

# Is there a liability of localness? How emerging market firms respond to regulatory punctuations

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## Abstract

In the 1990s, emerging economies all over the world deregulated, privatized and liberalized their domestic markets. These regulatory punctuations caused radical institutional changes for emerging market firms (EMFs). We argue that, for EMFs, regulatory punctuations created a liability of localness, parallel to the liability of foreignness that firms face when they go abroad. Whereas liability of foreignness comes from the differences caused by changing one's geographic place from 'here' to 'there'; liability of localness comes from changing one's point in time from 'then' (pre-exogenous regulatory shock) to 'now' (post-exogenous regulatory shock). In both cases, firms incur additional costs, and the ones that survive are ones that best develop strategies for coping with "being in a strange land". We apply our arguments to the Mexican banking industry, which was privatized and liberalized in the 1990s.

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## 1. Introduction

Emerging economies<sup>2</sup> have experienced radical transformations in their business landscapes due to the massive wave of deregulation, privatization and liberalization of their economies that started in the late 1980s (Hoskisson et al., 2000). These huge changes in government regulation affecting emerging market firms (EMFs) can be seen as

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<sup>2</sup> As defined by Hoskisson et al. (2000, p. 249) "Emerging economies are low-income, rapid-growth countries using economic liberalization as their primary engine of growth. They fall into two groups: developing countries in Asia, Latin America, Africa, and the Middle East and transition economies in the former Soviet Union and China."

regulatory punctuations; that is, major discontinuities in the business landscape caused by “sudden and extensive shifts in state constraints on business operations” (Haveman et al., 2001: 254).

While the importance of radical environmental change has been recognized for some time now (e.g., Meyer et al., 1990; Gersick, 1991, 1994; Wollin, 1999; Sabherwal et al., 2001), firm strategies and characteristics that facilitate or hamper firm performance under radical environmental change have not received the same attention (Keister, 2002). We know from statistics that the effects of large exogenous shocks cannot be estimated by marginal changes using comparative static methods, but rather require comparisons between cumulative totals (Caudill and Jackson, 1989). This suggests that successful firm strategies may be quite different when situations change; that is, when firms are faced with the large shocks that plague emerging economies rather than the smaller environmental changes that typically affect developed economies.

In this paper, we focus on emerging market firms’ strategies as they respond to large exogenous changes called punctuated equilibria (Haveman et al., 2001). Examining firm responses to regulatory punctuations in emerging economies should enable us to better identify the causes behind a successful or failed (radical) adaptation. For instance, DeCastro and Uhlenbruck (1997) suggest that different government privatization approaches evoked diverse domestic firm strategies, as privatization policies drastically changed the business landscapes of these countries and the old institutional rules of the communist system became useless in the new environment (Peng and Heath, 1996). Similarly, after major liberalization policies carried out by most Latin American governments during the 1990s, multinational enterprises (MNEs) suddenly could easily enter the Latin American markets (Sheahan, 1987, 1997; Toulan, 2002). In turn, this abrupt policy change forced domestic<sup>3</sup> firms to quickly adapt to the new landscape or face going out of business.

In attempting to better understand domestic firm responses to regulatory punctuations in their home countries, we find useful insights in the international business (IB) literature on liability of foreignness. The strategic management and IB literatures have produced a wealth of research gauging the actions and strategic shifts of MNEs (e.g., Ferrier, 2001; Luo and Peng, 1999). When firms venture overseas they face costs of doing business abroad (Hymer, 1960/76; Eden and Miller, 2004). A core component of the costs of doing business abroad is the liability of foreignness that firms face when they enter a foreign country (Zaheer, 1995; Zaheer and Mosakowski, 1997; Miller and Parkhe, 2002).

Definitions of liability of foreignness (LOF) vary. Eden and Miller’s definition of LOF—the one we use here—focuses on the socio-political and relational hazards associated with “being a stranger in a strange land”. LOF plus the economic costs of operating at a distance (e.g., communication and transportation costs) together comprise the costs of doing business abroad (see also Zaheer, 2002). Multinationals can overcome LOF through exploiting their firm specific advantages in the host-country (Hymer, 1960/1976; Buckley and Casson, 1976; Dunning, 1981). Much of the IB literature since the early 1980s has focused on these firm specific advantages as explanatory variables for performance comparisons between multinational and domestic firms.

If foreign firms suffer from liability of foreignness when they enter a host-country market, is it also possible that domestic firms can suffer from liability of localness (LOL)? Before the wave of regulatory punctuations in the 1990s, domestic firms in emerging economies were protected by a cocoon of high tariffs, license fees, state ownership, and close business–government relationships. Their inefficiencies were masked by protectionist policies that disguised the local firms’ natural disadvantages relative to their foreign counterparts.

When the barriers came down—and in many countries and industries the barriers came down very quickly—emerging market firms were faced with a tough decision: how to maneuver in the new competitive landscape? Regulatory punctuations created liability of localness for these firms; which we define as the additional socio-political and relational costs imposed by regulatory punctuations on local firms in their domestic market. Just as foreign firms experience a liability of foreignness when comparing “here” (domestic market) with “there” (foreign markets), we argue domestic firms can experience a liability of localness when comparing “then” (pre-regulatory punctuation) with “now” (post-regulatory punctuation). In both cases, firms incur additional costs, and the ones that survive are ones that best develop strategies for coping with “being in a strange land”.

There has been a dearth of research gauging how domestic firms in emerging economies are adjusting to radical environmental changes. Such changes range from regulatory punctuations at home to foreign exchange crises to the more general threats from technological change and globalization. We need to better understand firms’ strategic

<sup>3</sup> Throughout this paper, the labels emerging market firm(s), domestic firms and local firms are used interchangeably to refer to firms that are owned by the citizens of a particular emerging market.

responses to radical environmental change. For instance, [Doh \(2000\)](#) recognized the scarcity of studies on firm-level responses to privatization, while [Hoskisson et al. \(2000\)](#) commented on the need to study the larger institutional context on individual firm responses.

Our paper contributes to this literature by examining the responses of domestic firms in the Mexican banking industry to the privatization and liberalization that occurred in that industry over the 1990s. We argue that Mexican banks suffered from a liability of localness, once the protectionist barriers were removed, and that most banks were unable to cope in the new competitive landscape. Understanding which EMF strategies were successful, and which were not—that is, which Mexican banks were able to overcome their LOL and survive the regulatory punctuations and which did not, and why—are the research questions that drive our paper. We identify the socio-political costs faced by local firms,<sup>4</sup> asking why some EMFs are more successful than others when liberalization takes place.

Our paper is organized as follows. In Section 2 we briefly review the literature on liability of foreignness and firm performance. In Section 3, we develop the concept of liability of localness held by domestic firms in emerging economies, and build hypotheses about LOL and firm performance. We then test our hypotheses on a dataset of Mexican banks over the 1990s, and finish with conclusions and future research suggestions.

## 2. Literature review: the liability of foreignness

Our (LOF) literature review hinges in answering three questions: whether LOF exists, when it exists, and what drives it. Following [Eden and Miller \(2004\)](#), LOF goes beyond the well-known market-based costs of doing business abroad such as transportation costs and tariffs (e.g., [Dunning, 1995](#); [Hymer, 1960/76](#); [Rugman, 1981](#)). The focal point lies in understanding the ‘socio-political-relational’ hazards of foreignness.

[Hymer \(1960/1976\)](#) was the first to argue that, when going abroad, foreign firms would be at a disadvantage to domestic firms. In his view, these disadvantages or costs of doing business abroad (CDBA) arose out of the heightened barriers to entry in a host-country market. For instance, Hymer identifies three types of such increased barriers or disadvantages, namely: 1) informational, 2) discriminatory, and 3) currency exchange. Recently, interest in studying the CDBA concept has reemerged, albeit from a different perspective, as international management scholars examined the socio-political hazards of doing business abroad. For instance, [Zaheer \(1995\)](#) suggests that foreign firms are at a competitive disadvantage with their local counterparts because of their unfamiliarity with the host-country market, and because they face differential treatment by local organizations (e.g., government, suppliers). [Zaheer \(1995\)](#) calls this set of disadvantages (that are only borne by foreign firms), liability of foreignness (LOF).

