating in countries that are more involved in international trade use a lower proportion of domestic input ($\beta_4^n = -0.0045$, $p<0.01$), are less likely to be in the one inflate ($\beta_4^{oi} = -0.0064$, $p<0.01$), and more likely to be in the zero inflate ($\beta_4^{zi} = 0.0076$, $p<0.01$) parts of the interval. The country’s level of economic development tends to foster the proportion of domestic input ($\beta_5^n = 0.0854$, $p<0.01$) and lower the probability of using 0% domestic input ($\beta_5^{zi} = -0.3653$, $p<0.01$), while economic growth increases the probability of using 100% domestic input ($\beta_6^{oi} = 0.0419$; $p<0.01$). Firm’s controls indicate that larger firms use a lower proportion of domestic input ($\beta_7^n = -0.0179$, $p<0.01$) and are less likely to use an extreme value of domestic input ($\beta_7^{oi} = -0.2501$; $p<0.01$, $\beta_7^{zi} = -0.0765$; $p<0.01$), while firms that are more
involved in trade tend to use less domestic input in the three parts of our model ($\beta_8^P = -0.0006; p<0.05, \beta_8^{oi} = -0.0108; p<0.01, \beta_8^{zi} = 0.0028; p<0.01$).

Overall, Figure 3.8 highlights that only foreign equity has a significant main effect. The political hazard and autocracy variables are interdependent. A higher level of autocracy increases the use of domestic input, except at very low levels of political hazard. Conversely, the results can be interpreted thus: higher levels of political hazard increase the use of domestic input only for very high levels of autocracy. We summarize the results of our test of hypothesis in Table 3.6.

**Figure 3.8: Autocracy, Political Hazard, and Foreign Equity Interaction**
Table 3.6: Summary of Results

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Hypothesis Statements</th>
<th>Proportion</th>
<th>One Inflated</th>
<th>Zero Inflated</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Higher levels of political hazard are associated with increased firms’ usage of domestic input versus foreign input, ceteris paribus.</td>
<td>Not supported (not significant)</td>
<td>Not Supported (opposite sign)</td>
<td>Not Supported (opposite sign)</td>
</tr>
<tr>
<td>H2a</td>
<td>A higher level of autocracy is associated with increased firms’ usage of domestic input versus foreign input, ceteris paribus.</td>
<td>Not supported (not significant)</td>
<td>Supported</td>
<td>Supported</td>
</tr>
<tr>
<td>H2b</td>
<td>The positive relationship between a higher level of autocracy and increased firms’ usage of domestic input is stronger when political hazard is high.</td>
<td>Supported</td>
<td>Supported</td>
<td>Moderately supported</td>
</tr>
<tr>
<td>H3a</td>
<td>Foreign firms use less domestic input than domestic firms, ceteris paribus.</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
</tr>
<tr>
<td>H3b</td>
<td>The negative relationship between foreign firms and use of domestic input is weaker when level of political hazard is high.</td>
<td>Not supported (opposite sign)</td>
<td>Not supported (not significant)</td>
<td>Not supported (not significant)</td>
</tr>
<tr>
<td>H3c</td>
<td>The negative relationship between foreign firms and use of domestic input is weaker when level of autocracy is high.</td>
<td>Not supported (not significant)</td>
<td>Not supported (opposite sign)</td>
<td>Not supported (not significant)</td>
</tr>
</tbody>
</table>

3.5.3 Robustness Check

To assess the robustness of our results, we run identical analyses using a fractional logistic regression based on the quasi-likelihood method developed by Papke and Woolridge (1996) that models the effect of explanatory variables on the proportion of domestic input assuming that the three parts of the distribution are generated through a single process. We report the results for the coefficients estimates in Table 3.7.
Table 3.7: Fractional Logistic Regression Estimates*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1: Main Effects</th>
<th>Model 2: Interaction Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political Hazard(^c)</td>
<td>-.5347**</td>
<td>-.2653**</td>
</tr>
<tr>
<td></td>
<td>(.0674)</td>
<td>(.0836)</td>
</tr>
<tr>
<td>Autocracy(^c)</td>
<td>1.1810**</td>
<td>.5098**</td>
</tr>
<tr>
<td></td>
<td>(.0673)</td>
<td>(.1542)</td>
</tr>
<tr>
<td>Foreign Equity</td>
<td>-.6047**</td>
<td>-.5982**</td>
</tr>
<tr>
<td></td>
<td>(.0312)</td>
<td>(.0317)</td>
</tr>
<tr>
<td>Political Hazard(^c) x Autocracy(^c)</td>
<td>2.6963**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.4904)</td>
<td></td>
</tr>
<tr>
<td>Political Hazard(^c) x Foreign Equity</td>
<td>-.4693*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.1887)</td>
<td></td>
</tr>
<tr>
<td>Autocracy(^c) x Foreign Equity</td>
<td>-.3825*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.1565)</td>
<td></td>
</tr>
</tbody>
</table>

Control Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1: Main Effects</th>
<th>Model 2: Interaction Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade Openness</td>
<td>-.0087**</td>
<td>-.0086**</td>
</tr>
<tr>
<td></td>
<td>(.0003)</td>
<td>(.0003)</td>
</tr>
<tr>
<td>Per capita GDP(^b)</td>
<td>.1755**</td>
<td>.1691**</td>
</tr>
<tr>
<td></td>
<td>(.0140)</td>
<td>(.0141)</td>
</tr>
<tr>
<td>GDP Growth</td>
<td>-.0226**</td>
<td>.0232**</td>
</tr>
<tr>
<td></td>
<td>(.0041)</td>
<td>(.0041)</td>
</tr>
<tr>
<td>Firm Sales(^b)</td>
<td>-.1414**</td>
<td>-.1422**</td>
</tr>
<tr>
<td></td>
<td>(.0047)</td>
<td>(.0047)</td>
</tr>
<tr>
<td>Export Intensity</td>
<td>-.0062**</td>
<td>-.0061**</td>
</tr>
<tr>
<td></td>
<td>(.0004)</td>
<td>(.0004)</td>
</tr>
<tr>
<td>Constant</td>
<td>1.6178**</td>
<td>1.3759**</td>
</tr>
<tr>
<td></td>
<td>(.1554)</td>
<td>(.1404)</td>
</tr>
</tbody>
</table>

Log pseudolikelihood      | -19721.66             | -19,703.78                   |
Number of observations     | 46,369                | 46,369                       |

* Coefficients estimates are on the logit scale. Values in parenthesis are robust standard errors.

\(^a\) Coefficients estimates for year and sector dummies are not reported but were included in the analysis.

\(^b\) Natural logarithm.

\(^c\) Political Hazard and Autocracy mean centered.

