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# Home bitter home: How labor protection influences firm offshoring

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ABSTRACT

Drawing on the home country literature, we argue that firms headquartered or located in countries with strong labor protection may face challenges in their domestic operations. These firms are likely to initiate offshoring to enhance operational efficiency. Building on this argument, we also examine the boundary conditions moderating this proposed effect including labor productivity and employee stock ownership. Results based on a sample of information technology firms operating within five developed countries during 1990–2010 provide support for these arguments. These findings suggest that offshoring can be a partial exit strategy for firms to address the institutional challenges in their home country.

"Rules on severance pay and employee rights make it expensive and time consuming for the German software maker SAP to manage its costs" (Boudette, 2002).

## 1. Introduction

One of the fastest growing themes in international business (IB) research is the impact of home country on firms (Cuervo-Cazurra, Meyer, & Ramamurti, 2015; Estrin, Meyer, Nielsen, & Nielsen, 2016; Hoskisson, Wright, Filatotchev, & Peng, 2013; Marano, Arregle, Hitt, Spadafora, & Van Essen, 2016). The home country environment is crucial for firms to tap into the global market, because global market, provides important resources and assets that the firms can use for operations abroad (Cuervo-Cazurra & Ramamurti, 2017; Luo & Tung, 2007). Overall, home country institutions "facilitate both production and distribution of generated rents" (Hoskisson et al., 2013, 1297). Consequently, research shows that home country conditions may greatly influence firm strategies (Chakrabarti, Vidal, & Mitchell, 2011; Peng, Wang, & Jiang, 2008; Shi, Sun, Yan, & Zhu, 2017), internationalization motives (Luo & Wang, 2012; Witt & Lewin, 2007), and performance outcomes (Chacar, Newburry, & Vissa, 2010; McGahan & Victer, 2010).

Within the home country literature, researchers maintain that emerging market multinational enterprises (EMNEs) may differ in their internationalization strategies vis-à-vis firms based in developed countries (Luo & Zhang, 2016). EMNEs may to be more active in going abroad in order to cope with the challenges of home country operations. For example, some firms operating within emerging markets actively engage in foreign direct investment (FDI) in order to acquire more advanced know-how (Cuervo-Cazurra & Ramamurti, 2014, 2017; Kedia, Gaffney, & Clampit, 2012; Li, Li, & Shapiro, 2012). As useful as these studies are, little research has specifically examined: (1) whether other crucial home country resources—especially labor—may matter, and (2) how firms operating within developed countries use other internationalization strategies such as offshoring in response to the particular home country conditions.

The purpose of our study is to start addressing these important gaps. We ask: (1) How does home country labor protection affect firm offshoring? (2) Which boundary conditions will shape the relationship between home country labor protection and firm offshoring? We highlight the role of labor protection because stringent labor protection within the home country may hinder firm operational efficiency and effectiveness. When home country labor protection may lead to institutional challenges for domestic operations, we find that firms operating within home countries characterized by heavy labor protection may actively consider offshoring. Drawing on the home country literature (Cuervo-Cazurra & Ramamurti, 2014, 2017; Cuervo-Cazurra et al., 2015; Estrin et al., 2016; Hoskisson et al., 2013), we argue that firms headquartered or located in home countries characterized by relatively heavy labor protection are more inclined to undertake offshoring. This argument is also consistent with the varieties of capitalism (VOC) literature, which suggests that labor is an important actor within the home country (Hall & Soskice, 2001; Schneider, Schulze-Bentrop, & Paunescu, 2010).

Building on this baseline prediction, we also examine the boundary conditions that may moderate this proposed effect including labor

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productivity and employee stock ownership. Results based on a sample of firms in five developed countries' information technology industry (Britain, France, Germany, Japan, and the United States) from 1990 to 2010 provide support for these arguments. These findings suggest that stringent home country labor protection can significantly motivate firms to undertake offshoring.

Our contributions are twofold. First, our study contributes to the home country literature (Cuervo-Cazurra et al., 2015; Hoskisson et al., 2013; Xia, Ma, Lu, & Yiu, 2014). Researchers contend that home countries may provide essential resources and assets, but can also create difficulties that hinder business operations. When faced with these challenges firms may seek opportunities elsewhere, often abroad (Cuervo-Cazurra & Ramamurti, 2014, 2017; Luo & Wang, 2012; Peng et al., 2008; Yamakawa, Peng, & Deeds, 2008). Although this insight has been proposed, most studies examine firms operating within emerging markets so that whether or not firms in developed countries have similar strategies is not well-understood (for an exception, see Witt & Lewin, 2007). We propose that firms based in developed countries may opt to reduce their exposure to the home country environment via offshoring. Specifically, offshoring can be viewed as a *partial* exit strategy for responding to potential constraints within the home country.

Second, our findings also have implications for both the VOC literature (Carney, Gedajlovic, & Yang, 2009; Hall & Soskice, 2001; Jackson & Deeg, 2008) and the offshoring literature (Contractor, Kumar, Kunda, & Pedersen, 2010; Doh, Bunyaratavej, & Hahn, 2009). On the one hand, whereas the VOC literature notes that labor plays different roles in different countries (Aguilera & Jackson, 2003, 2010; Van Essen, Oosterhout, & Heugens, 2013), few studies examine how firms respond to labor protection within their home countries. Our paper adds to this literature by considering offshoring as a viable response. On the other hand, while offshoring has received considerable scholarly attention (Contractor et al., 2010; Rodriguez & Nieto, 2016), prior studies largely emphasize host country factors rather than home country conditions. We endeavor to make and substantiate the case that home country context may be an important determinant for firm offshoring.

