

## **Market Liberalization and Insurance Firm Performance in Emerging Markets & Developing Countries**

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## **ABSTRACT**

Our objective in this paper is to explore the relationship between market liberalization and insurance firm performance in emerging markets and developing countries (EMDCs). Specifically, we seek to determine whether market liberalization has a positive impact on firm performance and whether there are performance differences between foreign and local insurance firms. These issues are examined using a moderated times series cross-sectional design with a sample of 196 companies (including wholly owned subsidiaries, foreign-local joint ventures and locally owned firms) across 16 EMDCs between 2000 and 2003. Results of the analysis suggest that host country liberalization is positively associated with firm profitability for all insurers - foreign and local - operating in a given host country. No significant profitability differences were found between foreign and locally owned firms, although U.S. owned subsidiaries were significantly less profitable than subsidiaries from any other country. Additionally, firms located in Latin America were significantly less profitable than those operating in Asia.

## INTRODUCTION

Researchers in international business are understandably concerned with identifying the factors and conditions that enhance firm performance in multinational business ventures. A large part of the research in this area has focused on foreign direct investment (FDI) performance, specifically whether foreign firms are at a competitive disadvantage vis-à-vis local firms and when and whether foreign firms outperform locals when competing abroad (Dunning, 1988b; Zaheer, 1995; Zaheer and Mosakowski, 1997). Much of the research to-date has focused on the experiences of firms operating in the 'Triad' markets, the United States, Western Europe and Japan (Wolf, 1975; Michel and Shaked, 1986; Daniels and Bracker, 1989; Li and Guisinger, 1991; 1992; Mitchell, Shaver and Yeung, 1993; 1994; Zaheer, 1995; Zaheer and Mosakowski, 1997; Rugman and Verbeke, 2004) but there has been little systematic analysis of the performance differences between foreign subsidiaries and local firms competing in emerging markets, particularly in the services sector of the economy such as the insurance industry.

This gap in the research is particularly notable given the profound changes in economic development strategy that have taken place throughout the developing world over the last two decades (Wells, 1998; Hoskisson, Eden, Lau and Wright, 2000). During this period, governments in emerging markets and developing countries (EMDCs) began privatizing state monopolies, deregulating industries and liberalizing markets by bringing down barriers to foreign entry. Throughout much of the 1980s, market liberalization efforts, defined as the reduction or elimination of tariff and nontariff barriers to trade, competition and market entry, initially concentrated on the trade in goods. Since the mid-1990s however, the World Trade Organization (WTO) has been pressing member nations – both developed and developing nations - to open their markets to foreign competition in financial and insurance services.

For their part, insurance industry associations in the U.S. are lobbying hard to have the U.S. trade representative push for greater liberalization in emerging markets (American Insurance Association, 2001). Insurers from the Triad view market liberalization as a potential boon to their bottom line. Managers of these firms believe that they can leverage their firms' ownership specific advantages and dominate the insurance markets in many EMDCs. While large multinational insurance companies with extensive industry experience are pushing to enter EMDCs, managers of smaller domestic firms may fear they do not have the technical know-how or financial resources to compete. The consumers of insurance services, however, favor liberalization as it might lead to reduced costs and increased quality and service (Knudsen, 2002). Despite the uncertainties for local insurers, governments in EMDCs are responding to the World Trade Organization's (WTO's) call for increased liberalization by moving toward greater openness toward foreign investment in the financial services sector.

While foreign insurers are optimistic about market liberalization, there is relatively little research examining the impact of market liberalization policies on firm performance and whether multinational insurers do indeed have higher performance than local firms (Dornbusch, 1992). The few empirical studies to address the question of market liberalization in insurance services have focused on national-level or industry-level effects rather than firm-level performance (Mattoo, Rathindran, Subramanian, 2001; Mattoo, 1999; Ma and Pope, 2003). Not only is there uncertainty regarding the firm-level effects of these reforms, but countries are also liberalizing at different rates and to different degrees suggesting that there may be significant performance differences across liberalizing nations. Additionally, each country has its own unique political and economic characteristics. EMDCs differ widely in terms of the degree of political risk and violence in the country and the extent to which contracts and property rights are enforced and

protected; factors which are thought to be necessary conditions for a thriving insurance industry (North, 1990; Delios and Henisz, 2003; Drury, 2000).

Our objectives in this paper are to explore the relationship between market liberalization and firm performance in insurance services and to determine whether there are performance differences between foreign and local insurance firms operating in EMDCs. Based on insights from the research on market liberalization and the international expansion of service firms (Dunning, 1988a; 1989; Reardon, Erramilli and Dsouza, 1996; Contractor, Kundu and Hsu, 2002; Vachani, 1997), we hypothesize that market liberalization will have a positive impact on firm performance, that foreign insurers will outperform local firms and that market liberalization will moderate the relationship between foreign insurance firms and firm profitability.

The relationships described above are tested using moderated times series cross-section regression analysis with a sample of 196 companies located in 16 EMDCs in Asia and Latin America. Sample firms include locally owned, foreign owned and foreign-local joint venture firms for the time period 2000 to 2003. Results of the moderated regression model indicate that market liberalization does indeed have a significant direct effect on firm profitability for all insurers - foreign and local - operating in the host country. No significant difference in profitability was found between foreign and local firms although U.S. owned subsidiaries had significantly lower profits than firms from other countries. Finally, foreign and local firms operating in Latin America were significantly less profitable than firms in Asia.