\(^*\) p < 0.10 \quad \(^*\) p < 0.05 \quad \(^**\) p < 0.01

The results in Table 3.7 confirm our prior findings in Table 3.4. Autocracy has a positive effect on use of domestic input (\(\beta_2 = 0.5098; p<0.01\)), and foreign firms use less domestic input than domestic firms (\(\beta_3 = -0.5982; p<0.01\)). The negative relationship we observed in Table 3.4 between political hazard and use of domestic input is confirmed and significant (\(\beta_1 = -0.2653; p<0.01\)) in Table 3.7. The interactions terms are significant and
have the same sign as the respective significant portion of the zoib regression, which demonstrates that modeling a proportion as a single decision process tends to produce overall results that are sensitive to extreme values. For instance, the fractional logistic regression shows that a higher level of autocracy negatively moderates the negative relationship between foreign firms and use of domestic input ($\beta_{11} = -0.3825; p<0.05$). In our zoib regression, only the one inflate portion was negatively moderated by a higher level of autocracy ($\beta_{11}^{on} = -0.8252; p<0.01$). The interaction terms for the zero inflate and proportion components were not significant and had opposite signs. It is likely that the one inflate portion of the distribution produced a negative interaction term in the fractional logistic regression. The firms that use 100% domestic input represent a little bit more than half of our sample and hence have likely driven the interaction in Table 3.7.

Consistent with our prior results, the positive relationship between level of autocracy and use of domestic input is stronger when political hazard is high ($\beta_9 = 2.6963; p<0.01$), and the negative relationship between political hazard and use of domestic input is stronger for foreign firms ($\beta_{10} = -0.4693; p<0.05$). Lastly, we find average marginal effects with similar signs, but slightly different magnitudes (between one and two percentage points difference) as reported in Table 3.8.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>s.e.</th>
<th>p-value</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political Hazard</td>
<td>-0.0870</td>
<td>0.0110</td>
<td>&lt;.001</td>
<td>-0.1085 - 0.0655</td>
</tr>
<tr>
<td>Autocracy</td>
<td>0.1921</td>
<td>0.0109</td>
<td>&lt;.001</td>
<td>0.1708 - 0.2135</td>
</tr>
<tr>
<td>Foreign Equity</td>
<td>-0.1081</td>
<td>0.0060</td>
<td>&lt;.001</td>
<td>-0.1198 - 0.0963</td>
</tr>
</tbody>
</table>

Table 3.8: Fractional Logistic Regression Average Marginal Effects
3.6 DISCUSSION

In this study, we explore the influence that political institutions, operationalized as a country’s strength of veto players and level of autocracy, have on firms’ use of domestic input, a key operational decision with respect to operations strategy and supply chain design. We found tentative evidence that political institutional attributes of political hazard and autocracy are related to a firm’s decision to use input of domestic versus foreign origin. Similar to previous findings in the political economy literature (Mansfield et al., 2000, 2008; Aidt & Gassenber, 2010), firms located in autocratic countries tend to use less input of foreign origin. This protectionist inclination can be explained by the government’s willingness to protect the rents of its domestic supporters (De Mesquita, 2005; Milner, 2005) and a certain enthusiasm for economic nationalism. By trying to protect domestic production and employment, autocratic leaders can assert their patriotic role and justify that their ruling is necessary to protect national interests from a potential negative foreign influence. Governments that maintain a strong nationalist sentiment may foster institutional isomorphism (DiMaggio & Powell, 1983) and push firms through coercive (i.e., governmental rules), normative (i.e., societal rules), and mimetic (i.e., peer pressure) isomorphism change to use more domestic input. The increased usage of domestic input in autocratic countries appears to be structural since we control for national economic development, type of sectors, and firms’ level of internationalization. The fact that we observe in highly autocratic environments an increase in the use of domestic input, rather than a decrease (when political hazard increases) reaffirms the positive relationship that level of autocracy has on the use of domestic input (see Figure 3.2 and Figure 3.3).
Table 3.4 results lead to the unexpected finding of our study—that is, on average, use of domestic input decreases as political hazard increases. We speculated that polities featuring fewer veto players would have an easier time passing protectionist laws in the aftermath of the 2008 economic crisis, and we expected to observe an increase in the use of domestic input in these countries. A potential explanation for the decrease of domestic input when political hazard increases is that these countries indeed generated policies with the intent to increase the use of domestic content, but these policies turned out to be counterproductive for the whole economy. Recent studies (Hufbauer et al., 2013; Stone et al., 2015) found that almost all the countries that implemented LCRs since 2008 have observed a decline in domestic input’s availability, diversification, and innovativeness when considering the country’s whole economy. While the government’s efforts to increase the use of domestic input in certain sectors of the economy may have the desired effects in the short run, other sectors and more generally industrial competitiveness as a whole will suffer in the long run. Stone and colleagues (2015) observed that LCRs resulted in a price increase of the input for all but one of the measures they studied. The same authors also advance the notion that LCRs force firms towards certain industries, thereby decreasing production and input availability in other industries. Therefore, firms may have more difficulty finding domestically manufactured inputs that are price competitive and available in sufficient quantities when political hazard increases, which would explain the behaviors of firms located in the tails of our distribution (i.e., it is not possible to use 100% domestic input anymore and using only foreign input becomes an attractive solution given the aforementioned circumstances). This finding should encourage firms to be ready to use
foreign input if necessary when operating in countries with high levels of political hazard since protectionist policies that reduce the availability of domestic input in certain sectors are likely to occur.

Not surprisingly, we found that foreign firms use less domestic input than their domestic counterparts because the former exhibit a superior knowledge of international market factors with respect to the host market where they operate (Delios & Henisz, 2000). Of greater interest is the potential influence of political institutions on foreign firms’ consumption of domestic input. Foreign firms face greater risks of expropriation than domestic firms (e.g., Bradley, 1977) and these risks are even greater in countries where political hazard and nationalist sentiment are elevated. Accordingly, following the legitimacy-based view (Kostova & Zaheer, 1999; Stevens et al., 2016) we expected to find that foreign firms would use more domestic input than domestic firms when political hazard and level of autocracy are heightened in order to demonstrate their goodwill by engaging with local suppliers and communities.

While we did not find consistent nor significant effects for each firm’s behaviors, we found the opposite to be true for the effects of political institutional attributes on two types of behaviors. First, foreign firms reduce their proportion of domestic input more than domestic firms do when political hazard increases. Foreign firms may be impacted more than domestic firms by the negative effects that protectionist policies have on domestic input availability and price. Indeed, foreign firms have less knowledge of the local market than domestic firms given that they want to substitute foreign input for domestic input. If an input becomes unavailable or too costly, foreign firms would be more likely than
domestic firms to turn to international markets or to purchase a foreign brand they are familiar with on the domestic market. Foreign firms might have a harder time finding new domestic suppliers, and they may also have more doubts when it comes to finding trustworthy suppliers to meet their quality requirements. Second, we observe that the likelihood of using 100% domestic input increases less for foreign firms than for domestic firms when level of autocracy increases. In this situation, we advance the same argument: namely, that foreign firms may lack enough knowledge about the local market to use 100% domestic input. Moreover, foreign firms might fear getting certain critical inputs from domestic suppliers and sharing knowledge with them since intellectual property rights are poorly enforced in countries that feature a high nationalist sentiment with governments pushing for indigenous innovation and the development of its own national champions (see USITC, 2011; Bichler & Schmidkonz, 2012, Charpin & Roth, 2018).