## 2. Theoretical background

### 2.1. Home country context and firm internationalization

The importance of home country context has long been discussed in the literature. Resources such as technology, capital, and labor acquired at home base can be useful for operating abroad (Porter, 1990). Hoskisson et al. (2013) contend that "a country's endowed factor markets significantly determine its economic opportunity set" (p. 1297). Marano et al. (2016) also maintain that home countries "play a crucial role in firms' ability to develop and maintain their competitive advantage at home" (p. 1077). At the same time scholars suggest that the home country effect may differ between emerging markets and developed countries. Since emerging markets are often less developed in terms of capital, product, and labor markets (Khanna & Palepu, 1997), firms based in these countries may not be able to maintain competitive advantage. In order to overcome such a disadvantage, firms operating within emerging markets may be more active in entering global markets (Peng, 2012).

Prior research shows that EMNEs may leverage the assets and resources that they can procure from the home country as a "springboard" to facilitate their foreign operations (Luo & Tung, 2007). Similarly, firms that regard home country operations as more costly are more inclined to engage in FDI (Cuervo-Cazurra et al., 2015; Luo & Wang, 2012; Xia et al., 2014; Yamakawa et al., 2008). Since home country operations are characterized by "rising transaction costs associated with continuing uncertainty" (Luo & Wang, 2012: 249), firms operating within emerging markets may be inclined to undertake FDI (Cuervo-Cazurra et al., 2015; Luo & Wang, 2012; Peng, 2012; Yamakawa et al., 2008).

However, studies on the home country effect largely focus on firms operating within emerging markets, while whether or not firms based in developed countries may behave similarly is less clear—a challenge that we take up. We contend that firms operating within relatively developed countries may encounter challenges when home country labor protection is stringent. These firms may accordingly use offshoring as a way to streamline their domestic operations. Following Manning, Massini, and Lewin (2008), we define offshoring as "the process of sourcing any business task, process, or function supporting domestic operations from abroad" (p. 35). Since offshoring is "a specific manifestation of *firm internationalization*" (Schmeisser, 2013: 390), the use of offshoring in this article specifically refers to "offshore outsourcing."

### 2.2. Labor protection in a world with varying capitalism

The level of labor protection is not the same across different countries (OECD, 2004). Countries impose different rules on labor, including the conditions for hiring and firing employees, the maximum number of working hours per week, and minimum wages. These arrangements are designed to provide social protection for workers (Botero, Djankov, La Porta, Lopez-De-Silanes, & Shleifer, 2004; Ochel, 2009). Botero et al. (2004) argue that "every country in the world has established a complex system of laws and institutions intended to protect the interests of workers" (p. 1339). For example, a typical employee who has worked for four to five years at a firm is entitled to one and a half months of severance pay in Japan, only half a month of severance pay in Britain, and zero severance pay in the United States. Similarly, employers can only fire workers in France and Germany with an advance notice period of seven to eight months, but in the United States this notice period is much shorter.

According to the VOC literature, these varying levels of labor protection reflect countries' different institutional and social arrangements (Crouch & Streek, 1997; Hall & Soskice, 1991; Whitley, 1999). Two points can be highlighted. First, when studying home country differences it is imperative to consider other actors in addition to firms per se, including the financial system, education system, and industrial relations (Aguilera & Jackson, 2003; Capron & Guillen, 2009). For example, as the education system provides the foundation for employees' knowledge and skills, a country's education and training system cannot be overlooked. Hall and Gingerich (2009) contend that "in order to prosper, firms must engage with other actors in multiple spheres of the political economy" (p. 452). Countries can accordingly be conceived as "systems of interconnected systems" (OECD, 1999: 23).

Second, key actors in a country such as labor may "have a diverse set of socially constituted identities and interests" (Aguilera & Jackson, 2010: 492). The VOC literature suggests two distinctive coordination methods: the liberal market economy (LME) versus the coordinated market economy (CME). In LMEs such as Britain and the United States the relationships among actors within a country are more characterized by arm's-length exchanges where the price signal is the primary mechanism for actors to determine their behaviors. In contrast, in CMEs such as France and Germany, actors' decisions and behaviors are more guided by non-market relationships rather than price. As these relationships place less emphasis on short-run gains and losses, actors within CMEs tend to have a shared view of their prospects and will behave accordingly. For example, if firms do not perform well financially in an LME, they are unlikely to effectively raise capital from the market. In contrast, financial actors (e.g., banks) within a CME tend to be more patient and embedded such that they are willing to provide long-term capital (Aguilera & Jackson, 2010: 527).

The focus of this paper is labor protection within the home country. We opt to highlight labor because it represents a critical stakeholder of firms (Aguilera & Jackson, 2003, 2010). When a country's institutional

arrangements provide greater labor protection, these arrangements will alter "the structure of rights and responsibilities among the parties with a stake in the firm" (Aoki, 2000: 11). We primarily consider home countries because they are the foundations of many firms (Cuervo-Cazurra, 2011; Hoskisson et al., 2013; Lee & Makhija, 2009). Lee and Makhija (2009) maintain that "the domestic economic environment is a key context in which to engage in business activities" (p. 407). Moreover, Cuervo-Cazurra (2011) notes that the impact of home country on firms "is most noticeable…when the home country represents the main source of resources to the firm" (p. 383). We contend that home country labor protection will be a crucial determinant behind firm offshoring decisions.

## 3. Hypotheses

### 3.1. Home country labor protection and firm offshoring

Labor protection within the home country can affect firm business operations in two ways. First, whether labor protection is strong or weak will make a difference for firms to fully utilize employees' skills and talents. When employment protection is not strong, firms can effectively motivate and discipline employees. For example, if employees do not perform satisfactorily, managers can discharge them without worrying about breaking labor laws (Gibbons & Katz, 1991). However, such managerial discretion may be low in countries with strong labor protection. Ichino and Riphahn (2001) find that when workers receive greater employment protection, the number of absence days per week doubled. For this reason international investors are often reluctant to acquire targets in countries where labor receives strong institutional protection (Alimov, 2015; Capron & Guillen, 2009).