These findings have both theoretical and practical implications. Our analysis provides an opportunity to better understand the relationship between market liberalization and firm performance, how local firms are competing against their foreign counterparts and how extant theory may explain these experiences. More specifically, this analysis differs from other work

that has been done in this area in that prior studies have tended to compare firm survival rates rather than performance and have focused on the performance of the entire corporation rather than on the performance of the foreign subsidiary or joint venture (Li and Guisinger, 1991; 1992; Mitchell, Shaver and Yeung, 1993; 1994; Zaheer, 1995; Zaheer and Mosakowski, 1997). In addition, none of the prior empirical studies have specifically looked at the relationship between market liberalization and firm performance. Also, increasing evidence in the literature suggests that MNE subsidiaries frequently do not share the same characteristics as the MNE's headquarters (Birkenshaw and Morrison, 1995; Rugman and Verbeke, 2001). Foreign subsidiaries may not always be able to leverage the MNEs' advantages of scale and size (Oetzel, 2004) or reduce the subsidiaries' cost of being foreign (Zaheer, 1995). For these reasons, we believe that our focus on subsidiary level performance extends the research on MNEs and their subsidiaries, the research on the comparative performance of foreign and local firms, and studies analyzing the effects of host country policy – specifically market liberalization policies - on firm performance.

The remainder of the paper is organized as follows. First, we provide initial background on the insurance industry in EMDCs. We then review the relevant literature on market liberalization and its potential effect on firm performance. Based on these discussions, three hypotheses are then developed. Subsequent sections detail the research methodology employed, the sample, analytical methods and results. We conclude with a discussion of the findings, research limitations and the theoretical and managerial implications of the study.

## **INSURANCE INDUSTRY DYNAMICS**

Market liberalization of insurance services involves removing restrictions to foreign and domestic investment and allowing firms the freedom to set rates. In the process of liberalizing markets, governments generally set minimum capital requirements for insurers, introduce solvency margins and allow firms to engage in brokerage and perhaps reinsurance activities (Drury, 2000; Swiss Re, 2000). Liberalized markets may be partially (less than 100% equity ownership permitted) or completely open (100% foreign equity ownership allowed) to foreign competition although the WTO is pushing all member countries towards complete openness over the long-term (WTO, 2004). The sequence of steps involved in liberalizing the insurance market involves the removal of obligatory concessions to state-run reinsurers, freedom of cross-border business, acquisition of minority holdings in firms for joint ventures, acquisition of majority holdings and establishing local subsidiaries (Swiss Re, 2000). It is important to emphasize that each country falls somewhere along the 'liberalization continuum' and that even G-7 nations are not considered fully liberalized in this sector (Mattoo, 1999).

From the firms' perspective, the market opportunities promised by newly liberalizing markets are substantial given the low insurance coverage rates in most EMDCs (Drury, 2000). For example, in developed countries insurance sales normally average about 8% of GNP while in many emerging markets sales average 3% or less (see Table 1). In addition, in 2001 the Organization for Economic Cooperation and Development (OECD) estimated that 95% of the world's insurance business is done in OECD countries leaving large portions of the global market untapped. For these reasons, analysts expect that the significant market opportunities in these newly liberalized markets will lead foreign insurers to venture abroad.

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Insert Tables 1 and 2 about here  
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Between 1992 and 2001, the global insurance industry averaged annual growth rates around 5.9% for both life and non-life product lines although there was notable variation during this period with growth rates peaking at 22+% in 1993 (Swiss Re, 2000). A list of the top ten global property/casualty (PC) insurers, which accounted for roughly 40-45% of the total global PC insurance revenues in 2002, is shown in Table 2. As a percentage of total premiums written, the non-life portion of the business has declined from approximately 48% in 1992 to 40% in 2001.

Life and non-life (property/casualty) insurance products differ substantially in terms of their complexity and risk. Non-life insurance is inherently more complex to price and offer than life insurance and is subject to greater variability in returns. One reason for this is that the calculation of life expectancies is highly amenable to actuarial science making life insurance pricing more precise than the pricing of PC insurance products. Another reason is that life insurance claims are much easier to verify and process than PC claims and require less institutional support from the host country. Unlike life insurance, PC insurers often rely on the police to verify claims, investigate reported thefts or arson, and prosecute insurance fraud when necessary. Such institutional support may not always be reliable or available in many EMDCs. For these reasons, we expect property/casualty insurers to face greater business risk than life insurers.

Given the expected higher risk and difficulty of offering PC over life insurance, and the fact that some countries prohibit the sale of life insurance<sup>1</sup>, we are most concerned with the

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<sup>1</sup>Countries following Sharia law prohibit the sale of life insurance.

experiences of the PC insurers. Consequently, the focus of this analysis will be solely on PC insurers whose clients may include businesses, individuals or both. Next, we will review the literature on liberalization and develop several hypotheses about the effects that market liberalization policies may have on foreign and local insurance firms operating in EMDCs.

## **THEORY AND HYPOTHESES**

While the effects of privatization and deregulation on firm strategy and performance have received the bulk of the attention in the international business research (Haveman, 1992; Doh, 2000; Uhlenbruck and De Castro, 2000; Uhlenbruck, Meyer and Hitt, 2003; Doh, Teegen and Mudambi, 2004), relatively little has been said about the effect of market liberalization on MNEs, particularly in financial and insurance services. Unlike privatization and deregulation, market liberalization policies tend to be broader in nature and refer to the process of opening up domestic markets to foreign competition (Teschke and Sahar, 1994). Market liberalization also tends to occur incrementally over several policy changes rather than in one defining moment. In financial and insurance services, for example, many countries – including the United States - maintain restrictions on both cross-border exchanges and FDI, despite the fact that the country is considered to be open to foreign competition (WTO, 1998).