3.6.1 Implications for Theory

From a theory perspective, we contribute to the operations and supply chain literature by being the first empirical study measuring the influence of political risk stemming from institutions on the use of domestic input. This study complements the global operations modeling literature, which studies the optimization of network design and sourcing decisions based on regulatory trade risk (e.g., Munson & Rosenblatt, 1997; Wang et al., 2011). Having a better understanding of political institutions’ effects on firms’ operational decisions can help in assessing whether the suitability and efficiency of the mathematical models developed by the analytical literature are dependent on the polities in which firms operate. Furthermore, we shed light on the importance of appropriately
modeling a proportion whose values are generated by different processes (Cook et al., 2008). By analyzing the two tails and the rest of the domestic input distribution separately, we gained granularity in our analysis and decreased the likelihood of misinterpreting our findings. Instead of observing the average effect that the explanatory variables had on the use of domestic input, we gained insight on how they influenced each type of firm’s behaviors. The political institutional attributes were more effective in influencing firms’ extreme behaviors than impacting the proportion of domestic input used by the firms that did not use 100% nor 0% of domestic input. These findings imply that political institutional attributes are more likely to influence a firm’s decision regarding whether or not to use domestic versus foreign input than the decision related to quantity of either.

### 3.6.2 Implications for Practice

From a managerial perspective, the availability and use of domestic versus foreign input has tremendous repercussions on firms’ inventory levels, cost, and quality. Firms that import more foreign input\(^7\) tend to have higher material inventory levels (Golini & Kalschmidt, 2011) and greater inventory investment (Jain et al., 2014). Golini and Kalschmidt (2011) found that firms can reduce the negative effect of global sourcing on inventory by buffering their supply chain management practices. Accordingly, firms could decide whether they should implement or invest in such practices depending on the market they enter as our study stresses that the use of domestic input is influenced by political

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\(^7\) Albeit our dependent variable does not solely capture the proportion of foreign input that is imported by the firm but rather all the foreign input available domestically, we expect the relationship between foreign input and inventory to be similar to the one found in these studies. Firms that purchase foreign input from domestic suppliers must also take into account the longer lead time and uncertainty faced by their suppliers, so adjust their inventory accordingly.
institutional attributes. Kouvelis and colleagues (2004) argue that firms must take into account regulatory trade policies when they design their strategic network. In the same vein, we posit that operations managers should equally pay attention to the polities in which they operate. Firms should prioritize their efforts aimed at adapting their supply chain flexibility and resilience in mitigating regulatory trade risks in countries where the political institutions are inclined to generate such risks. Our findings also suggest that a higher level of autocracy is a necessary but not sufficient condition to significantly increase a firm’s usage of domestic input. Higher levels of political hazard must be present to enable autocrats to protect the selectorate’s rents. Thus, firms must monitor these two variables jointly to assess whether they are likely to influence the availability of foreign input, and in turn, the firm’s sourcing strategy. Additionally, sourcing managers that operate in political institutions favoring the use of domestic input should be encouraged to gain a greater understanding of the local factor markets. Indeed, foreign national managers should recognize that they will not be able to leverage their international factor markets knowledge as much as they would like to when operating in nationalist environments. Accordingly, firms may want to provide appropriate training about sourcing from domestic suppliers in emerging countries, a condition which features its own set of challenges with respect to quality standards as well as environmental and labor practices.

3.6.3 Limitations

This study comes with its set of limitations. First, this study presents correlations between our explanatory variables and the use of domestic input rather than causal links. Political risk is an endogenous construct, so we cannot rule out simultaneity bias in our
regression model or the possibility that a confounding variable generated biased estimates. To this point, we have not been able to find a suitable instrumental variable that would help us alleviate these concerns. The search for relevant instrumental variables in the political science literature is a constant challenge and future research could help reveal innovative ways to control for political risk endogeneity. Second, our firm level data was generated through various survey waves and thus is not free of measurement error. Accordingly, we warn our readers to interpret the magnitude of the results with caution and rather rely on the general trends highlighted in the study since it is plausible that certain respondents’ answers were approximate. However, we are not aware of any other source of secondary data that would allow us to study firms’ operational data across so many countries and time periods. Future research could help validate our findings within a smaller geographical entity (e.g., country level) by using data that are contingent on audit and subject to official reporting. Third, the generalizability of our findings is bounded to firms in emerging countries, which characterized the vast majority of the countries in our dataset. While emerging countries have been the standard for studying the influence of host country political risk on foreign firms, the recent populist and protectionist trends observed in western countries (e.g., Brexit, Trump’s election) should encourage future research to carry studies in such contexts. Fourth, the nested nature of our data (i.e., firms nested within countries) might have led us to overestimate the statistical significance of the effects of our country level variables (Moulton, 1990), especially for the cross-level interaction effects. Future research could attempt to build a program that combines mixed models and non-
linear regression analyses such as \textit{zoib} to more appropriately take into account the hierarchical structure of the data.

3.7 CONCLUSION

In this study, we investigated the effects that foreign equity and political institutional attributes such as political hazard, operationalized as the political constraints faced by political leaders, and level of autocracy have on firms’ use of domestic input. We use four data sources to construct a repeated cross sectional dataset, which we analyzed with a zero one inflated beta regression model in order to model the decisions of firms to use either only domestic input, no domestic input, or an amount in between, as three distinct processes. We found that foreign firms consistently use less domestic input than their domestic counterparts, regardless of the political hazard and autocracy levels. Independently, higher levels of political hazard tended to decrease use of domestic input, while a higher level of autocracy was inclined to increase it. However, the presence of both higher levels of political hazard and autocracy were linked to an increased use of domestic input. This finding supports our argument that autocrats that intend to protect the rents of their supporters by discriminating foreign input, are more likely to execute their plans when they face few political constraints. The implication for firms is important. By monitoring political institutional attributes in the different markets where they operate, firms can better assess the necessity and the potential success of implementing contingency plans with respect to their sourcing strategy and supply chain design. The measurement and identification challenges remain consequent when studying the effect of political risk on
firms’ operations. However, we hope that we paved the way for new research on the influence that political risk can have on firms’ strategic sourcing and other supply chain design strategies, as we are in the midst of a protectionist era that is redefining firm-government relationships.
CONCLUSION

This dissertation explores several notions of political risk, a topic gaining momentum in global supply chains but still understudied in supply chain and operations management (SC/OM). Political risk is a vague concept that is constantly evolving and can be studied from numerous perspectives; hence the importance of our Essay 1 contribution—the theorization of political risk in a way that is relevant to both current world developments and the SC/OM field. On the one hand, we focus on governments’ continuous strategy with respect to foreign entities as a source of political risk, rather than the more radical notion of political instability that has been less frequent in the past decades. On the other hand, we uncover the demand, supply, and operational risks that stem from host national strategy to pinpoint the consequences that are specifically relevant for the SC/OM field. Our supply chain risk conceptual framework offers several avenues for future research. Measuring the different sources of host national strategy risk could help firms adjust their supply chain practices to mitigate SC/OM risks. Monitoring host country domestic mercantilism can help firms adjust their inventory and capacity needs. Measuring host country animosity towards other countries can help firms select appropriate supply chain partners. Assessing the degree of national identity in the host country can help firms provide adequate training to their expatriates with respect to knowledge sharing practices.