Second, heavy labor protection may reduce workers' motivations to develop new skills, thereby hampering firms' adaptation capacities toward the changing world. When workers are highly protected, the labor market will become rigid because burdensome labor rules discourage firms from hiring new employees (Nickell, 1997). Firms are also less likely to hire new employees since heavy labor protection diminishes employee mobility. However, recruiting employees who possess new skills from the external labor market is critical for firms to remain innovative and competitive (Kaiser, Kongsted, & Rønde, 2015). When the hiring of new employees is hindered, firms may have difficulty updating and renewing their knowledge, resulting in competitive disadvantage.

Offshoring can be a way out of these problems. According to Oliver (1991), the pressure from operating in a given context may prompt firms to seek opportunities in other places. By doing so, firms can "escape from institutional rules and expectations" (Oliver, 1991: 154). Xia et al. (2014) suggest that as domestic competition increases, firms may actively consider going abroad as a way to cope with the uncertainty with home country operations. Witt and Jackson (2016) assert that when domestic operations become challenging, firms the firms may "move their operations, in part or in whole, to institutional contexts that better support these operations" (p. 797). This reasoning suggests that offshoring can be a valuable approach for firms in countries with stringent labor protection to enhance operational flexibility and efficiency.

In addition, offshoring can also help firms gain access to fresh ideas and knowledge beyond their home bases. Porter (1990) argues that countries have different strengths, while Hall and Soskice (2001) maintain that it is necessary for firms to engage in cross-border activities. Witt and Jackson (2016) contend that cross-border business activities may need to be initiated for firms to maintain a competitive edge. Since offshoring can help firms streamline their operations while achieving their goals (Castellani & Pieri, 2013; Mihalache, Jansen, Bosch, & Volberda, 2012; Nieto & Rodriguez, 2011), firms located within the countries with stronger labor protection may be apt to seek support from suppliers overseas. Specifically:

**Hypothesis 1.** The stronger labor protection is in the home country, the more likely that firms headquartered or located in that country would undertake offshoring.

Before proceeding, we must elaborate two clarifications regarding Hypothesis 1. First, there are two offshoring approaches: (1) offshoring where firms obtain needed input and services from independent suppliers located in other countries (Contractor et al., 2010; Doh et al., 2009; Lewin, Massini, & Peeters, 2009), and (2) captive sourcing where firms seek foreign materials via their foreign affiliates. Our study focuses on the former because it "requires a lower level of resource commitment and permits firms to choose the supplier that delivers the maximum advantage in each case" (Rodriguez & Nieto, 2016: 1738).[1]

Second, the literature also recognizes that location choices are important in offshoring decisions. Although one may intuitively associate offshoring locations with less developed countries (e.g., China or India), recent studies indicate that this may not necessarily be the case. For instance, Mudambi and Venzin (2010) argue that cost reduction is not the sole motivation for offshoring, and that knowledge seeking can be an important motivation (p. 1510). Other authors also maintain that firms may seek more advanced input and materials from more developed countries (Demirbag & Glaister, 2010). We accordingly consider both more and less developed countries as possible destinations for offshoring.

### 3.2. Boundary conditions

We argue that strong labor protection may adversely affect operations such that firms operating within countries with strong labor protection would be motivated to undertake offshoring (Hypothesis 1). As a baseline argument this hypothesis assumes that all firms have identical attributes and will react to a given home country context in a similar manner. However, the likelihood of offshoring may vary across firms because firms are "heterogeneous in their perception of institutional constraints and opportunities" (Guler & Guillen, 2010: 186). We must therefore consider the boundary conditions that may moderate this proposed effect. Our study considers two such factors including labor productivity and employee stock ownership. We discuss labor productivity first.

#### 3.2.1. Boundary condition: Labor productivity

Different firms, even those operating within the same home country and industry, may have different labor uses. In contrast with some firms utilizing less skilled labor with lower productivity for operations, other firms possess more skilled workers who can develop novel products or fresh services while demonstrating higher efficiency. For this latter group of firms, workers have a more crucial role given their capacity to generate higher-value output (Aw, Roberts, & Xu, 2011). Since workers of such quality are often in limited supply (Peteraf, 1993: 180), firms must spend resources in order to attract and retain them. We consider labor productivity as a boundary condition that may change the effect of home country labor protection.

Specifically, we posit that the effect of home country labor protection may be stronger for firms that demonstrate higher labor productivity. Frank and Obloj (2014) indicate that while highly skilled employees are more productive, they also enjoy higher bargaining power, which allows them to demonstrate non-cooperative behaviors that erode firm performance. By this logic when firms rely more on skilled employees for operations, they may run into greater difficulties when operating within countries with more stringent labor protection. For example, if firms ask for additional input from these employees (such as overtime) but home country institutions allow employees to

[1] We note that this argument does not imply that captive sourcing is either less important or less effective. In the Methods section we describe how we differentiate offshoring from captive sourcing.

refuse, then firms may easily run into problems. Moreover, highly productive employees tend to have stronger bargaining power that may disrupt firm operations (Coff, 1997; Williamson, Wachter, & Harris, 1975). Since strong labor protection can place firms in a disadvantageous position when managing workers, firms utilizing more productive workers while operating within home countries with strong labor protection may have greater motivation to undertake offshoring.