Prior research on the effects of liberalizing trade in goods suggests that liberalization has a positive long-term effect on economic growth in adopting countries (Dollar, 1992; Ben-David, 1993; Sachs and Warner, 1997). Trade liberalization generates economic growth by improving resource allocation, increasing host country access to technology, allowing firms to take advantage of economies of scale and scope and increasing domestic competition (Dornbusch,

1992:73-74). The growth effect from liberalization can be substantial in EMDCs where economic inefficiencies, an absence of technology and weak competition are often the norm.

Given the inefficiencies that often characterize EMDCs, it is not surprising that foreign investors from developed countries are often eager to enter newly liberalized markets and leverage their comparative advantages in these areas (Caves, 1974; 1996; Lecraw, 1991; Brewer, 1993; Gundlach and Nunnenkamp, 1998). In one of the few studies on the effects of insurance services liberalization and the participation of MNEs, researchers found that liberalizing markets attracted greater foreign direct investment (Ma and Pope, 2003). This increased FDI can generate positive employment and economic spillover effects for the domestic economy.

Although prior research on liberalization has focused on the trade in goods, several recent studies suggest that similar growth patterns hold for the liberalization of services (Mattoo, 1999; Mattoo, Rathindran and Subramanian, 2001). Recognizing that services liberalization differs from trade in goods in several respects, notably that services must be locally produced rather than imported, Mattoo, et al (2001) examined how growth effects for service liberalization might differ from liberalizing trade in goods. The authors found that the liberalization of services does indeed increase economic growth in liberalizing sectors and that this growth is attributable to increased FDI and domestic competition (Mattoo et al, 2001). Certainly this study has shed light on the national level economic effects of liberalizing services. Still, relatively little is known about the firm-level performance effects of such policies.

Although there is little research examining the effect of liberalization on insurance firm performance, past studies have theoretically argued and empirically demonstrated that host country policies can impact firm strategy and performance (De Castro and Uhlenbruck, 1997; Chaudhry and Walsh, 1995; Henisz, 2000; 2002; Murtha and Lenway, 1994; Lenway and

Murtha, 1994). In their study of the privatization of formerly state-owned enterprises, De Castro and Uhlenbruck (1997) found that differences with respect to the characteristics of privatization and government policies translate into differences in firm strategy in former communist, less-developed and developed countries. Others have argued that host countries' policies toward intellectual property rights protection has a direct effect on firm performance in the pharmaceutical and software industries (Chaudhry and Walsh, 1995). Given that host country policies have been shown to impact firm strategy and performance, and that industry-level studies suggest that market liberalization will have a positive effect on insurance firms, we expect that liberalization will have a positive effect on firm performance in liberalizing EMDCs. Assuming this is the case, we hypothesize that:

**Hypothesis 1:** Market liberalization is positively related to firm performance in emerging markets and developing countries.

### **Who Benefits The Most From Service Liberalization, Foreign or Local Insurers?**

While foreign and local firms may both benefit from liberalization policies, research suggests that one group may benefit more than the other. Liberalization policies effectively create new markets for multinational insurers from developed countries and provide MNEs with opportunities to leverage their ownership, or firm-specific advantages (FSAs) (Dunning, 1988a; Rugman and Verbeke, 2001; Ma and Pope, 2003; Burgess, 1995). Research on service firms doing business abroad suggests that important ownership advantages often include access to capital, access to markets, superior technology and managerial skills and experience operating in similar markets (Lall, 1980; Dunning, 1988a: 273; Vachani, 1997). It is unclear, however, whether foreign firm ownership advantages such as those detailed above will outweigh the potential advantages of locally owned firms, particularly since domestic firms are expected to

benefit from increased access to capital, technology and other resources. Despite the possibility that MNEs may have greater (or more valuable) internal resources and capabilities than domestic firms, it is possible that knowledge of the local market, access to market information, personal connections, and the ability to adapt to the often underdeveloped institutional environment in EMDCs may be more important to long-term business success. Local firms may have an advantage in this respect, at least in the short-term, if detailed market and consumer information are critical to firm performance (Boddewyn, Halbrich and Perry, 1986; Dunning, 1998; Contractor et al, 2002).

Despite the fact that liberalization may generate some benefits for all firms, and that local firms may have an advantage in terms of their personal connections and knowledge of the local market, there are certain factors that may favor foreign firms (Caves, 1974; Vachani, 1997). For example, pre-liberalization local insurers are generally faced with much less competition and therefore less need to constantly improve organizational efficiency and customer satisfaction. As a result, it is possible that local insurers will not be able to match the quality and price of foreign competitors. In fact, one of the obstacles to growth in the domestic insurance sector in Latin America has been low consumer confidence in the industry and its practices. For instance, during periods of high inflation Latin American insurers had a history of withholding claims payments in order to invest the money short-term for their own financial gain (Drury, 2000). In addition, many insurers in EMDCs lack the appropriate management skills and fail to utilize actuarial tables to set premiums. Not surprisingly, many such firms have gone bankrupt leaving consumers 'holding the bag'. Thus, consumer confidence that insurers will still be in business and willing to pay claims if they arise tends to be low throughout much of Latin America. Although the lack of consumer confidence in domestic insurers may hurt all firms in the

industry, it is also possible that foreign insurers from developed countries may benefit from the poor reputation of local competitors.