[Miller and Parkhe’s \(2002\)](#) global banking study strongly supports [Zaheer’s \(1995\)](#) LOF arguments by showing that domestic banks were more efficient than foreign-based banks. Also, [Mezias’ \(2002\)](#) study shows the effects of these socio-political hazards. He finds that foreign firms were more likely than their American counterparts to face unfavorable labor lawsuit judgments (i.e., foreign firms are more liable) in the United States. The study supports the claim that American firms’ familiarity with their domestic legal system plays a key role avoiding undesirable outcomes (i.e., labor lawsuits).

In terms of the temporality of LOF, or when it exists, [Zaheer and Mosakowski \(1997\)](#) conclude that LOF decreases after the first two years of operating in a host-country and lasts no more than 16 years. [Lu and Beamish \(2001\)](#) demonstrate that after an initial negative relationship between a firm’s FDI activity and its performance, performance markedly improves as LOF decreases.<sup>5</sup> Thus, according to the existing literature, LOF decreases as foreign firms become familiar with the local environment ([Zaheer, 1995](#); [Lu and Beamish, 2001](#)), gain access to information networks ([Zaheer and Mosakowski, 1997](#)) and earn legitimacy ([Kostova and Zaheer, 1999](#)).

As [Eden and Miller \(2004; 196\)](#) put it, the main disadvantage of an international firm when going abroad is being a ‘stranger in a strange land’. In this sense, CDBA and LOF are no longer interchangeable concepts ([Zaheer, 2002](#)). Indeed, [Eden and Miller \(2004\)](#) argue that CDBA can be decomposed into two parts: the market-based additional costs of doing business abroad (e.g., tariffs, transport costs), and LOF. They classify LOF as the socio-political-relational costs of doing business abroad (excluding the economics-oriented costs), namely: unfamiliarity, relational, and discriminatory hazards. The clarification is important because it allows for identifying certain institutional forces as the key drivers of LOF.

<sup>4</sup> Firms are considered local if they are headquartered in the host market and the majority of shares are owned by citizens of that host market (e.g., Microsoft is a local firm in the USA and Cemex a local firm in Mexico).

<sup>5</sup> They actually found evidence of an S curve relationship between a firm’s FDI activity (internationalization) and its performance. Explaining the whole relationship is beyond the scope of the question of when LOF exists.

According to [Eden and Miller \(2004\)](#), legitimacy and institutional distance explain how MNEs adjust to the ‘rules of the game’ or business environment of the host-country (i.e., its institutions). Some evidence supporting this argument comes from [Rangan and Drummond \(2004\)](#), who demonstrate that MNEs from home countries with closer ties (i.e., less socio-political-relational costs) outperform firms from home countries with more distant ties.

### 3. Theory development

#### 3.1. *The liability of localness*

As the competitive landscape becomes more global and technologically driven, frequent discontinuities causing rapid transformations are more likely to occur ([Hitt et al., 1998](#)). [Haveman et al. \(2001\)](#) note that sudden environmental discontinuities caused by shifts in regulatory policies and technological breakthroughs are likely to precipitate radical organizational change. Some LOF theorists have considered the effects of such discontinuities, in particular, the effects of market liberalization, on LOF. For instance, [Ataullah and Le \(2004\)](#) find that after market liberalization, the performance of foreign banks in Pakistan and India was equal to or higher than that of domestic banks. [Zaheer and Mosakowski \(1997\)](#) show that under financial deregulation, local firms were more likely to exit the market than foreign firms. Also, [Nachum \(2003\)](#) suggests that a probable explanation for the absence of LOF in her study of financial services firms in London is that British policies do not discriminate against foreign firms. In fact, [Nachum \(2003\)](#) comments that the Big Bang liberalization of the British stock exchange actually raised the status of the city of London as a premier international financial center.

Taken together, these studies show that market liberalization decreases the negative effects of LOF. Therefore, in a more global marketplace perhaps it is difficult to recognize the existence of LOF (e.g., [Nachum’s](#) study on financial service firms in the London Exchange). To our knowledge there has been little theoretical development explaining why market liberalization decreases the negative effects of LOF, and how it affects local organizations. Is it that other forces are at play? We believe so and make the case for the existence of a liability of localness.

In a protectionist oriented marketplace it is difficult to uncover the liabilities that local firms face when doing business in their home market. Essentially, protectionist policies disguise the local firms’ natural disadvantages relative to those of their foreign counterparts. When liberalization and privatization occur, and these artificial barriers are removed, the inefficiencies of (some) local firms become visible. These firms incur a liability of localness; that is, added socio-political and relational costs or hazards of adjusting to the “now” being different from “then”.

We argue liability of localness shares many similarities with liability of foreignness. LOF is about the added costs faced by foreign firm, adjusting to “here” being different from “there”. LOL is about the added costs faced by local firms, adjusting to “now” being different from “then”. In one case the issue is coping with the strangeness of being in a different geographic place (LOF); in the other, in a different point in time (LOL). In both cases, the competitive landscape facing the firms has shifted markedly, necessitating new strategies for survival.

This suggests that both LOF and LOL are contextual in nature. In other words, LOF is readily observable in the presence of protectionist policies that increase the foreign firms’ socio-political hazards (i.e., unfamiliarity, relational, and discriminatory hazards). Conversely, after radically removing protectionist policies, local firms are the ones most adversely affected by their unfamiliarity with the new ‘rules of the game’ and their exclusion from global networks (relational and discriminatory hazards). That is, LOF and LOL are the result of institutional forces.

[North \(1990:3\)](#) defines institutions as “the rules of the game in a society or, more formally, [as] the humanly devised constraints that shape human interaction”. [Scott \(1995:33\)](#) defines institutions as “cognitive, normative, and regulatory structures that provide stability to social behavior”. Thus, the rules of the game are the institutions, namely the cognitive, normative, and regulatory structures that shape the behavior of firms operating within a given market. For instance, using institutional theory (an organizational legitimacy argument), [Kostova and Zaheer \(1999\)](#), suggest that MNEs are rewarded for isomorphism.<sup>6</sup> [Kostova and Roth \(2002\)](#) argue that institutions create pressures for adoption of social patterns. In congruence with these concepts, LOF can also be understood as the added social costs faced by foreign firms in a local host market, “here” being different from “there”, due to institutional (socio-political relational) pressures to conform to the host market institutions. However, MNEs might face different legitimacy standards than

<sup>6</sup> In either case: coercive, mimetic, or normative isomorphism ([DiMaggio and Powell, 1983](#)), the key aspect about these authors argument is that foreign firms face institutional pressures to conform to a particular (host-country) environment.



their domestic counterparts; thus, pressure to conform does not necessarily mean MNEs need to behave like domestic firms (Kostova and Zaheer, 1999).

Likewise, liability of localness can also be understood as the added social costs faced by local firms, after a regulatory punctuation, “now being different from then”, due to pressures to conform to new cognitive, normative, and regulatory structures (i.e., the forming of new institutions). From a punctuated equilibrium perspective, sudden environmental discontinuities caused by shifts in regulatory policies and technological breakthroughs are likely to cause radical organizational change (Haveman et al., 2001). Baum et al. (1995) suggest that abrupt discontinuities create new habitats where new organizational designs should flourish. In this sense, we might think about these new habitats as new cognitive, normative, and regulatory structures (or new institutions) created by the abrupt discontinuity. Under this scenario, new strategies (i.e., new organizational designs) ought to be implemented by both existing and incoming firms if they want to flourish in the new institutional environment. In the words of Wake et al. (1983), abrupt discontinuities require a system’s deep structure (e.g., normative institutions) to change and create a new equilibrium. That is, new ways in which organizations need to respond to stimuli from the environment.

Zaheer (1995) suggests MNEs could reduce LOF because of their firm-specific advantages or because they were able to mirror the organizational practices of local firms. Expanding on the latter argument, Kostova and Zaheer (1999) point out that failure to mimic organizational practices (i.e., conform to local practices), adversely affects MNE legitimacy. They conclude LOF results from foreign firms not being sufficiently embedded in the information networks of the host-country. In other words, once foreign firms are able to interpret the cognitive, normative, and regulatory structures, namely the rules of the game in that particular society (host-country), they should be able to decrease their exposure to unfamiliarity, discriminatory, and relational hazards or LOF (Eden and Miller, 2004). That is, the added costs of doing business abroad caused by changing one’s geographic place from “here” to “there” decreases as the ‘rules of the game’ are better understood by foreign firms.