In contrast, the effect of home country labor protection may be reduced for firms with relatively lower labor productivity. Firms that demonstrate lower labor productivity typically employ workers possessing less specialized skills. Since their skills and experiences are not particularly valuable, these workers do not have "a stronger position to appropriate rent" (Coff, 1999: 119). Whereas stringent home country labor protection may create challenges for operations, firms utilizing less productive workers may not encounter major issues and thus may not proactively undertake offshoring. Thus:

**Hypothesis 2.** The relationship between home country labor protection and the likelihood of offshoring will be stronger for firms with higher labor productivity.

#### 3.2.2. Boundary condition: Employee stock ownership

Employee stock ownership is another factor that may influence the effect of home country labor protection. Agency theory maintains that the interests of employees as agents may not completely align with those of the firm (Eisenhardt, 1989; Jensen & Meckling, 1976). One way to align their interests with those of principals is to adopt employee stock ownership. Having a financial stake in the firm motivates employees to make greater contributions toward employers (Park, Kruse, & Sesil, 2004). In fact, stock ownership can encourage "key employees to make firm-specific investments" (Wang & Barney, 2006: 469), thereby creating value for the firm.

The effect of home country labor protection may vary depending on whether or not firms use employee stock ownership. Firms that do not use employee stock ownership but operate within countries with strong labor protection may have stronger motivation to undertake offshoring. For such firms it is more difficult for management to reach a consensus with employees, since workers without a stake in their firms may be less willing to cooperate with employers. These employees may bargain aggressively with employers and demand better treatment (Tucker, 1993). Earlier studies report that employee stock ownership may influence worker cooperation (Kim & Ouimet, 2014). Since a lack of employee stock ownership breeds challenges for domestic operations, firms that do not use employee stock ownership but operate within countries characterized by stringent labor protection may have stronger motivation to undertake offshoring.

In contrast, the effect of home country labor protection may be weakened for firms that use employee stock ownership, because employees are apt to identify with firm goals and may act with these goals in mind (Pierce, Rubenfeld, & Morgan, 1991). Employee stock ownership fundamentally "align[s] employee goals with those of the firm" (Coff, 1999: 386) and serves as a "vehicle for profit-sharing to encourage productive effort" (Wang, He, & Mahoney, 2009: 1269). Firms adopting employee stock ownership are therefore likely to win support from employees, even though offshoring may jeopardize some employees' jobs. Park et al. (2004) contend that employee stock ownership can "build a more cooperative culture, which can increase employee commitment" (p. 3). On this basis we propose that firms adopting employee stock ownership while being headquartered or operating in countries with strong labor protection would have reduced motivation to undertake offshoring. Specifically:

**Hypothesis 3.** The relationship between home country labor protection and the likelihood of offshoring will be weaker for firms adopting employee stock ownership.

## 4. Methodology

### 4.1. Sample

We leverage a sample of firms operating within the information technology industry from 1990 to 2010 (inclusive) for two reasons. First, focusing on a single industry is useful in order to control for industry effects (Dess, Ireland, & Hitt, 1990: 20). Second, since the products within this industry are highly standardized, firms may be more apt to consider seeking the input and materials provided by foreign suppliers. In this study information technology firms are defined as those operating within the software and hardware areas (two-digit standard industrial classification [SIC] codes including 35, 36, and 38). In our study, Britain, France, Germany, Japan, and the United States are considered home countries for firms since these countries collectively account for approximately 70 percent of the world's information technology production (Dedrick & Kraemer, 2011).

If a sample is non-random, then any statistical conclusions drawn may be inaccurate to the extent that certain firm attributes may affect motivations to engage in offshoring. Reeb, Sakakibara, and Mahmood (2012) recommend overcoming this issue by using the propensity score matching (PSM) method. The PSM requires a set of comparable firms located within the aforementioned home countries. We accordingly proceeded by identifying firms that were either headquartered or located in these countries from the Osiris database. Since Germany has relatively little coverage compared to all other home countries, we began with 60 firms in Germany that included more complete financial information as our initial sample. Based on this initial set, we identified four other firm sets with similar characteristics located in Britain, France, Japan, and the United States. Using the Stata code "PSMATCH2" (Leuven & Sianesi, 2003), we determined the similarity by comparing the differences between firms in terms of industry affiliation (four-digit SIC), age, size (assets), financial performance (ROA), and ownership (public or private). Based on the calculated propensity score we identified the closest one-to-one match for the German firms with the shortest Mahalanobis distance to another country. This led to a sample of 300 firms. Using a series of ANOVA tests, we find that our sample firms from each home country do not differ significantly in terms of company age ($p = 0.42$), size ($p = 0.35$), and financial performance ($p = 0.55$).

### 4.2. Dependent variable

The dependent variable offshoring is a binary variable indicating whether or not a firm engaged in offshoring during a given year (1 = yes and 0 = no). Following Griffith, Harmancioglu, and Dorge (2009), we identified firms' offshoring via content analysis (Weber, 1990). First, we generated a list of keywords describing offshoring,[2] based on which we then manually searched Factiva for press mentions. Consistent with earlier research (Hirshleifer, Low, & Teoh, 2012; Tang, Qian, Chen, & Shen, 2015), we focused on major business publications including *BusinessWeek*; *Economist*; *Financial Times*; *New York Times*; and *Wall Street Journal*. The initial search yielded 580 news articles with mentions of offshoring for the sample firms within the observation period. We further examined these articles manually and documented all incidents. After removing duplicate reports; we were left with 410 unique offshoring incidents. In order to ensure that the data coding was reliable, we asked an independent research assistant unaware of the study's purpose to read all of the news reports we had singled out and to code these offshoring incidents. The agreement rate was high (97%) and discrepancies were resolved through discussion. While most reports did not reveal the exact offshoring amount, 25 (6%) of them did and the average was US$4.64 million per contract.

[2] The full list of the keywords is available on request.