Another factor affecting insurance firms is that the industry is currently experiencing decreasing margins (Drury, 2000). Insurers in Latin America, for example, are investing in information technology (IT) to improve service and efficiency and lower costs. Firms are also using innovative strategies for reaching consumers such as through automated teller machines (ATMs) (Drury, 2000) or through church groups. MNEs entering newly liberalized markets often bring new technologies, experience working in different business environments, and substantial capital resources - resources that are sufficient to establish a solid market position (Vachani, 1997). Foreign firms also tend to lure away local executive talent with attractive salaries depleting managerial resources from existing companies and raising the wage costs of local firms (Vachani, 1997: 175).

To the extent that MNEs are able to leverage their firm-specific advantages – such as access to capital and technology, experience advantages associated with operating in highly competitive environments in their international operations, etc. - and that these advantages outweigh any disadvantages they may have in terms of knowledge of the local market, we would expect that foreign firms would experience higher firm performance vis-à-vis their local competition in EMDCs. While an examination of the specific source of performance advantage for either group of firms is outside the scope of this study, the preponderance of theoretical and empirical evidence appears to support the argument that foreign insurers will outperform locals. Thus, we suggest that:

**Hypothesis 2:** Foreign owned insurance firms will outperform locally owned insurance firms in emerging markets and developing countries.

Assuming that foreign owned firms have a competitive advantage over locally owned firms, we would also expect that the more liberalized the market, the greater this advantage will be. In a comparative study of the experiences of Turkey, South Korea and Mexico, Dornbusch (1992:79) concluded that, “liberalized trade [in goods] has so fundamentally shaken up the productive structure [in these three countries] that more liberal trade is invariably credited with a good share of the performance.” Mattoo, Rathindran and Subramanian (2001:3) also find that market openness in services influences long run growth performance and that countries with fully open telecom and financial service sectors grow up to 1.5 percentage points faster than other countries. Much of the growth in these sectors is driven by foreign owned firms.

Another reason that a substantial amount of the benefits associated with greater levels of liberalization may accrue to foreign firms is that although liberalizing nations now permit foreign participation in the insurance sector, many liberalizing countries continue to place restrictions on factors that limit the MNE’s ability to fully leverage its resources and capabilities across borders. These restrictions may include: 1) limits on the percent of foreign ownership allowed, 2) limits on the ability of insurers to invest premiums abroad, and 3) restrictions on certain cross border transactions that limit the MNEs ability to achieve economies of scale and scope. As markets become more open, foreign firms would presumably benefit the most, at least in the short-term. For the reasons noted above, we hypothesize that:

**Hypothesis 3:** The relationship between foreign ownership and firm performance will be positively moderated by market liberalization in the host country.

## DATA AND METHODS

### Sample Description and Data Sources

The sample for this study includes a cross-sectional time-series data set of 196 insurance firms operating in 16 different countries across Latin America and Asia. The sample was drawn from the population of property/casualty firms in the A.M. Best Life and Non-life Non-U.S. 2004 database. Best's insurance reports include quantitative and qualitative data on individual insurance companies in over 80 non-U.S. countries. The firms in the database may cater to individuals, businesses or both. Concerns about the comparability of life and property/casualty insurers also led us to restrict our study to property/casualty firms only. While all firms in the sample sell property/casualty insurance, some may also sell life and/or health insurance as well. In order to reduce the potential for confounding effects, we excluded firms from transition economies since researchers have noted that the experiences of firms in transition economies are not comparable to other developing and emerging market nations (De Castro and Uhlenbruck, 1997) and limited the sample to firms operating in Latin America and Asia. Thus, the initial set of firms from which we drew our sample consisted of 269 property/casualty insurers operating in 20 countries across Latin America and Asia. Reports for sixty-four of these firms were missing large portions of key performance data across some or all of the years of interest (2000 to 2003). These companies were excluded from the sample. In addition, the independent variable measures were not available for Taiwan and Trinidad and Tobago (9 firms total) so firms from these countries were also excluded. Table 3A shows that the final sample was almost evenly divided between firms located in Latin America (51.53%) and Asia (48.47%). Latin American host countries in the sample include Brazil (51), Chile (17), Dominican Republic (1), Ecuador (15), Jamaica (2), Mexico (6), Panama (3), Peru (1) and Uruguay (5). The Asian countries

include Hong Kong (9), Indonesia (7), Malaysia (27), Philippines (9), Singapore (23), South Korea (3) and Thailand (17).

Macroeconomic data for population and gross domestic product were collected from the World Bank Development Indicators database (population figures and gross domestic product). Measures for market liberalization (Mattoo, 1999), the rule of law and political instability (from Kaufmann, Kraay and Mastruzzi, 2003) were taken from research conducted at the World Bank.

## Measures

**Dependent variable.** The dependent variable used to measure firm-level performance was adjusted firm profits. The variable was measured as profits before taxes divided by total firm assets (see Table 3B). This measure was chosen because data on firm profitability was available for a significantly larger sample of firms and over a longer time period than any alternative measure. Basics statistics for the independent variables and the correlation matrix can be found in Tables 3A, 3B and 3C.