A similar type of argument can be made for interpreting what causes the liability of localness. LOF is the cost (incurred by foreign firms) for adjusting to the local market or “here institutions” rather than keep operating as if at home, or as “there institutions”. LOL, on the other hand, is the cost (incurred by local firms) for adjusting to the new internationally influenced local business practices or “now institutions” rather than how it used to be, or “then institutions”. Therefore, LOL comes as a result of regulatory punctuations changing the “rules of the game” for domestic firms, which operated in a more protected environment. These regulatory punctuations changed the cognitive, normative, and regulatory structures, in which domestic firms were used to operate. In short, whereas liability of foreignness comes from the differences caused by changing one’s geographic place from “here” to “there”; liability of localness comes from changing one’s point in time from “then (pre-exogenous regulatory shock)” to “now (post-exogenous regulatory shock)”. In both cases, firms incur additional costs, and the ones that survive are the ones that best develop strategies for coping with “being in a strange land”.

Regulatory punctuations, by their very nature, undermine and ultimately change the host market institutions that guide local firms’ business practices. Local firms then, are no longer familiar with the new ‘rules of the game’, and in fact operate as if ‘in a strange land’. Under these conditions, firms incur a liability of localness, which in turn decreases the local firms’ ability to survive. We therefore hypothesize the following:

**Hypothesis 1.** Regulatory punctuations in emerging economies have a negative effect on the survival of local firms.

### 3.2. *Strategies for coping with the liability of localness*

International business scholars argue that MNEs have two main motivations to engage in international diversification: 1) exploiting their capabilities in international environments (Hymer, 1960/1976; Dunning, 1977), and 2) exploring or augmenting their knowledge base (Cantwell, 1989). For local firms facing a new business landscape, the motivation is not to exploit their capabilities, but rather, to learn how to compete under a different set of rules. Local firms’ strategies must evolve if they are to survive (Nelson and Winter, 1982); more specifically, local firms need to learn the ‘rules of the game’ under liberalization or neoliberal policies (Blustein, 2002; Dunning, 2003; Miller and Pisani, 2007).

In so doing, local firms should benefit from international experience. For instance, prior research identifies international experience to be important for MNE survivability (Li, 1995; Mitchell et al., 1995; Shaver et al., 1997) and performance (Eden and Miller, 2004). Thus, we know foreign firms can successfully transfer the experience gained in

one foreign country into other foreign countries with similar institutions (Hitt et al., 1997; Zaheer, 1995; Zaheer and Mosakowski, 1997).

Likewise, Thomas et al. (2007) found that EMFs with developed market experience (e.g., international diversification) increase their survival rate when they subsequently enter new developed markets. In contrast, they found that EMFs with only business alliance experience with developed markets decreased their survival rate when subsequently entering new developed markets. We believe the same is true for EMFs that incur a liability of localness. That is, EMFs with international experience (e.g., international diversification) in developed countries that follow neoliberal policies, can better interpret their home market evolving institutions (post-regulatory punctuation) than EMFs without such international experience. Essentially, through international diversification into developed markets, EMFs can better adapt to the new realities of their home country business landscape as their institutions come to mimic those of developed market economies. This international experience in developed markets therefore, in turn, lessens the EMFs' liability of localness.

Hitt et al. (2000) argue weak institutions in emerging markets do not allow local firms to develop the financial and technological resources needed to compete internationally. Thus, these authors suggest EMFs may lack the necessary absorptive capacity to learn from developed market sources. However, the comments made by Hitt et al. (2000) compared MNEs to EMFs. Our paper, however, focuses on why some EMFs are more successful than other EMFs, in their own home country, when abrupt regulatory changes take place at home. Thus, our performance (survival) comparisons are comparisons among local emerging market firms.

Further, the evidence of prior research on LOF suggests both developed market firms and EMFs can reduce their LOF if they are able to transfer or 'export' their business experience from a foreign country to a set of similar foreign countries. Following this rationale, EMFs should be as able to transfer back or 'import' institutional business experience from developed markets as a way to cope with LOL in their home country post-regulatory punctuation.

From a punctuated equilibrium perspective (deep structure stage), we know that the higher the number of learning experiences by organizations, the larger their learning experience repertoires (Gersick, 1991). For Dunning (1977), MNEs can profit from international diversification not only through their ownership advantages, but also through increasing their learning experience repertoires. Thus, larger business experience repertoire provides firms with higher absorptive capacity (Cohen and Levinthal, 1990).

Besides developing larger repertoires, firms need to pay attention to the realities of their institutional environment; especially when abrupt changes like regulatory punctuations occur. For instance, D'Aveni and Macmillan (1990) show that under strenuous situations, such as regulatory punctuations, firms focusing their attention on the external environment outperformed those focusing their attention on the internal aspects of the business. Their argument rests on the notion that most internal aspects of the business are not necessarily aligned with the new business landscape and need to change. Alternatively, firms that focus on the internal aspects of their business, during strenuous situations, may be operating under the assumptions of past cognitive, normative, or regulatory structures. That is, firms focusing on the internal side of their business may be operating as if in 'then institutions'.

Following this logic, local firms not engaging in international diversification (or less internationally diversified) would have smaller learning experience repertoires than local firms that do (or are more internationally diversified). In turn, firms with smaller repertoires should take more time to interpret how to compete successfully given the new reality of their home market institutions. This would be expected even if these less diversified firms were to focus their attention to the changing environment. For example, Dunning (1988) argues that the creation of the European Common Market in the 1960s, which reduced trade and investment barriers within the region, was expected to benefit European firms. However, it was American—not European—firms that adapted fastest to the new regulations, setting up branch plants inside the Common Market to service the whole region. Most European firms, with their history of small stand-alone plants (i.e., smaller experience repertoires) and hidebound by inertia and trade unions, were unable to quickly respond to the new competitive landscape. Those that did engage in rationalized investments within Europe, which allow them to increase their learning experience repertoires, were able to go head-to-head with the incoming American multinationals.

Our arguments suggest that EMFs can use international diversification as a strategy to cope with liability of localness caused by regulatory punctuations; that is:

**Hypothesis 2.** International diversification will have a positive effect on the survival of emerging market firms after a regulatory punctuation.

Mergers and acquisitions are perhaps the most aggressive organizational response to resource dependence. Through an acquisition, the organization is trying to mitigate the resource dependence through internalization. In other words,

the acquiring firm tries to bring resource dependence under its control. For instance, Burt (1983: 70) states that “the most direct strategy for removing a source of market constraint would be to buy an establishment within the constraining sector.” Also, according to Pfeffer and Salancik (1978), horizontal acquisitions (i.e., acquisitions of firms competing in the same industry as their acquirers), reduce dependence by simultaneously reducing competition and increasing power.

In contrast to internalization strategies, growing “large” at home by acquiring a local competitor does not necessarily improve the knowledge stock about the new environment. This is especially so if the target firm does not have international experience. However, through a domestic acquisition, the buyer does ‘buy’ learning time by mitigating its resource dependence. In this sense, firms that acquire their competitors may be able to cope for a longer time period with the adversity of LOL than firms that do not follow this strategy. For instance, with the advent of the European Common Market, European firms could have scaled up for new, larger regional market by acquiring smaller firms in their home country (Dunning, 1988). Also inherent to any merger and acquisition is the concept of growth, which increases the probability of survival (Katz and Kahn, 1966). Moreover, failure to scale up by acquiring one’s neighbors may lead to foreign firms acquiring your firm. For example, when Czechoslovakia opened its doors to foreign investment after the collapse of the Soviet Union in 1989, rather than engage in its own acquisitions, the Czech carmaker Skoda was rapidly sold off to Volkswagen (Dawar and Frost, 1999).