### 4.3. Independent and moderating variables

Following Alimov (2015) and Capron and Guillen (2009), we measured *home country labor protection* using the employment protection legislation (EPL) strictness index from the Organisation for Economic Co-operation and Development (OECD). This index assesses employment protection legislation within a country using 18 basic items that can be grouped into three areas: (1) employment protection for regular workers against individual dismissal, (2) specific requirements for collective dismissal, and (3) regulation of temporary forms of employment. Based on these 18 basic items the OECD researchers developed a four-step procedure for constructing the EPL strictness index that allows for meaningful comparison across both countries and time periods (for a summary of the index construction process, see the 2004 edition of the OECD Employment Outlook). The time-varying indicator variable ranges from 0 to 6 with higher values suggesting greater labor protection within a country. Among all of the home countries covered in this study, we find that Germany (3.06) and France (2.69) offer relatively greater labor protection, while Japan (1.84), Britain (1.17), and the United States (0.79) offer relatively less.

Our first moderating variable is *labor productivity*. At the firm level this notion describes the degree of productivity by a firm's employees as a whole. One way to measure firm productivity is to consider a firm's total value added as the sum of all the input into its operations (Lieberman & Dhawan, 2005). Barney (2001) maintains that a firm's value added can be computed by considering all activities in the production process, including depreciation, amortization, fixed charges, interest expenses, labor and related expenses, pension and retirement expenses, net income before taxes, and rental expenses. Following Barney (2001), we obtained information on the above components from Osiris, calculated the sum of the above activities, and then scaled this sum over the number of firm employees. Since the value of this variable varies considerably across firms, we standardized it in order to ease interpretation (mean = 0 and standard deviation = 1). The greater the values, the higher the firm's labor productivity.

Consistent with Wang et al. (2009), we measured *employee stock ownership* using a binary variable coded 1 if a firm granted ownership to employees, and 0 if it did not. While a continuous measure is generally more informative, the proportion of firms that adopted employee stock ownership is not high in our data. The average of firms that did so is 3% with a maximum of only 16%. A binary variable is therefore sufficient to distinguish firms that adopted employee stock ownership from those that did not.

### 4.4. Control variables

Our models included several control variables that may correlate with the likelihood of firm offshoring. First, since large and established firms may have more resources that may affect their tendency to pursue offshoring, we controlled for *firm age* and *firm size* (measured by assets where both are logarithms). Furthermore, public firms may have greater capacities than their private counterparts to seek external resources supporting their operations. Accordingly, we coded a dummy variable *public firm* (1 if firms were public, and 0 otherwise). Moreover, relative to domestic firms, MNEs that have subsidiaries in foreign countries may have different inclination to obtain materials and input from overseas. We controlled for this effect by including a dummy variable *captive sourcing* (1 if firms had subsidiaries within a given foreign country, and 0 otherwise).

Second, firms that had engaged in offshoring before may have a greater tendency to do so again. We coded a variable *prior offshoring* measuring the number of times a firm initiated any offshoring activities with a given host country during the study period. Moreover, offshoring may also be propelled by firm performance. Although low performance firms may have motivation to source materials and input from abroad, high performance firms may also be interested in utilizing these resources. Since both predictions have merits, we did not expect firm performance to behave in a particular way. Nonetheless, we included *firm performance* (measured as return on assets) in our model.

Third, a firm's tendency to undertake offshoring may be affected by domestic labor costs. We controlled for this effect by including *home country labor costs* (measured as monthly wages in logarithm). Similarly, the decision to procure materials from a host country may depend on the labor costs within that country. Labor cost data were obtained from the International Labour Organization (ILO). In order to ensure that the unit of labor costs was comparable, we converted the local currency into US dollars using information obtained from the Exchange Rate Archives of the International Monetary Fund (IMF). Finally, we created a set of year and industry dummies (at the four-digit SIC level) in order to control for period- and industry-fixed effects.

### 4.5. Model estimation

We are interested in how home country labor protection may affect the motivations of firms within a given home country to undertake offshoring. When considering the variables of interest, a firm's likelihood of offshoring can be expressed as follows:

$$Offshoring_{ijt} = \alpha + \beta\ HomeLabor_{it\text{-}1} + \gamma\ HomeLabor_{it\text{-}1} \times LaborProductivity_{it\text{-}1} + \delta\ HomeLabor_{it\text{-}1} \times EmpOwnership_{it\text{-}1} + \zeta\ Controls + \varepsilon$$

where $i$ indexes the firm, $j$ a given host country, and $t$ the year. *HomeLabor* is home country labor protection, *LaborProductivity* labor productivity, and *EmpOwnership* employee stock ownership. $\alpha$ is the intercept, $\beta$, $\gamma$, and $\delta$ are the coefficients of theoretical interest, and $\varepsilon$ is the residual.

Three aspects of our model merit explanation. First, the dependent variable is the probability that a firm engaged in offshoring activities within a given host country during a given year. We modeled this probability because it provides fine-grained information regarding the firm's offshoring decisions. Host country characteristics are shown to play a crucial role in firm offshoring decisions (Contractor et al., 2010; Doh et al., 2009). We note that our conclusions remain consistent when the dependent variable is modeled as whether or not firms pursued offshoring during a given year.

Second, the identification of possible host countries that prospective offshoring firms may have considered also requires articulation. While a prospective offshoring firm may have evaluated several host countries before eventually deciding on one, it would be unrealistic to include all possible foreign countries in this estimation. Prior research maintains that host countries that would be perceived as attractive include: (1) foreign countries with which the focal firm had offshoring before, and (2) foreign countries with which industry counterparts (with the same two-digit SIC code) had offshoring (Sorenson & Stuart, 2001). Following this approach we identified 16 possible host countries or regions: Britain, Canada, China, Germany, France, Hong Kong, Israel, India, Italy, Japan, the Netherlands, Singapore, South Korea, Switzerland, Taiwan, and the United States. For each sample firm we created a dummy variable reflecting whether or not it engaged in offshoring with the host country during a given year.