**Independent variables.** The independent variables and their measures used in this study are *type of firm* and *the degree of market liberalization*. *Type of firm* was measured using two dummy variables to differentiate between wholly owned subsidiaries, joint venture and locally owned firms; the latter of which served as the reference group. To capture the *degree of market liberalization in the host country* we used an index of market liberalization, specifically for non-life insurance firms, that was developed at the World Bank (Mattoo, 1999). This liberalization index is the modal weighted average of the value of the most restrictive trade measure applied by a country to each mode in the sector. The mode refers to cross-border trade, consumption abroad and commercial presence abroad. The weight of each is based on its prevalence in practice. In

the case of non-life insurance services, the weighting is 0.20, 0.05 and 0.75 respectively, indicating that three-quarters of all international insurance transactions occur through establishment trade which includes consumer transactions with the foreign insurer located in the country. Researchers then determined what the most restrictive trade measure was that each country adopted and assigned each a value (Mattoo, 1999). The more restrictive the measure, the smaller the value assigned. Using this system, the developed countries averaged 0.697 on the non-life insurance index with the United States rating 0.69. Latin American countries averaged 0.31 and Asia averaged 0.46. In terms of sample firms, the Latin American countries averaged .27 with Ecuador being the most restrictive (0.08) and Panama (0.75) the least. As for Asia, the countries averaged a liberalization rating of .39 with Singapore (0.10) being the most restrictive and Indonesia (0.75) the least (see Table 3B).

**Control variables.** Several control variables were used in the analysis. First, it was important to control for market size and gross domestic product since the sample includes countries with substantially different populations and income levels. Thus the *log of total host country population* and the *log of gross domestic product (GDP)* were used. Data for both came from the World Development Indicators (World Bank) and includes data for 2000 through 2003. Second, a dummy variable indicating whether the firm was *operating in Latin America or Asia* was used (“1” indicated Latin America and “0” Asia). Another control variable included in the models was *product scope*. Firms offering non-life insurance only were coded “0” and firms offering both life and non-life insurance were coded “1.” Approximately 46% of the 196 firms in the sample offered both life and non-life products (see Table 3A). This variable was included because empirical findings and industry analysts have suggested that product diversity may be negatively related to firm performance (Katrissen and Scordis, 1998). Since each country has its

own unique political and economic characteristics, control variables for political stability and rule of law were also included in the analysis. EMDCs differ widely in terms of the degree of political turmoil and violence in the country and the extent to which contracts and property rights are enforced and protected; factors which are thought to be necessary conditions for a thriving insurance industry (Drury, 2000). Measures for the *rule of law* and *political stability* in the host country were obtained from World Bank research on governance (Kaufmann et al, 2003; Globerman and Shapiro, 2003; Rao, Pearce and Xin, 2005). The authors of this report based their measure of *rule of law* on perceptions of the incidence of crime, the effectiveness and predictability of the judiciary, and the enforceability of contracts (Kaufmann et al, 2003:4). Taken together, the authors argue that these indicators measure the “success of a society in developing an environment in which fair and predictable rules form the basis for economic and social interactions, and importantly, the extent to which property rights are protected” (Kaufmann et al (2003:4). In terms of interpreting the measure, higher values suggest that individuals have greater confidence in the rules of society. The authors of this report also developed a measure of ‘political stability and absence of violence.’ This indicator, which is based on the perceived likelihood that the government in power will be destabilized or overthrown by possibly unconstitutional and/or violent means including domestic violence and terrorism, was used to assess *political instability* in the host country. With this indicator, higher values indicate greater stability. Both measures are based on a scale between -2.5 and +2.5 (see Table 3B for summary statistics). Finally, *MNE nationality* was measured using three different dummy variables to identify wholly owned subsidiaries from Western Europe, the United States, Japan, or “other” (the reference group) home countries (the total number of “other”<sup>2</sup> countries was 7). This measure was included to control for the possibility that MNE subsidiaries from the

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<sup>2</sup>These other countries included Australia, Brazil, India, Indonesia, Malaysia, Singapore and South Korea.

Triad markets may have an advantage over other MNE subsidiaries in terms of experience and other firm-specific resources.

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Insert Tables 3A, 3B and 3C about here  
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**Analytical Methods.** We conducted several regression diagnostic tests in order to determine the appropriate analytical technique for estimating the model. The Breusch-Pagan (B-P) (Breusch and Pagan, 1979) test, which determines whether models are characterized by heteroskedasticity, was employed to determine whether ordinary least squares (OLS) or time series-cross section regression analysis was the most appropriate method for estimating the model. Results of the B-P test were significant indicating that feasible generalized least squares (FGLS) time series cross section analysis was the appropriate method. Since several independent variables in the dataset are time invariant and thus not supported by fixed effects methods, a random effects model was adopted (Hsiao, 1986). Finally, given the moderated relationship suggested in Hypothesis 3 a hierarchical moderated regression model was used to understand the variation in the firm performance variable, adjusted firm-level profits before taxes between 2000 and 2003 (Cohen and Cohen, 1983).<sup>3</sup>

## RESULTS

The results of the hierarchical moderated time series cross section analysis are presented in Table 4. The total number of observations for each model was 784. Examination of the variance inflation factor (VIF) test revealed that all VIF values were below 10 indicating that

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<sup>3</sup> Despite the prima facie evidence supporting random effects, we also employed the Hausman test to determine whether there is significant correlation between the unobserved firm-specific random effects and the regressors. If there is no such correlation, then the random effects model may a better fit to the data. If there is such a correlation, the random effects model would be inconsistently estimated and the fixed effects model would be the model of choice (Greene, 2003). Results of the Hausman test indicated that the random effects model was indeed the most

multicollinearity is not a serious problem in the data (Belsey, Kuh and Welsch, 1980). Results for Model 1 indicate that the model is significant (Wald  $\chi^2$ ; 0.0000>61.52) with an overall variance explained of 15.34% ( $R^2=.1534$ ). Model 2, which includes the interactions terms, is also significant (Wald  $\chi^2$ ; 0.0000>64.58) with an overall variance explained of 16.05 ( $R^2=.1605$ ). The change in  $R^2$  between Models 1 and 2 is statistically significant (F-test=3.25;  $p<.05$ ) and amounts to an increased variance explained of 0.71% (+.0071). The full model (Model 2) was used to test the three hypothesized relationships.