This dissertation also highlights the crucial need to listen to and understand business practitioners’ perspectives in order to build political risk theory that is rooted in real business issues. Accordingly, Essay 2 reveals how foreign executives’ perception and
sensemaking of the Chinese host national strategy can lead their firms to adapt their strategic supply chain partner engagement to mitigate political risk. Essay 2’s main contribution is to show that the SC/OM practitioners are not immune to what is happening in the political arena. The SC/OM function can also contribute to a firm’s efforts to reduce the potential negative influence of host national strategy by tailoring customized strategic supplier development practices. Future research should study how synchronizing the SC/OM and strategic management functions could optimize the benefits stemming from host government-multinational company relationships, while preserving the firms’ key interests. Our study showed that firms’ strategic intent to enhance their supply chain partner engagement to curry political favors is not necessarily safely implemented at the operational level, thereby threatening a firm’s long term endeavors.

Finally, this dissertation shows that gaining a better understanding of political risk implies studying not only governmental strategies and policies, but also the structure of the political institutions that support such actions. Essay 3 shows that the political constraints faced by political leaders as well as the processes that led them to take office can influence firms’ use of domestic input. Political institutions can facilitate or hinder risky government interventions affecting SC/OM. Thus, Essay 3 contributes to the supply chain risk management literature as it shows that studying political institutions can help firms decide whether they should design resilient supply chains to mitigate potential policy changes. Future research could investigate which discriminatory government interventions are more likely to be enacted within certain types of political institutions and what best practices firms might implement to mitigate supply chain disruptions.