Finally, because the dependent variable is binary in nature, we used the logit model for estimation (Long & Freese, 2003). Combining all of the available information provided 19,555 firm-country-year observations for analysis. All regressions used robust standard errors clustered at the firm level.

## 5. Results

### 5.1. Main findings

Table 1 presents descriptive statistics. We used the mean-centering

**Table 1**
Descriptive Statistics and Correlations.

| Variable | Mean | S.D. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Offshoring | 0.02 | 0.05 | – | | | | | | | | | | | | |
| 2. Home country labor protection | 2.53 | 0.71 | 0.03 | – | | | | | | | | | | | |
| 3. Labor productivity | 0.00 | 1.00 | −0.04 | −0.04 | – | | | | | | | | | | |
| 4. Employee stock ownership | 0.10 | 0.30 | −0.02 | 0.16 | 0.04 | – | | | | | | | | | |
| 5. Firm age | 2.92 | 0.85 | 0.01 | 0.15 | 0.06 | −0.09 | – | | | | | | | | |
| 6. Firm size | 13.72 | 3.45 | 0.03 | 0.28 | 0.01 | 0.13 | 0.19 | – | | | | | | | |
| 7. Public firm | 0.57 | 0.49 | 0.04 | 0.15 | 0.03 | 0.10 | 0.06 | 0.08 | – | | | | | | |
| 8. Captive sourcing | 0.52 | 0.49 | 0.04 | 0.03 | 0.02 | 0.06 | 0.08 | −0.07 | 0.38 | – | | | | | |
| 9. Prior offshoring | 0.04 | 0.24 | 0.27 | −0.02 | 0.00 | −0.02 | 0.00 | 0.03 | −0.01 | 0.01 | – | | | | |
| 10. Firm performance | 0.13 | 2.41 | 0.06 | 0.02 | 0.05 | 0.01 | 0.01 | 0.13 | 0.04 | 0.05 | 0.00 | – | | | |
| 11. Home country labor cost | 7.87 | 0.22 | −0.02 | 0.60 | 0.01 | 0.09 | 0.12 | 0.14 | 0.06 | 0.02 | −0.01 | 0.01 | – | | |
| 12. Host country labor protection | 1.12 | 0.76 | −0.03 | −0.04 | −0.02 | −0.01 | −0.03 | −0.02 | −0.01 | −0.00 | −0.11 | −0.01 | −0.05 | – | |
| 13. Host country labor cost | 7.53 | 1.18 | 0.01 | −0.00 | 0.00 | −0.00 | −0.01 | −0.00 | 0.00 | 0.00 | 0.02 | −0.00 | −0.01 | −0.36 | – |

*Notes*: $N = 19555$; correlations with absolute values exceeding 0.03 are significant at $p < 0.05$.

**Table 2**
Results of Logit Estimates.

| Variable | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|---|---|---|---|---|---|
| Home country labor protection (HCLP) | | 0.621*** (0.213) | 0.648*** (0.221) | 0.626*** (0.214) | 0.684*** (0.231) |
| HCLP × Labor productivity | | | 8.864*** (2.044) | | 8.857*** (2.048) |
| HCLP × Employee stock ownership | | | | −0.171*** (0.065) | −0.181*** (0.070) |
| Labor productivity | −0.075** (0.032) | −0.084** (0.032) | −0.162***(0.053) | −0.080** (0.032) | −0.171*** (0.038) |
| Employee stock ownership | 0.430 (0.828) | 0.383 (0.822) | 0.459 (0.829) | 0.389 (0.819) | 0.465 (0.826) |
| Firm age | 0.179 (0.233) | 0.217 (0.226) | 0.274 (0.229) | 0.215 (0.227) | 0.272 (0.229) |
| Firm size | 0.167** (0.067) | 0.169*** (0.065) | 0.170** (0.067) | 0.170*** (0.065) | 0.170** (0.067) |
| Public firm | 0.842 (0.612) | 0.830 (0.601) | 0.899 (0.620) | 0.829 (0.601) | 0.897 (0.620) |
| Captive sourcing | −0.479 (0.503) | −0.516 (0.516) | −0.600 (0.522) | −0.514 (0.516) | −0.598 (0.522) |
| Prior offshoring | 0.226*** (0.110) | 0.227*** (0.114) | 0.231*** (0.112) | 0.267*** (0.113) | 0.281*** (0.114) |
| Firm performance | 0.382*** (0.099) | 0.377*** (0.099) | 0.373*** (0.098) | 0.377*** (0.099) | 0.373*** (0.098) |
| Home country labor cost | −0.173 (0.806) | −1.060 (1.492) | −1.115 (1.504) | −1.072 (1.496) | −1.126 (1.501) |
| Host country labor protection | −0.319 (0.239) | −0.337 (0.332) | −0.343 (0.334) | −0.337 (0.332) | −0.344 (0.344) |
| Host country labor cost | −0.339** (0.145) | −0.345** (0.144) | −0.345** (0.145) | −0.345** (0.144) | −0.340** (0.145) |
| Industry fixed effects | Incl. | Incl. | Incl. | Incl. | Incl. |
| Year fixed effects | Incl. | Incl. | Incl. | Incl. | Incl. |
| Constant | −1.950*** (0.673) | −1.090 (1.077) | −1.161 (1.094) | −1.081 (1.097) | −1.152 (1.097) |
| Observations | 19555 | 19555 | 19555 | 19555 | 19555 |
| Log likelihood | −183.227 | −172.693 | −162.824 | −168.677 | −160.809 |
| Pseudo $R^2$ | 0.359 | 0.369 | 0.386 | 0.372 | 0.386 |

*Notes*: Standard errors clustered by firm appear in parentheses. Two-tailed tests.
*$p < 0.1$.
**$p < 0.05$.
***$p < 0.01$.

approach to create the interactions. All variance inflation factor (VIF) values are below the recommended cut-off point of 10, suggesting that multicollinearity is not a major issue.