From an institutional theory perspective, we know organizations try to follow institutionalized rules in their quest for legitimacy and survival. For instance, Meyer and Rowan (1977) argue organizations are rewarded for isomorphism because they are viewed as responsible and thus legitimate. Moreover, as organizations follow taken-for-granted routines (cognitive legitimacy) they develop structural inertia (Hannan and Freeman, 1984). If the ‘rules of the game’ remain unchanged, structural inertia may bring positive effects to the organization. However, in the context of radical change (e.g., a regulatory punctuation), structural inertia may hinder the organization’s ability to adapt and survive.

Ultimately, structural inertia is the result of taken-for-granted cognitive, normative, and, regulatory structures to avoid uncertainty. This is what institutional theorists refer to as ‘imperfect and pragmatic solutions to reconcile past conflicts’ (Scott, 1995). Alchian identifies lack of uncertainty as the main component for the successful pursuit of profit maximization since “where foresight is uncertain, profit maximization is meaningless” (Alchian, 1950:211).

Milliken (1987) identifies three types of uncertainty conditions, namely: state, effect, and response uncertainty. For Milliken, whereas the state condition refers to uncertainty about the future state of the world; effect uncertainty refers to uncertainty about the implications of that future state, and its impact on the organization’s ability to function. Lastly, response uncertainty refers to the difficulty to predict the likely consequences of a response choice. This type of uncertainty is closest conceptually to definitions of uncertainty offered by decision theorists (under stable conditions).

From this perspective, a radical transformation of the business landscape (e.g., due to a regulatory punctuation), can be thought of as effect uncertainty. Under this condition, EMFs would not necessarily understand their new institutional environment and this misconception would hinder their ability to function. Moreover, uncertainty may be accompanied by two consequences that raise transaction costs: small numbers and exclusivity (Podolny, 1994).

According to March (1988), the greater the uncertainty, the more likely organizations are to engage in exchange relations with those with whom they have transacted in the past and with those of similar status. By following a mergers and acquisition (M&A) strategy, EMFs should therefore be able to decrease their effect uncertainty. This is because firms following M&A strategies de facto increase the number of organizations with whom they have transacted in the past while also developing new partnerships with members from higher status. Thus, merger and acquisition strategies should allow organizations to reduce uncertainty, and therefore to increase their survivability. We therefore hypothesize the following:

**Hypothesis 3.** Acquisition strategies will have a positive effect on the survival of emerging market firms after a regulatory punctuation.

## 4. Research methodology

### 4.1. Sample

Rangan and Drummond (2004) argue that the IB literature has overemphasized performance comparisons between foreign MNEs and domestic firms, and largely overlooked performance differences among foreign MNEs (and among

local firms) competing in a third host market. Thomas et al. (2007) answer Rangan and Drummond's (2004) call to shed light on performance comparisons among foreign MNEs competing in a third host market. They study performance differences of emerging market multinationals in a developed market. Similarly, in this paper we answered Rangan and Drummond's call by analyzing performance differences among local emerging market firms facing pervasive foreign competition after the introduction of a regulatory punctuation.

As an empirical test of our theory explaining performance differences among local EMFs after a regulatory punctuation, we selected the Mexican banking industry during the 1990s as our study sample. The sample presents an excellent opportunity to study the negative effects of a regulatory punctuation, how the firms adopted different strategies to cope with LOL, and the impact of these strategies on their performance and survivability. At the start of the period local banks did not have to compete against foreign banks (1991 to 1994). However, the regulatory punctuations of the mid-1990's abruptly changed the 'rules of the game' for the local banks, thus providing an excellent sample to compare EMFS before and after a regulatory punctuation. (See Appendix A for a detail explanation on the regulatory changes).

We were able to obtain data for all private (local) commercial banks operating in the Mexican banking industry from 3/1991 to 3/2004. This was the complete universe of banks operating in Mexico during this time period. (Many IB emerging scholars would agree this is no small feat as it is quite difficult to obtain quality databases in emerging economies.) The data were collected quarterly from the (Mexican) National Commission of Banking and Securities' Statistical Bulletins. These bulletins have financial data for all foreign and local banks operating in the industry, such as loan portfolio, net income, assets, market share, etc. Nonfinancial information, such as number of acquisitions or international diversification data, was retrieved from scholarly articles on the subject. For instance, Guillen and Tschoegl (1999) present all the international strategic alliances and acquisitions of Spanish banks in Latin America (including Mexico).

#### 4.2. Statistical methods

We used hazard models to test our hypotheses because out of the 37 domestic owned banks that entered the Mexican banking industry from 3/1991–3/2004, only 12 banks survived. Such a small survival rate (32.4%) reflects firm performance much better than traditional financial measures. Also, survival analysis has been extensively used by other LOF researchers and institutional theory researchers (e.g., Hannan and Freeman, 1989; Li, 1995; Mitchell, Shaver, and Yeung, 1995; Hannan and Carroll, 1995; Shaver, Mitchell, and Yeung, 1997; Zaheer and Mosakowski, 1997; Gaur and Lu, 2007). For example, Thomas et al. (2007) use survival analysis to explain the relative success of EMFs going to abroad to a developed market. Similarly, we use survival analysis to explore the relative success of EMFs at home after a regulatory punctuation that opens the home market to foreign competition.

Table 1 presents information about the number of banks that entered and exited the Mexican banking industry, along with industry market share, according to the liberalization periods explained in Appendix A. To measure the local firms' ability to survive, we used a continuous-time hazard model approach (maximum-likelihood<sup>7</sup>). We developed a "life table"; that is, for each bank-quarter period point, we coded the dependent variable as 1 if a bank failed (i.e., changed its ownership or exited the industry) and 0 otherwise. For this method, the bank's hazard of "dying" starts when it enters the Mexican banking industry (at age quarter #1) and finishes if the event occurs or when the observation is censored (quarter # 52, 3/2004).

We used the exponential model in terms of entering time into the equation. Allison (1984) notes the exponential model implies that a hazard is constant over time. This means that logarithms of the survival function ( $\ln(S(t))$ ) are linearly related to time  $t$ ; that is, the subjects studied (e.g., firms) are no more likely or less likely to fail towards the end of the period observation than at the start. The exponential model can be expressed by the following equation:  $\log h(t) = a + b_1 \times 1 + b_2 \times 2$ . To determine the appropriateness of the exponential model, we first ran a Weibull distribution model, which provides information about the distribution shape parameter  $p$ ; this test confirmed the appropriateness of the exponential model for our data analysis.<sup>8</sup>

<sup>7</sup> While we believe this is the optimal hazard model to test the present data. However, we also tested the data using Cox (See Table 8).

<sup>8</sup> According to Cleves et al. (2004), a  $p$  value of 1 corresponds to an exponential model where the hazard does not change with time. A  $p$  value  $>1$ , on the other hand, indicates the hazard increases with time, and thus, the Gompertz model is the proper model to use. Finally,  $p$  value  $<1$ , means the hazard decreases with time and that the Weibull model is the proper model to use.



Table 1  
Mexican banking industry entries, exits and other statistics

# Bank entries			
Regulatory punctuation	Domestic banks	Foreign banks	
Privatization	20	0	
NAFTA	12	2	
FDI relaxed	3	20	
FDI total openness	2	2	
# Bank exits			
Regulatory punctuation	Domestic banks	Foreign banks	
Privatization	0	0	
NAFTA	4	0	
FDI relaxed	16	0	
FDI total openness	4	4	
Total # banks			
Regulatory punctuation	Domestic banks	Foreign banks	
Privatization	20	0	
NAFTA	29	2	
FDI relaxed	15	20	
FDI total openness	12	17	
M&A Activity			
Regulatory punctuation	Domestic–Domestic	Foreign–Domestic	Domestic–Foreign
Privatization	0	0	0
NAFTA	1	0	0
FDI relaxed	9	6	0
FDI total openness	1	4	1
Market share (%) in the Mexican banking industry			
Regulatory punctuation	Domestic banks	Foreign banks	Foreign banks
	(Total)	(Total)	(Controlling interest)
Privatization	94.5	5.5	0.6
NAFTA	93.6	6.4	1.3
FDI relaxed	33.8	66.2	16.4
FDI total openness	18.0	82.0	82.0

Source: Banco de México (1991–2004).