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Insert Table 4 about here  
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Results from the full model, Model 2, support Hypothesis 1 that market liberalization has a positive and direct effect on firm performance; that is for all firms operating in a given host country, whether foreign or local (.1409;  $p=.000$ ). Hypothesis 2, which suggested that foreign owned insurers would outperform locally owned firms, was not supported. Moreover, analyzing subsidiaries by home country nationality revealed that wholly owned subsidiaries from U.S. MNEs had significantly lower profits than wholly owned subsidiaries from any other nation (-.079;  $p=.004$ ).

Regarding Hypothesis 3, neither of the interaction terms (wholly owned subsidiary\*market liberalization) was significantly correlated with adjusted firm profits. This suggests that market liberalization does not moderate the relationship between foreign ownership and firm performance. In terms of the control variables, results show that insurance firms located in Latin America have significantly lower profits than firms in Asia (-.0289;  $p=.007$ ). Firm product diversity, population, GDP, political stability and rule of law in the host country,

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appropriate alternative.

were not found to be significantly correlated with firm profitability. The results are discussed in more detail in the following section.

## **DISCUSSION**

Results of this study provide initial insights into the gap in the research on the effects of market liberalization policies on firm performance. We find that market liberalization is positively associated with higher firm profitability for all firms operating in a given country, regardless of mode of entry or whether the firm is foreign or local. Although a longitudinal study is necessary to draw definitive conclusions, this study also offers modest reassurance to local firms in liberalizing nations. At least so far, liberalization policies seem to have a positive impact on foreign and local firms alike.

One explanation for the finding that foreign and local firms benefit from liberalization may be that each group obtains access to important complementary resources. Local firms gain greater access to foreign capital and technology and foreign firms are able to tap into new markets (Burgess, 1995). At this point, since insurance penetration rates are low in many EMDCs there may be room for a variety of firms to operate successfully. Once these markets become more saturated, we would expect competition to intensify and industry consolidation to increase, events which will put downward pressure on profits. Currently, insurance penetration rates in EMDCs (see Table 1) are still very low indicating that there is continued room for growth in the industry.

Although market liberalization was shown to have a direct effect on firm profitability, there was no evidence that market liberalization moderated the relationship between wholly owned subsidiaries or joint ventures and firm profitability. Thus, higher levels of market

liberalization were not associated with higher foreign firm performance. Additionally, at this time foreign firms do not appear to have a performance advantage over their local competitors in EMDCs. No significant differences were found between wholly owned subsidiaries, foreign-local joint ventures and locally owned firms. In fact, wholly owned subsidiaries of U.S. MNEs had significantly lower profits than firms from other countries.

The findings regarding foreign versus local firm performance beg the question, why don't foreign firms outperform their local competitors? One possible explanation may be that MNEs' ownership-specific advantages are not sufficient to outweigh the costs of servicing an unfamiliar or distant market (Hirsch, 1976; Dunning, 1980; Zaheer, 1995; Zaheer and Mosakowski, 1997; Eden and Miller, 2004). For example, despite the possibility that MNEs may have greater internal resources and capabilities than local firms, it may be that knowledge of the local market, access to local market information, personal connections and adaptation to the often underdeveloped institutional environment in EMDCs may be more important to operating a profitable operation than other factors. Local firms may have an advantage in this respect, at least in the short-term, if detailed market and consumer information are critical to firm performance (Boddewyn et al, 1986; Dunning, 1998; Contractor et al, 2002). While data limitations prevented further investigation of this issue here, future studies examining the effect of the firm's length of time in the host country may indicate whether firm experience enables foreign firms to overcome the liabilities and costs of being foreign.<sup>4</sup>

Several factors may also diminish a foreign firm's ability to leverage its firm specific advantages. For example, contrary to theoretical predictions empirical research has not yielded strong support for achieving gains from economies of scale in the global insurance industry

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<sup>4</sup> The authors would like to thank Benjamin Gomes-Casseres for this suggestion.

(Katrishen and Scordis, 1998). Although researchers have suggested that services are characterized by a high degree of factor mobility and can generate significant scale effects (Mattoo et al, 2001), Katrishen and Scordis (1998:306) found that multinational insurers only achieve benefits from economies of scale up to a point (\$2.3 billion in premium sales), but large insurers (over \$4.9 billion in premium sales) do not achieve economies of scale. In the same study, the researchers also found that international diversity and product diversity were associated with diseconomies of scale. The authors conclude that the insurance industry is still highly differentiated by nation and product making global service standardization, and therefore economies of scale or scope, untenable. In fact, researchers have long recognized that one of the key differences between the service and manufacturing sectors is that there exist relatively greater demands on service firms to customize to the local market and to gain access to local market information (Boddewyn et al, 1986; Contractor et al, 2002). Perhaps another reason for Katrisen and Scordis' (1998) findings is that, as mentioned earlier, most countries place some restrictions on the cross-border trade of insurance. Thus, even if the potential for scale- and scope-economies exists, regulatory barriers prohibit the realization of such advantages.