Table 2 reports the regression results and Model 1 presents the baseline estimations including all control variables. Model 2 investigates the main effect of home country labor protection. Models 3 and 4 introduce one interaction variable each, and the full model is represented by Model 5. All models are highly significant ($p < 0.001$), suggesting that our predictors have significant statistical power.

Hypothesis 1 argues that firms operating within home countries with strong labor protection are likely to undertake offshoring. In Models 2 to 5 we find a positive coefficient for home country labor protection. For instance, in Model 2 home country labor protection bears a positive estimate ($\beta = 0.621$, $p < 0.01$). This result can be interpreted as follows: a one-unit increase in home country labor protection will raise a firm's likelihood of offshoring by five percent. Since the average probability of initiating offshoring to a given country is not high in our data (approximately two percent), the effect of home country labor protection is non-trivial. When using the average offshoring amount of our data, the estimate also implies that a one-unit increase of home country labor protection will lead to an offshoring contract of US$149,872. This magnitude supports Hypothesis 1.

Hypothesis 2 contends that the effect of home country labor protection would be stronger for firms with higher labor productivity. According to Model 3, the interaction of home country labor protection and labor productivity is positive and significant ($\beta = 8.864$, $p < 0.01$). This result suggests that labor productivity intensifies the effect of home country labor protection, and Hypothesis 2 is accordingly supported.

Hypothesis 3 further proposes that the influence of labor protection in the home country will be weaker for firms adopting employee stock ownership. As indicated in Model 4, the interaction of home country labor protection and employee stock ownership is negative and significant ($\beta = -0.171$, $p < 0.01$). This finding supports Hypothesis 3.

In order to better understand how these two moderating variables change the main effect, we plot the interaction effects in Figs. 1 and 2. The patterns revealed in these two figures are consistent with our predictions. For example, Fig. 1 suggests that although firms with lower labor productivity have higher propensities to seek offshoring than firms with higher labor productivity under the condition of low home country labor protection, as home country labor protection increases the difference between these two groups of firms diminishes. When home country labor protection reaches a high level, then firms with higher labor productivity exhibit greater propensities to undertake

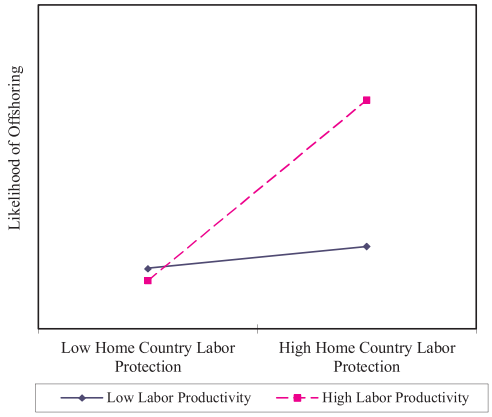


**Fig. 1.** Interaction of Home Country Labor Protection and Labor Productivity on Firm Offshoring.

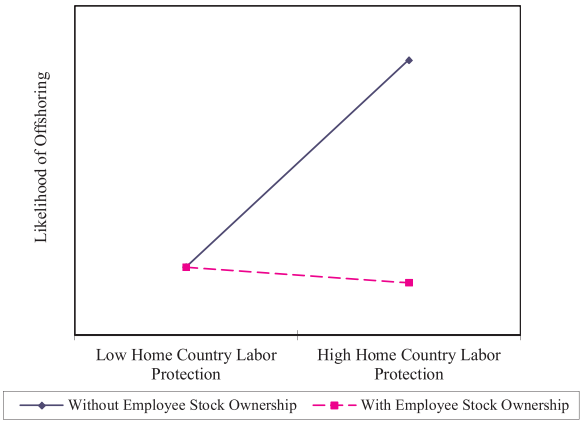


**Fig. 2.** Interaction of Home Country Labor Protection and Employee Stock Ownership on Firm Offshoring.

offshoring versus those with lower labor productivity. This pattern is consistent with our Hypothesis 2. Similarly, Fig. 2 suggests that employee stock ownership is a crucial factor changing the relationship between home country labor protection and firm offshoring. Overall, these plots indicate that labor productivity and employee stock ownership are critical boundary conditions.

### 5.2. Two robustness checks[3]

#### 5.2.1. Sub-period analyses

In our main analyses we study firms' offshoring using a span of two decades (1990–2010). Although this approach allows us to study offshoring in a more comprehensive manner, this method may not illuminate the nuances of each specific era. Here we addressed this issue in two steps. First, we split the entire observation period into different sub-periods including five-year and ten-year windows. We then estimated the models separately using each sub-period. The results using different observation windows are consistent with our main findings. We also tested whether or not our sample firms experienced large-scale changes during the complete observation period. Focusing on major asset and employee reductions (Ahmadjian & Robbins, 2005), we found that four firms experienced relatively large-scale changes during the study period. We then re-estimated the model by removing them in order to ensure that our results are not affected by these cases. Our findings remained robust when these firms were excluded.

[3] In the interest of space, results from these tests are not shown here but are available on request.