Further, we decided to use a maximum likelihood approach over the partial likelihood approach (Cox model). The Cox model is unable to model variables that predict success perfectly because the partial likelihood estimation is a product of likelihoods for all events observed to occur. In contrast, the maximum likelihood estimation is a product of the likelihoods for all individuals in the sample (not only the ones that occurred).

### 4.3. Measures

#### 4.3.1. Dependent variables

Our dependent variable is a continuous variable that signals the hazard or probability of a bank to exit the Mexican banking industry between 3/1991 and 3/2004.<sup>9</sup> Thus, we create a “life table” of subject-time units (Cox, 1972), where the dependent variable is the hazard rate or likelihood that a bank exits the Mexican banking industry in a given quarter (1–52). The banks at risk are those already operating in the Mexican banking industry. In turn, the dependent variable is named “NuQuarters”, as it records the number of quarters between when the bank enters the Mexican banking industry (i.e., starts the risk period) and when the bank either exits or is censored (from quarter 1 to quarter 52). The NuQuarters

<sup>9</sup> The year of 1991 was selected as the starting point of the period of study because it was 5/1991 when the first bank was reprivatized.

dependent variable is used in combination with the variable Exit. Exit records whether the event occurred, that is, whether a bank exited the industry (Exit=1) or was censored (Exit=0).

Therefore, when the dummy variable Exit equals one, it means that a bank went bankrupt, exited the industry, or was sold at a loss. The implication for all three cases is that the bank performed poorly. Censoring (Exit=0) would take place at the end of the observation period if the event did not occur or if a bank was sold at a premium.

#### 4.3.2. Independent variables

**4.3.2.1. Liberalization.** The dummy variable ‘liberalization’ represents the regulatory punctuation that took place in the Mexican banking industry. We identify the period between 3/1991 and 3/1995 as a protectionist period, hence liberalization=0. In contrast, we identified the period between 6/1995 and 12/2001 as the liberalization period as it saw the demise of protectionist policies. After 12/2001 we coded liberalization=0 again to maximize the effect of the policy. Congruent with LOF arguments, it is to be expected that a couple of years after the market liberalizes, local firms should have adapted to the new environment. See Appendix A for a review of the Mexican banking industry liberalization.

**4.3.2.2. Number of foreign banks.** As an alternative way of measuring the adverse effects of liberalization, we also used the variable ‘number of foreign banks’. This ordinal variable captures the number of foreign banks operating in the Mexican banking industry from 3/1991–3/2004. Perhaps this variable might only capture the main symptom of liberalization, namely the establishing of foreign firms in the industry. However, its advantage over the liberalization variable is that it does not rest on the researcher’s arbitrary understanding of when indeed liberalization took place. Thus, using this variable should add robustness to our empirical results.

**4.3.2.3. International diversification.** International diversification is a count variable (range 0–2) where 0 equals no international diversification by the focal bank or any of its affiliates. A count of 1 means the focal bank, or any of its affiliates, has at least one subsidiary in any Latin-American country or in any developed market country. A count of 2 means the focal bank, or any of its affiliates, has at least one subsidiary in any Latin-American country and in any developed market country. Although an entropy measure for international diversification is desirable, BankScope and other known datasets do not report

Table 2  
Commercial banks reprivatized by the Mexican government (1991–1992)

Date	Bank name	% of shares sold	Amount received (Millions of USD*)	Price/Book value
6/7/1991	Mercantil de Mexico (Probursa)	77.2	202	2.66
6/14/1991	Banpais	100	180	3.03
6/21/1991	Banca Cremi	66.7	248	3.40
8/2/1991	Confia	78.7	295	3.73
8/9/1991	Banco de Oriente	66	74	4.04
8/16/1991	Bancrecer	100	141	2.53
8/23/1991	Banamex	70.7	3227	2.63
10/25/1991	Bancomer	56	2848	2.99
11/8/1991	BCH	100	291	2.68
1/24/1992	Serfin	51	915	2.69
2/7/1992	Comermex	66.5	876	3.73
2/28/1992	Somex	81.6	607	3.31
3/27/1992	Atlantico	68.5	475	5.30
4/3/1992	Promex	66	348	4.23
4/10/1992	Banoro	66	368	3.95
6/12/1992	Mercantil del Norte (Banorte)	66	575	4.25
6/26/1992	Internacional (Bital)	51	481	2.95
7/3/1992	Centro	66.3	281	4.65
6/7/1991	Mercantil de Mexico (Probursa)	77.2	202	2.66
6/14/1991	Banpais	100	180	3.03
6/21/1991	Banca Cremi	66.7	248	3.40
	Total		\$12.433	

\*Dollar–peso average exchange range: 1991=3.01615; 1992=3.09408. The amount paid does not assume 100% ownership. In all cases, however, the controlling interest surpassed 51%. Source: Hovey (1996L: 247–250); Rogozinski (1998: 131).

the revenues of a bank at a country or regional level (thus an entropy measure was unattainable). Also, [Barkema and Vermeulen \(1998\)](#) used the number of foreign countries where a bank had its subsidiaries.

**4.3.2.4. Acquisitions.** ‘Acquisitions’ is an ordinal variable that records the cumulative number of acquisitions (in the Mexican banking industry) that a focal bank made throughout the observation period.

#### 4.3.3. Control variables

**4.3.3.1. Size.** Consistent with standard academic research in management, we used the natural logarithm of assets to control for the possible positive effect of firm size.

**4.3.3.2. Top-1000 banks of the world.** [Zaheer and Mosakowski \(1997\)](#) used the Top-200 banks of the world (reported by *The Banker* every July) as a control variable. This control variable is important because it controls for reputation, and the overall performance of the bank. In other words, this variable controls for the possible positive (or negative) effects of a bank’s franchise value. *The Banker’s* ranking considers: strength, soundness, profits, performance, capital ratio, and nonperforming loans to total loans ratio ([The Banker, 1992–2005](#)). This is an ordinal variable with four ranges: Top-25, Top-200, Top-1000, and the rest.

**4.3.3.3. New bank.** As an alternative way to control for the effects of size and reputation, we also controlled for the possibility of a ‘new bank’ effect. Thus, we used a dummy variable, ‘new bank’, to identify whether a bank was sold by the Mexican government to a local national (new bank=0) or if it was newly established by a local national (new bank=1). Indeed new banks are much smaller than the banks sold by the Mexican government. [Table 2](#) shows the amount received by the Mexican government for each bank it sold during the reprivatization period. Likewise, [Table 3](#) illustrates the market share that each of these reprivatized banks from 1991–2004. [Table 4](#) presents the market share of each of the newly

Table 3  
Market share of original (old) banks per period

Bank name	Entry	MS	End of period (P1)	MS	End of P2/ last report	MS	End of P3/ last report	MS	3/2004 or last report	MS
Atlantico	Mar-92	2.6%	Dec-93	3.9%	Dec-94	5.2%	Sep-97	4.2%	Sep-97	
Banamex	Sep-91	24.2%	Dec-93	21.3%	Dec-94	22.4%	Dec-98	20.7%	Sep-01	20.0%
Bancomer	Dec-91	22.7%	Dec-93	17.9%	Dec-94	18.8%	Dec-98	20.8%	Sep-00	21.6%
Bancrecer	Sep-91	3.6%	Dec-93	2.6%	Dec-94	2.5%	Sep-97	8.9%	Sep-97	
Banoro	Jun-92	0.9%	Dec-93	0.8%	Dec-94	1.3%	Dec-96	2.2%	Dec-96	
Banorte	Sep-92	1.6%	Dec-93	2.0%	Dec-94	2.5%	Dec-98	7.39%	Mar-04	10.7%
Banpais	Sep-91	1.0%	Dec-93	4.3%	Sep-94	3.7%	Sep-94		Sep-94	
Centro	Sep-92	1.0%	Dec-93	1.3%	Dec-94	2.4%	Jun-95	2.4%	Jun-95	
Comermex	Mar-92	6.7%	Dec-93	6.0%	Dec-94	6.6%	Jun-95	6.1%	Jun-95	
Confia	Sep-91	2.1%	Dec-93	2.0%	Dec-94	2.7%	Jun-97	3.7%	Jun-97	
Cremi	Sep-91	2.1%	Dec-93	2.5%	Jun-94	2.4%	Dec-94		Dec-94	
De Oriente	Sep-91	0.3%	Dec-93	0.6%	Dec-94	0.5%	Dec-94		Dec-94	
Internacional	Sep-92	6.3%	Dec-93	5.8%	Dec-94	5.3%	Dec-98	8.4%	Jun-02	7.8%
M. Probusa	Sep-91	2.4%	Dec-93	4.3%	Dec-94	2.5%	Jun-95	2.8%	Jun-95	
Mexicano	Mar-92	3.8%	Dec-93	6.9%	Dec-94	7.5%	Sep-96	8.3%	Sep-96	
Promex	Jun-92	1.0%	Dec-93	1.9%	Dec-94	3.4%	Dec-97	3.8%	Dec-97	
Serfin	Mar-92	14.0%	Dec-93	10.6%	Dec-94	13.1%	Dec-98	13.6%	Sep-99	13.4%
Union	Dec-91	1.6%	Dec-93	3.4%	Jun-94	3.1%	Dec-94		Dec-94	
Centro						1.8%				1.2%
Banpais						2.3%				1.3%
Banorte						<b>3.2%</b>				3.9%
						7.39%				6.40%