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APPENDIX A

Essay 2: Illustrative Data, and Coding

Table A.1: Process Model, Construct Definitions, and Illustrative Data

<table>
<thead>
<tr>
<th>Process step</th>
<th>Coding Definition</th>
<th>Illustrative Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceiving</td>
<td><strong>Industry Criticality:</strong> The firm’s perception of the importance of both its industry and strategic supply chain partners’ industries in terms of the government’s host national strategy</td>
<td><strong>High.</strong> AUTOMNC perceives its industry as highly important to the government because car manufacturing is at the core of industrial development: “It’s an industry that is creating a lot of jobs. Not only the carmakers, but all the supply chain below. You know tier-one, tier-two, tier-three suppliers” (AUTOMNC, Purchasing Manager). The industry has very specific guidelines for allowing for foreign firms to operate: “To build cars in China, you cannot do it alone; you need to have a partner” (AUTOMNC, Product Development Manager) so foreign firms “are not allowed to produce cars through a wholly owned foreign enterprise” (AUTOMNC, Purchasing Manager). The only mode of entry is through a joint venture with a Chinese partner: “There are specific laws for firms that want to settle in China; you are forced to work in joint venture” (AUTOMNC, R&amp;D Team Leader).</td>
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<td></td>
<td><strong>Moderate.</strong> PHARMNC and COMPMNC perceive they are moderately important for the government as they touch areas that are of national interest such as healthcare and technological development. PHARMNC has attempted to heighten its importance: “You know that a lot of discussion is now on the price of a medicine because of the pressure on healthcare” (PHARMNC, Procurement Director). These industries do not operate under specific guidelines for foreign firms, but their supply chains may be restricted in some ways. For example, agriculture is important for PHARMNC, yet the “China government is not open to have foreign companies participating in agriculture in China, so that’s more or less a sector that is off bound” (PHARMNC, Procurement Director). Technological development is another aspect that COMPMNC understands as an area for development: “If you look at some of the direction with China, there is a lot of investment by the government. There are technology funds to invest. There’s a transition going on to higher technology types of manufacturing, and there’s an interest in how China wants to grow the economy” (COMPMNC, Supplier Quality Director).</td>
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<td></td>
<td><strong>Low.</strong> PACKMNC and SENSMNC perceive their industries are of low importance to the host country: “The government today, the five-year planning, the 10-year planning, they are talking about more the mega-structure, the mega-economics—packaging is never the mega-economics (PACKMNC, Sourcing Manager). The products involved do not feature critical technology: “Unfortunately, the products that we are making are not very complicated. . . . and there is hundreds of small Chinese manufacturers all around; this is not anything secret. We can just be better and have a better brand, but it’s not any technology that the Chinese didn't have since 20 years” (SENSMNC, Sales Manager). The industries are not subject to specific foreign-firm guidelines and they merely play a small role in China’s national strategy.</td>
<td></td>
</tr>
<tr>
<td>Process step</td>
<td>Coding Definition</td>
<td>Illustrative Data</td>
</tr>
<tr>
<td>-------------</td>
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<td>-------------------</td>
</tr>
<tr>
<td><strong>PERCEIVING</strong></td>
<td><strong>Market Criticality:</strong> The firm’s perception of China’s importance with respect to its overall business strategy. <em>(Indicates whether foreign firms can avoid China if not satisfied with host national strategy)</em></td>
<td><strong>Promising.</strong> AUTOMNC perceives China’s market—“the first automotive market [in the world]” (AUTOMNC, Purchasing Manager)—as promising for the company. The market represents 25 percent of global sales but has little impact on global operations because “in joint venture, it’s very difficult to get cash out of China. . . . The benefits will be reinvested in order to construct a new plant, so at the end it is not really benefiting [our firm]” (AUTOMNC, Purchasing Manager). AUTOMNC also sank large investments with the prospects of future profits and long-term establishment: “We now have three factories and one under construction. . . . There are four factories. It’s too much investment [to exit]” (AUTOMNC, Purchasing Manager).</td>
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<td></td>
<td><strong>Substantial.</strong> The market is substantial for COMPMNC and PHARMNC in terms of sourcing. COMPMNC relies on China to supply its worldwide operations—“Our largest supply base is here in Asia and our largest volume of suppliers are here in China” (COMPMNC, Supplier Quality Director)—and does not believe another country could fulfill its needs: “There is only one China from a supply base point of view. . . . There is no another place like that. There is only—this is it” (COMPMNC, Procurement Director). PHARMNC has “the majority of its Asian suppliers in China” (PHARMNC, Procurement Director) along with its assets: “We have four. I would say four plants, I mean reasonably sized plants” (PHARMNC, R&amp;D Sourcing Director). The consumer market is also important: Sales grew 50 percent in 2015 for COMPMNC, while PHARMNC experienced double-digit growth.</td>
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<td><strong>Temporary.</strong> PACKMNC has invested little money in China due to the nature of its business model: “So the beauty of our business today is for this type of professional consultation companies, we don’t get limited by the hardware investment” (PACKMNC, Sourcing Manager). SENSNC only has one factory and is ready to follow its customers if they leave China: “If they go West, well, maybe we also go West, but it also can be that if they are thinking of moving to Vietnam that we also move to Vietnam, honestly speaking. Go with the flow” (SENSNC, General Manager). The same observation holds for PACKMNC: “We follow the brand where the brand tell us to because the brand keeps on popping around” (PACKMNC, Sourcing Manager).</td>
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<tr>
<td>Process step</td>
<td>Coding Definition</td>
<td>Illustrative Data</td>
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<tr>
<td><strong>SENSEMAKING</strong></td>
<td><strong>Firm Role:</strong> Respondents’ perceptions of behavioral expectations for their firms with respect to host national strategy <em>(What do they want from us?)</em></td>
<td><strong>Explicit.</strong> Employees know the role assigned to AUTOMNC well: “The sharing of technology is pretty clear. It is written in our joint venture contract” (AUTOMNC, Product Development Manager). The long-term goal is to help the Chinese car manufacturer become an international player: “So if a foreigner wants to come to China, which is the first automotive market, so of course they all do . . . they [the government] will force them to be in joint ventures with our Chinese OEMs. So Chinese OEMs could get skills and competence and then the target of the Chinese government since the beginning is to create automotive champions that can go abroad and be as well-known as [a competitor]” (AUTOMNC, Purchasing Manager).</td>
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<td><strong>Implicit.</strong> Despite having no clear instructions on foreign firms’ role in supporting government goals, foreign firms can sense a role nonetheless: “There is certainly a desire, or you can feel some pressure and intent that Chinese state-owned enterprises and China government organizations will begin to show a preference for companies that are either Chinese or have an impact on China company development” (COMPMNC, Supplier Quality Director). PHARMNC believes it is involved in healthcare spending issues: “We tried to shift the direction a bit in government and people that take a decision on which drugs should be sourced and dosed out, which drug should be reimbursed towards the true cost of the true therapy and the outcome” (PHARMNC, Procurement Director).</td>
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<td></td>
<td><strong>Trivial.</strong> PACKMNC does not perceive its activities to be relevant to the national strategy: “It doesn’t affect us that much” (PACKMNC, Sourcing Manager). SENSMNC perceives how the local government expects firms to play an active role in the local economy: “[They] will ask you very clearly, ‘What is the investment? How many people will work there? How many foreigners?’ So they know whether the investment is interesting or not for them” (SENSMNC, General Manager). SENSMNC perceives its role as relatively trivial, being tied only to financial considerations: “I saw the development within the last 15 years ago. They welcomed you very cordially, they say, ‘Please come invest your money.’ . . . So this is how the Chinese government treated foreign companies in the past, and also still that’s right now. So as long as you’re investing, you’re mostly welcome, and if you complain too much, then they will say, ‘You can go if you don’t like [your situation]’” (SENSMNC, General Manager).</td>
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<tr>
<td>Process step</td>
<td>Coding Definition</td>
<td>Illustrative Data</td>
</tr>
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</tbody>
</table>
| **Firm Legitimacy:** Respondents’ perceptions that their firms’ actions are desirable, proper or appropriate for the national strategy  
(Do they need us?) | **Acquired.** AUTOMNC believes its actions and presence are necessary as the host firm (partner in the joint venture) would not be able to achieve its goals on its own: “Why do [Chinese firms] get into a joint venture today? Because they do not know, they do not have the know-how, today they do not know, they need us, when we remove the [expatriates], there is nothing working” (AUTOMNC, Quality Manager). AUTOMNC acquired legitimacy by supporting (continuously) the technology development: “They still need us. They still need some Western skills to do that. Maybe things changed, but also there is another trend is that the car will become more and more complex to develop. Especially if by 2025, we spoke about autonomous vehicles, it will request a huge amount of R&D and things like that. I am not sure that our partners will be able to do that…” (AUTOMNC, Product Development Manager). AUTOMNC can help guide its joint-venture partner toward international markets: “I believe also that there is a huge opportunity for China to export to Asian markets. . . . With the manufacturing ports of China, they are well-placed to export to this kind of countries. But it's another challenge, because you know China has been always centered on themselves. They don’t have the right mindset I think to go now on overseas markets, except if they can rely on all the returnees. . . . It makes more sense to collaborate with us for exports” (AUTOMNC, Product Development Manager). | |
<p>| <strong>Desired.</strong> COMPMNC wants to continue to make sure its actions are desirable as the government changes: “I think that’s a part of this. You need to look at the 13th five-year plan and you need to think about how to make sure your company is important, and needed, and valued in the direction of this plan. Another example of that is, in environmental initiatives. Because that’s a very big part of that 13th five-year plan” (COMPMNC, Supplier Quality Director). The firm is resolute in demonstrating that its presence and actions can be useful in China: “We’re not a Chinese company, but we can cooperate with Chinese companies to have a positive impact and to be important in this trend of the development in China” (COMPMNC, Supplier Quality Director). In the same vein, PHARMNC foresees an impact in reducing healthcare spending: “If you can take a drug against blood clotting, an oil tablet, once a day that allows you to be dismissed two days earlier in the hospital, than every day have to take an IV and spend two days longer in the hospital, then the value of that drug you should factor in. That patient is two days less in the hospital and that’s, for the government, two days less of hospital costs as a burden. That's more and more how we want to position ourselves” (PHARMNC, Procurement Director). | |
| <strong>Overlooked.</strong> PACKMNC did not mention anything related to the need to demonstrate its actions or presence in the host country were required or needed: “because our industry is not the tier-one product. Nobody recognizes a paper packaging supplier. They will recognize [manufacturer] because they are producing a tier-one line. We are the tier two, sometimes our supplier is tier three, so all the focus is only on the tier-one side” (PACKMNC, Sourcing Manager). SENSMNC, likewise, perceives the government does not necessarily desire its actions “because there are many companies [like us] who would like to come to China.” Still, firms of its kind can serve a purpose: “They will use you as an advertisement and say, ‘You see, this company can produce such difficult products here in China’” (SENSMNC, General Manager). SENSMNC appears to ignore opportunities to pursue a position of government desirability by focusing primarily on the financial incentives of having technological capabilities: “We are also applying for financial support from the government.” (SENSMNC, General Manager). | |</p>
<table>
<thead>
<tr>
<th>Process step</th>
<th>Coding Definition</th>
<th>Illustrative Data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Responding</strong></td>
<td><strong>Strategic Supply Chain Partner Engagement:</strong> How the firms engage in developing their strategic supply chain partners</td>
<td>Collaborative. AUTOMNC highly cooperates with its joint-venture partner: “As the R&amp;D center we have in [another city], the others [competitors] do not have that. . . . We decided to trust the Chinese and there are projects that are completely done here” (AUTOMNC, R&amp;D Team Leader). AUTOMNC perceives its role as a transmitter of knowledge and is not afraid of sharing information: “When I explain technical things sometimes, I put my knowledge, I deliver without—I cannot say, ‘Oh no, since you are Chinese I just give you half the info.’ No, I know how to explain, I answer all the questions, all I can” (AUTOMNC, Quality Manager). This is the case even in sensitive areas such as R&amp;D: “In our case, in our special area of digital and connected cars, we are quite open and we are quite pushing [to share technology]” (AUTOMNC, Product Development Manager).</td>
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<td></td>
<td><strong>Socially responsible.</strong> COMPMNC perceives and orchestrates a win-win relationship with supply chain partners. While COMPMNC cooperates to benefit from a competitive advantage—“There obviously will be a capacity and pricing opportunity” (COMPMNC, Procurement Director)—the firm also perceives it is doing good for China: “We feel like we’re having a positive impact. We have a very high-quality standard. We can work with suppliers to meet that quality span standard so we can bring their levels up” (COMPMNC, Supplier Quality Director). COMPMNC also goes beyond its purely implicit role to help China achieve national strategy-related sustainability goals, emerging as a leader in reducing volatile organic compounds. COMPMNC also is courting government approval by helping high-risk suppliers comply with chemical hazardous plans certain cities require (COMPMNC, Supplier Quality Director). The firms in this category engage as a “Samaritan,” seeking to do good for the country: “When we talk about community engagement, we mean, let’s engage the local suppliers, let’s engage the local people to work in our manufacturing sites, let’s offer facilities to the community, that everyone can enjoy” (PHARMNC, Procurement Manager).</td>
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<td></td>
<td><strong>Self-centered.</strong> The firms in this category engage with strategic supply chain partners such that it benefits them. PACKMNC is a middle man that must ensure strategic partners have the right capabilities to service their customers: “We would tell them what you need to do in terms of the equipment material, service quality, customer service side to lift you up. Because is the only way that I can rely on the production partner to service my international customers” (PACKMNC, Sourcing Manager). SENSMNC cooperates with its suppliers in order to increase their quality levels: “It takes time and I can see the improvement, because right now it is like 95 percent is the okay rate of the cheap supplier, which is quite okay. Of course, we are pushing him to improve more but I can see from 80 percent to 95 percent it is already a large improvement” (SENSMNC, General Manager). The engagement is not related to pressure in the host national strategy, and the firm’s willingness to help China’s domestic firms has distinct limits: “After a certain extent we have to say, ‘Sorry, you are too stupid to improve’” (SENSMNC, General Manager). More explicitly: “No child labor, no bribery, no corruption, that’s the basic . . . We would not try to impose something with the supplier that we trust to do something which is not necessary” (PACKMNC, Sourcing Manager).</td>
<td></td>
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</tbody>
</table>
# Table A.2: Industry Criticality and Market Criticality Ratings