#### 5.2.2. Alternative labor productivity measures

In studying the moderating effect of labor productivity, we used an indicator that considers all input for a firm's production process in order to measure labor productivity. The literature suggests some alternative measurements. For instance, Lieberman and Dhawan (2005: 1068) propose that a firm's value added can be captured by considering the difference between firm sales versus the costs of purchased materials and services (i.e., COGS). Similarly, human resource management research also maintains that labor productivity can be measured using firm sales per employee (Datta, Guthrie, & Wright, 2005). We accordingly developed these two alternative indicators of labor productivity replacing the original labor productivity variable and then performed additional analyses. In results not reported here, we found that our conclusions still hold when alternative labor productivity indicators are used.

## 6. Discussion

### 6.1. Contributions

At least two contributions emerge. First, our study contributes to the home country literature (Cuervo-Cazurra & Ramamurti, 2014, 2017; Cuervo-Cazurra et al., 2015; Hoskisson et al., 2013). When stringent labor protection hinders operational effectiveness, the home country can become less supportive or even "unfriendly" (Hoskisson et al., 2013: 1309). How do firms cope with this challenge? We contend that firms operating within countries with stringent labor protection may opt to undertake offshoring. This argument is crucial, since it highlights that even developed home country contexts may prompt firms to consider escaping. The literature suggests that EMNEs may actively engage in outward FDI in order to escape from their home country constraints (Cuervo-Cazurra & Ramamurti, 2014, 2017; Luo & Wang, 2012; Xia et al., 2014). We add to this literature by making and substantiating the case that firms operating within developed countries may adopt similar strategies. While developed home countries can confer superior resources and assets, certain institutional arrangements such as labor protection may make home countries less supportive (Witt & Lewin, 2007). Firms based in developed countries may in turn consider shifting some operations overseas instead. As offshoring "requires a lower level of resource commitment and permits firms to choose the supplier that delivers the maximum advantage in each case" (Rodriguez & Nieto, 2016: 1738), it is more flexible than FDI. By undertaking offshoring, firms based in home countries with higher levels of labor protection are allowed to improve operational efficiency.

Second, our findings also contribute to both the VOC literature (Carney et al., 2009; Jackson & Deeg, 2008) and the offshoring literature (Contractor et al., 2010; Lewin et al., 2009; Nieto & Rodriguez, 2011). Labor is recognized as a crucial element within a society (Van Essen et al., 2013). Although strong labor protection enhances worker welfare, this institutional arrangement can create challenges for firms. Firms operating within countries that have greater labor protection may consider offshoring proactively. Specifically, "firms will experience *competitive disadvantage* if labor regulations fail to adjust to new realities" (Witt & Lewin, 2007: 582; emphasis added). Offshoring may accordingly represent one viable approach for firms responding to the institutional challenges of domestic operations. Overall, from a labor protection angle, this study contributes to the institution-based view (Peng et al., 2008).

### 6.2. Practice implications

Our findings have several implications for managers and policymakers. One immediate implication is that managers should pay attention to the issue of labor protection. Furthermore, managers must evaluate the issue of labor protection by taking labor productivity and employee stock ownership into analyses. While the effect of labor

protection is more pronounced for firms with higher labor productivity, labor protection within the home country are less impactful for firms that adopt employee stock ownership. Firms employing more productive workers are therefore encouraged to keep an eye on the issue of labor protection, and granting stock ownership may be one way to better manage their employees.

At the same time our findings are also informative for policymakers. Deregulations and the removal of trade barriers have made the global market increasingly competitive, ultimately generating calls to loosen labor protection in countries that previously provided greater worker welfare considerations. Therefore, "when labor protection has become excessive…labor market institutions must be reformed" (Kanter, 2006). As policymakers decide to alter the institutions by engaging in reform (Cuervo-Cazurra, 2015), it is important to adopt a more integrative perspective in balancing firm needs versus labor welfare. A one-side view may not be able to make the best use of a nation's resources.

### 6.3. Limitations and future research

Our paper has several limitations that provide opportunities for future research. First, our sample firms are based in five developed countries. However, labor protection is not limited to these countries. Subsequent studies can examine emerging economies such as China and India. Similarly, our research is based within a single industry (i.e., the information technology). While this allows us to control for the industry effect, how firms in other industries may react to home country labor protection can be examined in the future.

Second, aside from labor, other actors (such as shareholders and banks) within the home country are also crucial (Hall & Soskice, 2001). Studies investigating other key actors would improve our understanding of how the broader socio-economic home country context may influence firm strategies.

Finally, our study relies on content analyses while focusing on a particular period (i.e., 1990–2010) to study firm offshoring. In order to gain greater insight we encourage researchers to adopt other methods (e.g., survey instruments and interviews) to study small- and medium-sized firms as well as develop more refined indicators that capture firm offshoring. For example, researchers can develop more sophisticated measures such as the type (e.g., R&D) and number of functions that are relocated to foreign nations. Doing so will enhance our understanding of the association between home country context and firm offshoring.

## 7. Conclusion

How does home country labor protection influence firm offshoring? Drawing on the home country literature (Cuervo-Cazurra & Ramamutri, 2014, 2017; Marano et al., 2016; Xia et al., 2014), we contend that home country labor protection may create institutional challenges for domestic operations so that firms from these countries may actively look toward foreign countries for resources via offshoring. Leveraging this central argument, our study also examines the boundary conditions that moderate the effect of home country labor protection including labor productivity and employee stock ownership. Our findings suggest that stringent home country labor protection will increase firm motivations to undertake offshoring. Moreover, the effect of home country labor protection will vary depending on labor productivity and employee stock ownership. These results collectively suggest that offshoring can be a partial exit strategy for firms coping with the challenges in their home countries. In closing, we suggest that while "home sweet home" is part of our lexicon, policymakers, managers, and scholars must be aware of the institutional impact of "home bitter home."

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