Centro and Banpais were acquired by Banorte during 1997, but are not yet integrated to Banorte.

\*MS= Market Share (measured in assets).

Source: Mexico’s National Commission of Banking and Securities’ Statistical Bulletins.

(P1 = Reprivatization; P2 = NAFTA, P3 = Exchange rate crisis, P4 = Complete liberalization).

Table 4  
Market share of newly established (new) banks per period

Bank Name	Entry date	MS	End P1	MS	End P2	MS	End P3	Last report	MS	Mar-04 last report	MS
Afirme	Mar-95	0.02%					Dec-98		0.49%	Mar-04	0.49%
Alianza	Jun-96	0.04%					Mar-97		0.02%	Mar-97	
Anahuac	Jun-95	0.03%					Sep-96		0.15%	Sep-96	
Azteca	Dec-02	0.12%								Mar-04	0.66%
Banregio	Sep-94	0.03%			Dec-94	0.04%	Dec-98		0.15%	Mar-04	0.29%
Bansi	Dec-95	0.02%					Dec-98		0.09%	Mar-04	0.12%
Capital	Mar-94	0.04%			Dec-94	0.19%	Mar-96		0.31%	Mar-96	
Del Bajío	Dec-94	0.02%			Dec-94	0.02%	Dec-98		0.23%	Mar-04	0.74%
Del Sureste	Sep-94	0.39%			Dec-94	0.17%	Mar-96		0.13%	Mar-96	
Inbursa	Mar-94	0.47%			Dec-94	0.87%	Dec-98		2.91%	Mar-04	3.61%
Industrial	Mar-94	0.06%			Dec-94	0.25%	Sep-97		0.26%	Sep-97	
Interacciones	Dec-93	0.05%	Dec-93	0.05%	Dec-94	0.23%	Dec-98		0.94%	Mar-04	0.33%
Interestatal	Dec-93	0.04%	Dec-93	0.04%	Dec-94	0.09%	Jun-95		0.14%	Jun-95	
Invex	Jun-94	0.06%			Dec-94	0.04%	Dec-98		0.17%	Mar-04	0.25%
Ixe	Dec-94	0.02%			Dec-94	0.02%	Dec-98		0.31%	Mar-04	0.55%
Mífel	Jun-94	0.02%			Dec-94	0.04%	Dec-98		0.23%	Mar-04	0.25%
Pronorte	Mar-94	0.02%			Dec-94	0.03%	Jun-96		0.03%	Jun-96	
Quadrum	Dec-94	0.03%			Dec-94	0.03%	Dec-98		0.20%	Sep-01	0.14%
Ve por más	Sep-03	0.02%								Mar-04	0.02%

\*MS = Market Share (measured in assets).

Source: Mexico's National Commission of Banking and Securities' Statistical Bulletins.

(P1 = Reprivatization; P2 = NAFTA, P3 = Exchange Rate Crisis, P4 = Complete Liberalization).

established domestic banks during the same period. By comparing these Tables 2–4, the size difference between the old and new banks becomes clear.

## 5. Empirical results

To test Hypotheses 1 through 3, maximum likelihood (ML) continuous-time survival methods were utilized. In treating this sample as panel data, the robust specification was included to avoid heteroskedasticity problems. In other words, the robust specification justifies the conventional variance estimate assumption (the independence of observations). Table 5 presents the summary statistics and correlations of the variables included in the hazard models.

As shown in the measures section, we used two models to test our hypotheses. Model 1 uses the natural logarithm of assets and the Banker's Index (Zaheer and Mosakowski, 1997) as control variables, whereas Model 2 uses the dummy variable New Bank as a control. As it can be easily observed in Tables 2 through 4, the old banks were much larger than the new ones. Also, none of the new banks were ever included in the Banker's Top-1000. Thus, we believe the 'New Bank' variable provides for parsimony. Further, Model 1 uses policy changes to code liberalization (see Appendix A), while Model 2 uses the number of foreign banks (in the Mexican banking industry) as a proxy for liberalization. If nothing else, we believe that if the results of this alternative model (Model 2) are consistent with those from Model 1, it would strengthen the robustness of the results.

Table 5  
Descriptive statistics and correlations

Variable	Mean	S.D.	1	2	3	4	5	6	7	8
1 Exit	0.03	0.16	1							
2 Lnassets	9.21	1.79	0.02	1						
3 Bankers_zm index	3.66	0.55	0.02	-0.73*	1					
4 New_bank	0.51	0.50	-0.06	-0.73*	0.62*	1				
5 Liberalization	0.55	0.50	0.080*	0.00	-0.03	0.26*	1			
6 NumForeign Banks	11.85	8.12	0.42	-0.01	0.05	0.47*	0.74*	1		
7 IntLdiversification	0.45	0.79	-0.06	0.58*	-0.54*	-0.31*	0.02	0.04	1	
8 Acq_cumulative	0.16	0.51	0.02	0.29*	0.24*	-0.19*	0.11*	0.25*	0.25*	1

Note:  $N=872$ ,  $p<0.05^*$ .



Table 6

Dependent variable = exit

	Model 1					Model 2				
	Weibull Distribution Model 1 (LnAssets & BankerZMIndex as control variables; liberalization as policy change)					Weibull Distribution Model 2 (New bank as control variable & number foreign banks as proxy for liberalization)				
	Hazard Ratio	S.E.	Coeff	S.E.	Z	Hazard Ratio	S.E.	Coeff	S.E.	Z
LN Assets	1.52	0.37	0.42	0.24	1.70†					
Bankers_ZM index	2.10	1.74	0.74	0.82	0.90					
New Bank						0.19	0.10	-1.66	0.52	-3.19**
Liberalization	3.18	1.66	1.16	0.52	2.22*					
No Foreign Banks						1.07	0.05	0.07	0.05	1.45
Intl Diversification	0.35	0.13	-1.03	0.37	-2.77**	0.34	0.11	-1.08	0.33	-3.28**
Acq_Cumulative	1.08	0.51	0.08	0.47	-0.18	0.77	0.29	-0.25	0.37	-0.69
Intercept			-11.17	4.91	-2.27*			-4.39	0.85	-5.15***
$1/\ln-p$			0.12		0.61			0.26		0.88
$P$			1.13	0.22				1.29	0.38	
$N =$	872					872				
Wald $\chi^2 =$	13.70					18.53				
Prob> $\chi^2 =$	0.017*					0.001**				
Number of subjects =	37					37				
Number of failures	24					24				

Notes: Two-tailed z-statistics where: † $p < 0.10$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < .001$ .

First, we ran the Weibull distribution method for both models (see Table 6). This method displays the Weibull distribution shape parameter  $p$ , which has a value of 1.13 for Model 1 and 1.29 for Model 2, respectively, and is not statistically significant. This means the parameter  $p$  is no different from 1 in either Model ( $p < 0.54$ ;  $p < 0.38$ ). A  $p$  value of 1 suggests the hazard is constant. This means that these domestic banks are no more or less likely to fail late in the period of observation than they were at its start. Thus, the proper distribution to use is the exponential distribution (Cleves et al., 2004; Hamilton, 1998).