Alternatively, the factors that confer competitive advantage in EMDCs may differ from those that confer advantage in developed economies like the Triad. Superior information technology systems may facilitate product and service delivery in developed countries but not in EMDCs. In developed economies, consumers and businesses alike have access to the infrastructure that supports advanced technology. In many EMDCs, however, consumers may not have access to computer-based products and service delivery systems. The types of insurance products desired by consumers may also differ across markets. Additionally, domestic

insurers in EMDCs may be better at pricing their services to the market and attracting a broader segment of the local market than are MNEs.

Another reason that MNEs are not outperforming local firms may be that the type of MNEs that enter EMDCs may differ from those that choose to concentrate on the Triad markets. For example, although Table 2 shows that four out of the top 10 global insurers are from the U.S., the U.S. subsidiaries in this sample are significantly less profitable than subsidiaries from other countries. It appears that although U.S. firms may be highly competitive in developed country contexts, they are at a competitive disadvantage relative to local firms and multinationals from other developed countries when operating in emerging markets and developing countries.

Along the same lines, in an analysis of how host government entry restrictions affect multinational enterprises' market entry and ownership decisions, Gomes-Casseres (1990) found that smaller firms were more likely to enter restricted, or somewhat restricted, markets than larger firms. Although the insurance markets in our sample are moving toward greater levels of liberalization rather than more restriction, certainly the foreign firms in our sample are smaller, on average, than the local firms. Local insurers averaged total assets of \$90.5 million while joint ventures averaged \$36.7 million and wholly owned subsidiaries \$6.36 million. At these asset levels, firm size can still be an advantage since, according to Katrisen and Scordis (1998), size does not create diseconomies of scale and scope until firms reach \$2.3 billion in annual sales. Thus, the fact that foreign firms are not outperforming locals may be partly a function of firm size rather than firm resources or capabilities.

Whether or not foreign firms suffer from a liability of foreignness, lack of experience, or are simply smaller in size requires further investigation. Certainly, the sale of insurance services requires a greater level of individualized service and personal attention than does the sale of

physical goods. Consumers must trust the quality and reliability of a service firm before making a purchase since it is often difficult or impossible to ‘return’ a service. Service sector firms may therefore incur higher learning and adaptation costs in their international ventures than firms in other sectors. Additionally, recent articles in the popular press and anecdotal reports from Central American consumers suggest that some U.S. insurers may have a poor record of paying claims (Starkman, 2005). This may partially explain the poor performance of U.S. insurers in this study.

Regarding economic development in the host country and its impact on firm performance, there was no evidence that either gross domestic product or population in the host country had a direct effect on firm profitability. Given that low-income levels in EMDCs are often considered barriers for foreign insurers since potential consumers often have little disposable income for the purchase of insurance products (Drury, 2000), this finding is somewhat surprising. Of course, foreign insurers operating in countries with a lower GDP may be following their corporate clients rather than catering to the local market. Demand for insurance services may also be greater in countries with higher operating risks. Future research in this area may help determine how the aggregate development of an economy impacts the adoption of insurance sector reforms and total sales in the industry.

In terms of location effects, results show that insurance firms located in Latin America had significantly lower profits than insurers located in Asia. A study comparing the different liberalization experiences of Asian and Latin American countries supports this finding and offers one explanation for this result. Researchers found that in comparison to countries in Latin America, Asian countries have tended to take a gradual approach to trade liberalization (Agosin and French-Davis, 1995). The researchers found that gradually liberalizing trade yielded greater

positive economic benefits over the long-term than the rapid approach to liberalization favored by many Latin American countries (Agosin and Ffrench-Davis, 1995: 46). Others have arrived at similar conclusions arguing that the sequencing of economic liberalization reforms matters (Edwards, 1997). Although the study by Agosin and Ffrench-Davis (1995) focused on the liberalization of trade in goods in the 1980s and early 1990s, their results suggest that the process of liberalization is important and may partially explain why there are significant differences in profitability between insurers operating in Latin America and Asia. The regions also differed in the extent to which they had liberalized. Asian countries in the sample averaged 0.39 on the non-life insurance liberalization index while Latin American countries averaged 0.27 (Mattoo, 1999).

Finally, contrary to expectations, neither political stability nor rule of law in the host country was related to firm performance. This is somewhat surprising since insurance firms require a strong regulatory environment and some degree of stability in order to foster a thriving industry. Insurers need to be certain that crimes such as arson and theft will be investigated and prosecuted in a fair and timely manner to minimize moral hazard problems. One explanation for this finding may be that the rule of law and overall regulatory environment plays a different role in EMDCs than they do in developed countries' economies. While it would seem that the importance of a fair and transparent legal environment would hold across all countries, other researchers have found that the legal environment does not affect firm behavior in EMDCs in the ways we might anticipate (Khanna and Yafeh, 2005). Likewise, Kobrin (1978) has noted that political instability is not equivalent to political risk and financial loss to the firm. The factors creating instability in EMDCs may not have a direct affect on the insurance industry. Taken

together, the findings in this study and the results of past research suggest that we need a better understanding of how institutions in EMDCs affect firm strategy and performance.