<table>
<thead>
<tr>
<th>Firm Industry:</th>
<th>AUTOMNC</th>
<th>COMPMNC</th>
<th>PHARMNC</th>
<th>PACKMNC</th>
<th>SENSMNC</th>
</tr>
</thead>
<tbody>
<tr>
<td>- National Strategy</td>
<td>+++</td>
<td>++</td>
<td>++</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Heavy job provider. National Champions</td>
<td>Technological development</td>
<td>Healthcare</td>
<td>None</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>- Host National Strategy</td>
<td>+++</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Restricted. Joint-venture only and two max</td>
<td>Permitted</td>
<td>Permitted</td>
<td>Permitted</td>
<td>Permitted</td>
<td></td>
</tr>
</tbody>
</table>

Supply Chain Partners Industries:

<table>
<thead>
<tr>
<th>Firm Industry:</th>
<th>AUTOMNC</th>
<th>COMPMNC</th>
<th>PHARMNC</th>
<th>PACKMNC</th>
<th>SENSMNC</th>
</tr>
</thead>
<tbody>
<tr>
<td>- National Strategy</td>
<td>+++</td>
<td>++</td>
<td>++</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Electrical vehicles. Heavy subsidies</td>
<td>High-end manufacturing. Funds to invest</td>
<td>Replacing chemical with biological facilities</td>
<td>None</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>- Host National Strategy</td>
<td>+++</td>
<td>++</td>
<td>+++</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Prohibited (mapping) and restricted (batteries)</td>
<td>Encouraged (CNC machines)</td>
<td>Prohibited (agriculture)</td>
<td>Permitted</td>
<td>Permitted</td>
<td></td>
</tr>
</tbody>
</table>

| Overall Score (sum of +) | 12 | 7 | 8 | 4 | 4 |
| Category Labels | High | Moderate | Moderate | Low | Low |

## Market Criticality

| Impact of Current Sales | + | +++ | + | N/A | + |
| Split with Joint-venture. Reinvested. | High in global sales | Moderate in global sales | Low in global sales |
| Market Share in China | ++ | +++ | ++ | N/A | + |
| In difficulty | One of the leaders | One of the challengers | In difficulty |
| Sales Growth | + | +++ | +++ | + | + |
| Steady | Very significant | Significant | Growing in other Asian countries | Catching up in China |
| Sourcing (i.e., exports) | + | +++ | +++ | + | + |
| Only China | Worldwide | Worldwide | Only as back-up | Supplying sister companies |
| Sunk Costs | +++ | ++ | ++ | + | + |
| High. New constructions | Significant and steady | Significant and steady | No hardware investment | Low |
| Future prospects | +++ | ++ | ++ | + | + |
| Global supply base and strong sales with partner | Sales and supply opportunities | Sales and supply opportunities | Follow brands in new emerging countries | Seriously think about moving to Vietnam |
| Overall Score (sum of +) | 10 | 16 | 13 | 3 | 7 |
| Category Labels | Promising | Substantial | Substantial | Temporary | Temporary |