Table 7

Dependent variable = exit

	Model 1					Model 2				
	Exponential Distribution Model 1 (LnAssets & BankerZMIndex as control variables; liberalization as policy change)					Exponential Distribution Model 2 (New bank as control variable & number foreign banks as proxy for liberalization)				
	Hazard Ratio	S.E.	Coeff	S.E.	Z	Hazard Ratio	S.E.	Coeff	S.E.	Z
LN Assets	1.56	0.35	0.44	0.22	1.96†					
Bankers_ZM index	2.21	1.80	0.79	0.82	0.97					
New Bank						-0.17	0.09	-1.74	0.52	-3.38**
Liberalization	3.45	1.64	1.24	0.47	2.61**					
No Foreign Banks						1.09	0.03	0.09	0.26	3.43**
Intl Diversification	0.35	0.13	-1.04	0.36	-2.85**	0.34	0.11	-1.07	0.33	-3.28**
Acq_Cumulative	1.12	0.52	0.12	0.46	0.26	0.81	0.29	-0.20	0.35	-0.58
Intercept			-11.23	4.79	-2.34*			-3.66	0.38	-9.74***
$1/\ln-p$										
$P$										
$N =$	872					872				
Wald $\chi^2 =$	17.90					24.39				
Prob> $\chi^2 =$	0.003**					0.0001****				
Number of subjects	37					37				
Number of failures	24					24				

Notes: Two-tailed z-statistics where: † $p < 0.10$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < .001$ .

Table 8

Domestic banks database (ex-post analysis comparison: time-series linear model random effects, Cox hazard model, logistic regression) dependent variables: ROA, exit, and exit, respectively

	Time-series		Cox		Logistic	
	Coeff.	P > z	Hazard Ratio	P>z	Hazard ratio	P>z
Control variables						
LN Assets	-0.90	0.08†	1.52	0.08†	1.65	0.05*
Bankers_ZM index	-0.47	0.46	1.63	0.45	2.40	0.31
Liberalization	-1.04	0.03*	4.62	0.04*	3.83	0.01*
Independent variables						
Intl Diversification	1.70	0.03*	0.37	0.01**	0.34	0.01**
Acq_Cumulative	-0.18	0.72	1.07	0.91	1.24	0.69

Note: Two-tailed z-statistics where: † $p < 0.10$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < .001$ .

Consistent with these explanations, we ran the exponential distribution for both Model 1 and Model 2 (Table 7) with the following results. Hypothesis 1 predicts the existence of liability of localness. According to Table 7, the existence of liberalization policies is negatively related to firm survival. Model 1 shows liberalization with a hazard ratio of 3.45 ( $p < 0.01$ ). This suggests the abrupt change in the “rules of game” caused by liberalization policies increased the likelihood of exiting the industry by a local bank by 245% (i.e.,  $100 * (3.45 - 1.00) = 245\%$ ). For Model 2, the Number of Foreign Banks variable, which is a proxy for liberalization, has a hazard ratio of 1.09 ( $p < 0.01$ ). In turn, the ‘number of foreign banks’ variable indicates that each foreign bank entering the industry increases the likelihood of exiting the industry by a local bank by 9% (i.e.,  $100 * (1.09 - 1.00) = 9\%$ ). These results strongly support Hypothesis 1.

Hypothesis 2 suggests that international diversification lessens LOL. International diversification is a count variable (range 0–2), where 0 equals no international diversification by the focal bank or any of its affiliates. A count of 1 means that a bank, or any of its affiliates, has at least one subsidiary in any Latin-American country *or* in any developed market country. A count of 2 means that a bank, or any of its affiliates, has at least one subsidiary in any Latin-American country *and* in any developed market country. According to Table 7 international diversification is statistically significant. The hazard ratio is 0.35 ( $p < 0.01$ ) for Model 1 and 0.34 ( $p < 0.01$ ) for Model 2. These results suggest that for every unit of international diversification increased (from 0–1, and from 1–2), the likelihood of exiting the industry decreases by roughly 65% (i.e.,  $100 * (0.35 - 1.00) = -65\%$ ). The results strongly support Hypothesis 2.

Hypothesis 3 suggests there is a positive relationship between a local firm acquisition activity and its likelihood of survival. The acquisition variable is a count (cumulative) variable that reflects the number of banks acquired by a domestic bank within the Mexican banking industry (ranging from 0–3). Table 7 shows the acquisition variable is not significant. However, it is somewhat troublesome to find that this variable posts different signs in Model 1 (+) and Model 2 (-). Nonetheless, we believe the results from Model 2 are more robust because of the lower correlations among their variables (although both Models have good VIF numbers). Also, the model is more parsimonious (it uses only one control variable, which is highly significant) and has more explanatory power (Model 1,  $p < 0.01$ ; Model 2,  $p < 0.001$ ). While these results clearly show that all domestic banks were affected by liberalization (thus showing the existence of LOL), the study also explains why some domestic banks were more successful than other domestic banks.

### 5.1. Ex-post analysis of results

To confirm the robustness of the results, we conducted several additional tests using three alternative statistical models. The first statistical model is a cross section time-series linear model using random (within) regression estimators<sup>10</sup> (See Certo and Semadeni, 2006 for a good review on the use of these types of models). We did conduct the corresponding Hausman test (Thomas et al., forthcoming) and the random effects model was the appropriate one to use ( $P > \chi^2 = 0.8760$ ). The other two statistical methods are logistic regression and (Cox) partial likelihood survival analysis.<sup>11</sup> To conduct these tests the same database was utilized.

<sup>10</sup> Please note the cross sectional time-series linear model uses ROE as its dependent variable.

<sup>11</sup> Please note both the logistic regression and the partial likelihood survival analysis (Cox) use Exit (0, 1) as their dependent variable.

Table 8 compares the results obtained using cross section time-series linear model, logistic regression, and the Cox survival analysis. The results are similar to those presented in the main model (i.e., Table 7). In all three cases, namely: cross section time-series linear model, Cox hazard model and logistic regression the results are exactly the same. The coefficients and hazard ratios (respectively) are statistically significant for international diversification and not statistically significant for acquisitions. The robustness of the results further demonstrates their soundness.

## 6. Discussion

### 6.1. Contributions

One of the main contributions of the present study is to show that local firms in emerging economies face a new set of added costs, namely liability of localness. This is especially so when emerging economies undergone regulatory punctuations. Such major shifts in the competitive landscape completely change the rules of the game for local firms.

No other study, to our knowledge, had tested the effect on the survivability of the members of a local industry (e.g., Mexican banking industry) once liberalization policies have been in place. This is a different way of testing for this added cost of doing business in a home market, compared to that used by LOF scholars, who usually compare foreign versus local firms. Further, the results of Hypothesis 1 clearly demonstrate the existence of LOL.

Our study also contributes to the international business literature by finding support for Hypothesis 2, which states that international diversification lessens LOL and increases firm's survivability after a regulatory punctuation. IB scholars argue that MNEs have two main motivations to engage in international diversification: 1) exploiting their capabilities in international environments (Hymer, 1960/1976; Dunning, 1977), and 2) exploring or augmenting their knowledge base (Cantwell, 1989). For local firms facing a new business landscape, it is clear that the motivation is not to exploit their capabilities, but rather to learn how to compete under the new cognitive, normative, and regulatory structures or 'rules of the game'. The empirical evidence shows strong statistical support for these claims. Moreover, our results show that LOL can be lessened by international diversification.

By contrast, the arguments espoused for the advantages of acquisition strategies were not supported by our results. Burt (1983: 70) states that "the most direct strategy for eliminating a source of market constraint would be to purchase an establishment within the constraining sector." Pfeffer and Salancik (1978) suggest that horizontal acquisitions reduce commensalistic dependence by simultaneously reducing competition and increasing power. However, it is not clear what would the effect be for the firms operating in a particular industry (i.e., Mexican banking industry) if there are several acquisitions taking place, especially by foreign banks. Under this scenario, it might be possible that domestic banks receive only marginal benefits by acquiring one other bank. Perhaps the positive relationship between a domestic bank's acquisition activity and its likelihood of survival is only effective after more than one transaction. Also, it might be that local firms are not able to reduce the effect uncertainty (Milliken, 1987) generated by the regulatory punctuation. Hence, it seems acquisition strategies did not allow the buying firm to earn legitimacy any faster than firms not pursuing this strategy.