Scale for each criteria: +low ++moderate +++high
APPENDIX B

Essay 3: Countries, Years, and Number of Firms Surveyed

<table>
<thead>
<tr>
<th>Country/year</th>
<th>N</th>
<th>Country/year</th>
<th>N</th>
<th>Country/year</th>
<th>N</th>
<th>Country/year</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina2010</td>
<td>701</td>
<td>Cambodia2016</td>
<td>110</td>
<td>Ghana2007</td>
<td>277</td>
<td>Latvia2009</td>
<td>72</td>
</tr>
<tr>
<td>Armenia2009</td>
<td>75</td>
<td>Cameroon2009</td>
<td>93</td>
<td>Ghana2013</td>
<td>280</td>
<td>Latvia2013</td>
<td>83</td>
</tr>
<tr>
<td>Armenia2013</td>
<td>64</td>
<td>Cameroon2016</td>
<td>312</td>
<td>Guatemala2006</td>
<td>282</td>
<td>Lebanon2013</td>
<td>185</td>
</tr>
<tr>
<td>Azerbaijan2013</td>
<td>85</td>
<td>Chile2010</td>
<td>693</td>
<td>Guinea2016</td>
<td>74</td>
<td>Lithuania2009</td>
<td>78</td>
</tr>
<tr>
<td>Bangladesh2013</td>
<td>1,088</td>
<td>China2012</td>
<td>1,619</td>
<td>Honduras2006</td>
<td>222</td>
<td>Lithuania2013</td>
<td>75</td>
</tr>
<tr>
<td>Belarus2008</td>
<td>59</td>
<td>Colombia2006</td>
<td>569</td>
<td>Hungary2010</td>
<td>112</td>
<td>Madagascar2009</td>
<td>163</td>
</tr>
<tr>
<td>Belarus2013</td>
<td>99</td>
<td>Colombia2010</td>
<td>646</td>
<td>Hungary2009</td>
<td>87</td>
<td>Madagascar2013</td>
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</tr>
<tr>
<td>Bhutan2015</td>
<td>64</td>
<td>Croatia2007</td>
<td>301</td>
<td>India2014</td>
<td>6,793</td>
<td>Malaysia2015</td>
<td>488</td>
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<tr>
<td>Bolivia2006</td>
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<td>Croatia2013</td>
<td>97</td>
<td>Indonesia2009</td>
<td>937</td>
<td>Mali2007</td>
<td>293</td>
</tr>
<tr>
<td>Bolivia2010</td>
<td>73</td>
<td>Drc2010</td>
<td>54</td>
<td>Indonesia2015</td>
<td>904</td>
<td>Mali2010</td>
<td>60</td>
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<tr>
<td>Botswana2006</td>
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<td>Drc2013</td>
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<td>Iraq2011</td>
<td>457</td>
<td>Mali2016</td>
<td>143</td>
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<tr>
<td>Botswana2010</td>
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<td>Ecuador2006</td>
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<td>Israel2013</td>
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<td>Mauritania2006</td>
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<td>Brazil2009</td>
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<td>Jamaica2010</td>
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<td>Mauritania2014</td>
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<tr>
<td>Country/year</td>
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<td>Country/year</td>
<td>N</td>
<td>Country/year</td>
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<td>Country/year</td>
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<td>----</td>
</tr>
<tr>
<td>Mexico2010</td>
<td>995</td>
<td>Panama2010</td>
<td>60</td>
<td>SriLanka2011</td>
<td>314</td>
<td>Uzbekistan2013</td>
<td>98</td>
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<tr>
<td>Moldova2009</td>
<td>95</td>
<td>Paraguay2006</td>
<td>264</td>
<td>Suriname2010</td>
<td>74</td>
<td>Venezuela2010</td>
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<td>Moldova2013</td>
<td>76</td>
<td>Paraguay2010</td>
<td>100</td>
<td>Swaziland2006</td>
<td>64</td>
<td>Vietnam2009</td>
<td>699</td>
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<tr>
<td>Mongolia2009</td>
<td>126</td>
<td>Peru2006</td>
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</tbody>
</table>
APPENDIX C

Essay 3: Codes Used with Computer Program Stata 14

Code for merging original Enterprise Survey datasets (World Bank, 2017)
cd"G:\My Drive\Spring 2018\Third Essay"
use"New_Comprehensive_August_7_2017.dta"
cd"G:\My Drive\Spring 2018\Third Essay"
use"Firm Level TFP Estimates and Factor Ratios_May_1_2017.dta"
merge 1:1 idstd using New_Comprehensive_August_7_2017.dta

Code for creating domestic input variable (World Bank, 2017)
rename d12a dom_inp
mvdecode dom_inp, mv(-8 -9 -7)
gen domestic_input=dom_inp/100

Code for creating foreign equity variable (World Bank, 2017)
rename b2b foreign
mvdecode foreign, mv(-8 -9 -7)
gen foreign_equity = foreign>=50 if foreign==.
label var foreign_equity "foreign_equity"
label define foreign_equity _lbl 0"domestic" 1"foreign"
label values foreign_equity foreign_equity _lbl

Code for creating export intensity variable (World Bank, 2017)
rename d3c export_intensity
mvdecode export_intensity, mv(-7 -8 -9)

Code for creating firm sales variable (World Bank, 2017)
rename d2_gdp09 sales
gen firm_sales = ln(sales)

Code for reorganizing sector variable (World Bank, 2017)
encode stra_sector, gen(sector)
*group fabricated metal sectors*
replace sector=1 if (sector==2 | sector==9)
*group chemical sectors*
replace sector=3 if (sector==4 | sector==5)
*group electronics sectors*
replace sector=7 if (sector==8)
*group food sectors*
replace sector=10 if (sector==11)
*group textile sectors*
replace sector=41 if (sector==42 | sector==43 | sector==13)
*group hospitality and tourism sectors*
replace sector=14 if (sector==44 | sector==15)
*group machinery sectors*
replace sector=18 if (sector==19 | sector==20)
*group manufacturing sectors*
replace sector=21 if (sector==22 | sector==28)
*group minerals sectors*
replace sector=23 if (sector==27 | sector==24)
*group motor vehicles sectors*
replace sector=25 if (sector==26)
*group service sectors*
replace sector=38 if (sector==29 | sector==30 | sector==39 | sector==40)
*group plastic sectors*
replace sector=37 if (sector==31)
*group retail sectors*
replace sector=34 if (sector==35 | sector==36)
*group transport sectors*
replace sector=45 if (sector==46)
*group wholesale sectors*
replace sector=47 if (sector==48)
*group wood sectors*
replace sector=50 if (sector==49 | sector==51 | sector==12)

Sample code for creating political hazard variable (imported from POLCON dataset; Henisz, 2002)
* 0 means no political constraints so high risk*
gen polcon3=.
replace polcon3=0 if country=="Afghanistan2008"
replace polcon3=0 if country=="Afghanistan2014"
replace polcon3=0.495057 if country=="Albania2007"
replace polcon3=0.367679 if country=="Albania2013"
replace polcon3=0.370601 if country=="Angola2006"
replace polcon3=0.160323 if country=="Angola2010"
replace polcon3=0.387274 if country=="Antiguaandbarbuda2010"
replace polcon3=0.250191 if country=="Argentina2006"
replace polcon3=0.360682 if country=="Argentina2010"
replace polcon3=0.464302 if country=="Armenia2009"
replace polcon3=0.464302 if country=="Armenia2013"
*reverse code polcon3 variable to have 0 as minimum risk and 1 as maximum risk*
replace polcon3=1-polcon3
rename polcon3 political_hazard
*mean center political hazard for model with interactions*
sum political_hazard
Sample code for creating *autocracy* variable (imported from POLITYIV dataset; Marshall et al., 2017)
*create index of autocracy (from 0= less autocratic to 10=more autocratic)*
gen aut=
replace aut=. if country=="Afghanistan2008"
replace aut=. if country=="Afghanistan2014"
replace aut=0 if country=="Albania2007"
replace aut=0 if country=="Albania2013"
replace aut=4 if country=="Angola2006" 
replace aut=4 if country=="Angola2010"
replace aut=0 if country=="Argentina2006"
replace aut=0 if country=="Argentina2010"
replace aut=0 if country=="Armenia2009"
replace aut=0 if country=="Armenia2013"
*scale autocracy from 0 to 1*
replace aut= aut/10
rename aut autocracy
*mean center autocracy for model with interactions*
sum autocracy
gen autocracy_c=autocracy-r(mean)