It is worth noting that studies about the negative effects of liberalization policies at the firm-level have been scarce. Thus, the present study contributes to the business and public policy literatures by addressing this gap. In so doing, we advanced the concept "liability of localness". Also, this research explains why, despite regulatory punctuations normally negative effects on domestic firms (LOL), there are some firms that manage to overcome these negative effects and experience positive outcomes. Specifically, we found that international diversification lessens LOL. Our finding contributes to the international diversification literature by illustrating that local firms were able to learn from their international experiences in developed markets, and to benefit by transferring that knowledge to their home country as a mechanism for coping with a regulatory punctuation at home.

We also see our work on liability of localness as also adding to the new "David versus Goliath" literature, comparing emerging market firms to developed country multinational enterprises. For example, Dawar and Frost (1999) examine the strategies that EMFs use when their domestic markets are penetrated by MNEs. The authors recommend that when the pressures to globalize are very strong, EMFs with strong firm-specific advantages should upgrade their resources so they can compete in global markets; EMFs with weak advantages should expand only into nearby emerging markets. Thomas et al. (2007) provide empirical support for this argument in their exploration of why EMFs choose to enter developed markets and which ones are likely to survive, arguing that organizational learning is critical for survival. Dawar and Frost (1999) argue that, where globalization pressures are weak, firms should either dodge or defend their

markets from the entering MNEs. The failure of foreign breweries to penetrate the local market in China is one example of a successful defender strategy (Heracleous, 2001). Our study has strong parallels to the dodging strategy, which Dawar and Frost (1999: 126) argue is very difficult to execute because it “requires a company to revamp major aspects of its strategy—and to do so before it’s swept away under the tide of foreign competition”.

Our study also highlights issues that raise other new questions for future research. For instance, liability of localness is not, and should not be, the same for all local firms. As Eden and Miller (2004: 196) argue, the main disadvantage of an international firm when going abroad is being a “stranger in a strange land.” However, this study shows that local firms, after facing abrupt discontinuities at home, can also feel as strangers in a strange land, even if it is their own home market. Thus, it would be interesting to explore if differences in liability of localness change with time. Does LOL necessarily decrease with time? Or, are there certain conditions under which LOL can be enhanced? Does LOL also affect developed market firms? Future researcher should strive to obtain answers to these questions.

## 6.2. Limitations

As with most studies, the present research has some limitations. First, the degree to which these results can be generalizable to the experience of other domestic firms operating in developed markets and other emerging markets needs to be considered. While emerging markets are not homogenous (Hoskisson et al., 2000), the regulatory punctuations (e.g., liberalization, privatization) faced by local firms have commonalities. For instance, several streams of literature (e.g., economics, political science, management) suggest that regulatory punctuations were widespread in the 1990s. Thus, we expect that our findings about the Mexican banking industry can be generalized to other emerging markets. For example, the present study may have useful implications for the banking industry in the People’s Republic of China, which is undergoing a similar regulatory punctuation involving deregulation, privatization and liberalization. Also, the Mexican banking experience may be generalizable to developed markets. For instance, the U.S. banking has also been affected by regulatory punctuations such as Financial Services Modernization Act of 1999, which removed the 1933 Glass–Steagall Act restrictions and created significant changes in the competitive landscape.

Second, focusing on only one industry, banking, is a possible limitation of our study. However, it is also worth noting that several international business studies on LOF have used financial institutions as the unit of analysis (e.g., Miller and Parkhe, 2002; Zaheer and Mosakowski, 1997). Moreover, regulatory punctuations in the 1980s and 1990s often took place at the industry level as government deregulated, privatized and liberalized industries that historically had been under strong government regulations, such as telecommunications, banking and public sector utilities. Nonetheless, we recommend that future researchers should investigate more industries, and look at other countries.

Another limitation of this study is the measurement of some of the variables. These difficulties were apparent in the use of a categorical variable (0–2) to measure international diversification for domestic banks. Although, more fine-grained measures would have been preferred, the availability (or lack) of archival sources made this task unattainable. It is also worth mentioning that conducting empirical research in emerging markets adds another degree of difficulty. However, we expect that our results would have been stronger had we attained even more-fine grained measures since variables tend to become more statistically significant when changed from a dummy variable to a categorical variable.

## 7. Conclusions

In the 1990s, emerging economies deregulated, privatized and liberalized their domestic markets, causing regulatory punctuations at home. Emerging economies also suffered from major foreign exchange crises, some self-imposed, others caused by contagion effects (e.g., the rapid spread of Thailand’s 1997 currency crisis throughout Asia and Latin America). These huge punctuations caused radical institutional changes for domestic firms in emerging economies. In this paper we have argued that, for emerging market firms, regulatory punctuations created a *liability of localness* at home, parallel to the well-known international business concept of liability of foreignness when firms go abroad. Whereas liability of foreignness comes from the differences caused by changing one’s geographic place from “here” to “there”; liability of localness comes from changing one’s point in time from “then (pre-shock)” to “now (post-shock)”. In both cases, firms incur additional costs dealing with these liabilities, and the firms that survive are those that develop the best coping strategies. We hope our initial exploration of the concept of liability of localness inspires other scholars to examine the costs incurred by firms of “being in a strange land”, whether caused by shifts in space (here versus there)



or shifts in time (then versus now), and the strategies—successful or not—that firms use to deal with their new competitive landscape.

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### Appendix A

This Appendix summarizes the regulatory punctuations affecting the Mexican banking industry since 1990.

#### 1. Protectionist Period

Reprivatization of the Mexican Banking Industry (1990–1992). In 1990, the Mexican Congress authorized the return of (domestic) private banks to conduct business in Mexico. As the authorization took place, Mexican President Salinas issued a document providing the basis for the sale of the 18 commercial banks owned by the government. Congruent with a protectionist policy, Gruben and Welch (1996) suggest that the high price-to-book ratios offered by the Mexican investors to buy the state-owned banks should be interpreted as a sign that Mexican investors expected the industry to remain uncompetitive.

Mexican Banking Industry Provisions for NAFTA (1994). The North American Free Trade Agreement (NAFTA) takes place January 1st, 1994. Mexico would grant permission to American and Canadian financial firms to operate in Mexico; these firms would face certain market share limitations. These limitations would be phased out until the year 2000. During the transition period, the maximum market share allowed for (all) the banking institutions from US and Canada would be gradually incremented from 8% to 15%. This period is a protectionist one because the government did not allow any single foreign institution to hold more than a 1.5% share of the market.

#### 2. Liberalization Period

Exchange Rate Crisis, FDI Restrictions Relaxed (1995). In December 20, 1994, the Mexican government implemented a 15% devaluation of the peso (Froot and McBrady, 1996; Maskooki, 2002). Applying this policy change marked the beginning of the worst economic recession of this country's history. In fact, American President Clinton had to approve an economic rescue packet for Mexico on January 11, 1995 as the Mexican GDP fell 7% in 1995 (Krueger and Tornell, 1999; Wilson et al., 2000). The crisis forced the Mexican authorities to carry out a radical revision to the country's banking law, which came into effect March 1995. This adjustment reduced the banking industry (market share) limitations imposed in the NAFTA's transition period. From this date on, each foreign bank could control up to 6% of the Mexican banking industry, and in total, all foreign banks combined could have up to 25% market share of the industry.

FDI Restrictions Canceled (1998). To avoid future costly financial rescue packages, the Mexican lawmakers passed four significant banking law modifications (12/14/1998). The first modification will allow for the creation of the Institute for the Protection of Bank Savings, which will oversee the establishment of a new deposit insurance program. Modifications two and three had to do with crisis support programs. And the last and more important modification, reads as follows: "Foreign investors will be allowed to hold a majority share in Mexican commercial banks, regardless of size. Under the prior law, foreign investors were not permitted to hold a majority share in banks that had a capital share in excess to 6% of the aggregate capital of the system. This restriction is eliminated in the new law."

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