Sample code for creating *trade openness* variable (calculated as [(total imports+total exports)/GDP]then imported from World Development Indicator dataset; World Bank, 2018)
*create variable trade openness*
gen openness=
replace openness=. if country=="Afghanistan2008"
replace openness=. if country=="Afghanistan2014"
replace openness=0.76 if country=="Albania2007"
replace openness=0.84 if country=="Albania2013"
replace openness=. if country=="Angola2006"
replace openness=. if country=="Angola2010"
replace openness=1.06 if country=="Antiguaandbarbuda2010"
replace openness=0.32 if country=="Argentina2006"
replace openness=0.61 if country=="Argentina2006"
replace openness=0.6 if country=="Armenia2009"
replace openness=0.62 if country=="Armenia2013"
rename openness trade_openness

Sample code for creating *GDP per capita* variable (imported from World Development Indicator dataset, World Bank; 2018)
*Create index of GDP per capita PPP constant (base 2011)*
gen ppp=. 
replace ppp=1284.78 if country=="Afghanistan2008" 
replace ppp=1814.16 if country=="Afghanistan2014" 
replace ppp=7917.17 if country=="Albania2007" 
replace ppp=10369.77 if country=="Albania2013" 
replace ppp=3949.28 if country=="Angola2006" 
replace ppp=5908.06 if country=="Angola2010" 
replace ppp=20836.18 if country=="Antiguaandbarbuda2010" 
replace ppp=15518.68 if country=="Argentina2006" 
replace ppp=17168.38 if country=="Argentina2010" 
replace ppp=7558.37 if country=="Armenia2009" 
replace ppp=7511.14 if country=="Armenia2013" 
*gen natural log of ppp*
gen lppp=ln(ppp) 
rename lppp per_capita_GDP

Sample code for creating GDP growth variable (imported from World Development Indicator dataset; World Bank, 2018)
*gen gdp growth rate*
gen growth=. 
replace growth=13.75 if country=="Afghanistan2008" 
replace growth=1.96 if country=="Afghanistan2014" 
replace growth=5.44 if country=="Albania2007" 
replace growth=1.42 if country=="Albania2013" 
replace growth=18.27 if country=="Angola2006" 
replace growth=2.42 if country=="Angola2010" 
replace growth=-12.04 if country=="Antiguaandbarbuda2010" 
replace growth=8.86 if country=="Argentina2006" 
replace growth=-5.92 if country=="Argentina2010" 
replace growth=6.91 if country=="Armenia2009" 
replace growth=7.21 if country=="Armenia2013" 
rename growth GDP_growth

Code for dropping missing values
drop if domestic_input==. 
drop if political_hazard==. 
drop if autocracy==. 
drop if foreign_equity==. 
drop if trade_openness==. 
drop if per_capita_GDP==. 
drop if GDP_growth==. 
drop if firm_sales==. 
drop if export_intensity==. 
drop if year==. 

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drop if sector==.

**Code for zoib regression Model 1 (Table 3.4)**
zoib domestic_input political_hazard autocracy i.foreign_equity trade_openness per_capita_GDP GDP_growth firm_sales export_intensity i.year i.sector,
oneinflate(political_hazard autocracy i.foreign_equity trade_openness per_capita_GDP GDP_growth firm_sales export_intensity i.year i.sector) zeroinflate(political_hazard autocracy i.foreign_equity trade_openness per_capita_GDP GDP_growth firm_sales export_intensity i.year i.sector) robust

**Code for zoib regression Model 1 marginal effects (Table 3.5)**
margins, dydx(political_hazard autocracy foreign_equity) predict(pr)

**Code for zoib regression Model 2 (Table 3.4)**
zoib domestic_input political_hazard_c autocracy_c i.foreign_equity c.political_hazard_c#c.autocracy_c c.political_hazard_c#i. foreign_equity c.autocracy_c#i. foreign_equity trade_openness per_capita_GDP GDP_growth firm_sales export_intensity i.year i.sector, oneinflate(political_hazard_c autocracy_c i. foreign_equity c.political_hazard_c#c.autocracy_c c.political_hazard_c#i. foreign_equity c.autocracy_c#i. foreign_equity trade_openness per_capita_GDP GDP_growth firm_sales export_intensity i.year i.sector) zeroinflate(political_hazard_c autocracy_c i. foreign_equity c.political_hazard_c#c.autocracy_c c.political_hazard_c#i. foreign_equity c.autocracy_c#i. foreign_equity trade_openness per_capita_GDP GDP_growth firm_sales export_intensity i.year i.sector) robust

**Code for Political Hazard, Autocracy, and Domestic Input Example (Figure 3.2)**
margins, at(political_hazard_c=(-.2104 .2104) autocracy_c=(-.2095 .2095))

**Code for Autocracy and Political Hazard Interaction (Figure 3.3)**
margins, at(autocracy_c=(-.12(0.1).78) political_hazard_c=(-.2104 .2104))

**Code for Political Hazard and Foreign Equity Interaction (Figure 3.4)**
margins, at(political_hazard_c=(-.35(0.1).35) foreign_equity=(0 1))

**Code for Political Hazard, Foreign Equity, and Domestic Input Example (Figure 3.5)**
margins, at(political_hazard_c=(-.2104 .2104) foreign_equity=(0 1))

**Code for Autocracy and Foreign Equity Interaction (Figure 3.6)**
margins, at(autocracy_c=(-.12(0.1).78) foreign_equity=(0 1))

**Code for Autocracy, Foreign Equity, and Domestic Input Example (Figure 3.7)**
margins, at(autocracy_c=(-.2095 .2095) foreign_equity=(0 1))
Code for Autocracy, Political Hazard, and Foreign Equity Interaction (Figure 3.8)

margins, at(autocracy_c=(-.12(.1).78) political_hazard_c=(-.2104 .2104)
foreign_equity=(0 1))

Code for fractional logistic regression Model 1 (Table 3.7)
glm di political_hazard autocracy i.foreign_equity trade_openness per_capita_GDP
GDP_growth firm_sales export_intensity i.year i.sector, link(logit) family(binomial)
vce(robust)

Code for fractional logistic regression Model 1 marginal effects (Table 3.8)
margins, dydx(political_hazard autocracy foreign_equity)

Code for fractional logistic regression Model 2 (Table 3.7)
glm di political_hazard_c autocracy_c i.foreign_equity
 c.political_hazard_c#c.autocracy_c c.political_hazard_c#i.foreign_equity
c.autocracy_c#i.foreign_equity trade_openness per_capita_GDP GDP_growth firm_sales
export_intensity i.year i.sector, link(logit) family(binomial) vce(robust)
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