An important follow-up to this study would be to examine how foreign and local insurers invest the premiums they collect and whether there are significant differences in their investment strategies. Earnings on premiums are essential for firm viability. For private insurance companies to thrive over the long-term, they must have access to pension funds and capital markets in order to generate sufficient returns from investments to support claims payments. In emerging economies, where stock markets are often poorly developed and illiquid, property rights are weak and poorly enforced and market volatility is generally higher, investing premiums can become a complicated and risky task. Such institutional weaknesses may inhibit growth in the sector.

### **Limitations**

Several limitations should be noted when considering the findings discussed above. First, although the study includes several years of data (from 2000 to 2003), it is possible that over the long-term, one group of firms will come to dominate the market for insurance in each country. Perhaps foreign insurers are in the early stages of entering markets where they face a steep learning curve. Additionally, since most emerging markets have only recently liberalized it is possible that the long-term effects of market liberalization on insurers will differ significantly from the effects found here.

Self-selection bias can also be a problem in studies of entry mode and firm performance (Shaver, 1998). The way in which a firm enters the economy may be a function of its internal capabilities and external pressures and thus endogenous to the model. In demonstrating this

problem of endogeneity, Shaver (1998) found no effect of entry mode on performance after using Heckman's correction for self-selection bias. Although it is important to note this concern, we do not believe this poses a problem in our study. First, in some cases entry mode is a function of the entry restrictions imposed by the host country and thus not endogenous to the model. Second, results showed little support for entry mode as a driver of performance so if such a bias exists it is presumably toward under- rather than over-estimating the importance of entry mode.

## **Conclusions**

Emerging markets and developing countries are now entering the third wave of liberalization, the opening up of the service sector to foreign competition. In this paper, we focused on one of the components of the financial sector, the global trade in insurance services. Since the market liberalization of insurance is a relatively new phenomenon, this paper makes a contribution toward a better understanding of how liberalization affects foreign and local firm performance. Our findings also contribute to the growing literature on service firms by examining the relative performance of foreign and local insurers in the context of EMDCs, particularly at the subsidiary level.

While researchers have recognized for some time now that government policies affect firm performance and influence market desirability for MNE's (Lenway and Murtha, 1994; Murtha and Lenway, 1994; Henisz, 2000), relatively little empirical work has documented how market liberalization policies affect service firm performance. Attempting to fill this gap in the research, we have shown that greater levels of market liberalization in the host country are associated with higher profitability for both foreign and local insurance firms. It is notable,

however that foreign firms are not outperforming locals, at least not for the firms in this dataset. U.S. owned MNE subsidiaries seem to be at a particular disadvantage since they have significantly lower profits than subsidiaries from other countries. Contrary to prior research, findings did not indicate that rule of law and political stability in the host country have a significant effect (either direct or moderating) on firm performance.

While the results from this study appear to contradict expectations that the opening of insurance markets to foreign competition would bring about further dominance by the traditional, well-established multinational insurance companies (Ripoll, 1996), it is premature to draw definitive conclusions. Insurance service provision may require a substantial degree of local adaptation and market knowledge; factors which favor local firms, at least in the near term. To enhance their performance, foreign firms must gain a better understanding of the sources of competitive advantage in EMDCs and more experience operating in these markets (Erramilli, 1991). A richer understanding of how to compete in EMDCs will enable foreign firms to formulate more effective strategies for competing in these markets. Such information is also vital for local firms trying to maintain or strengthen their competitive position. Perhaps local insurers firms can turn their initial performance advantages into a long-term competitive advantage over multinational insurers.

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**Table 1: Basic Statistics on the Global Insurance Industry**

Total Business	Premium Volume (in millions US\$)		Share of Premiums World Market as % of GDP		Premiums per capita (US\$)
	<u>2002</u>	<u>2001</u>	<u>2002</u>	<u>2002</u>	<u>2002</u>
<b>Americas</b>	<b>1,089,447</b>	<b>993,529</b>	<b>41.47</b>	<b>8.48</b>	<b>1,283</b>
North America	1,049,527	949,331	39.95	9.39	3,275
Latin America & Caribbean	39,920	44,198	1.52	2.39	75.5
<b>Europe</b>	<b>851,802</b>	<b>767,432</b>	<b>32.43</b>	<b>8.06</b>	<b>1,034.4</b>
Western Europe	826,484	744,669	31.46	8.58	1,732.6
Central/Eastern Europe	25,319	22,763	0.96	2.76	75.5
<b>Asia</b>	<b>624,090</b>	<b>595,412</b>	<b>23.76</b>	<b>7.61</b>	<b>167.8</b>
Japan	445,580	444,664	16.96	10.86	3,498.6
South and East Asia	167,286	140,156	6.37	4.89	50.2
Middle East/Central Asia	11,225	10,592	0.43	1.64	39.6
<b>Africa</b>	<b>24,120</b>	<b>24,639</b>	<b>0.92</b>	<b>4.45</b>	<b>29.2</b>
<b>Oceania</b>	<b>37,438</b>	<b>34,707</b>	<b>1.43</b>	<b>4.05</b>	<b>1,201.8</b>
<b>World</b>	<b>2,626,898</b>	<b>2,415,720</b>	<b>100</b>	<b>8.14</b>	<b>422.9</b>
<b>Industrialized Nations</b>	<b>2,359,029</b>	<b>2,173,371</b>	<b>89.8</b>	<b>9.3</b>	<b>2,480.4</b>
<b>Emerging Markets</b>	<b>267,868</b>	<b>242,349</b>	<b>10.2</b>	<b>3.7</b>	<b>50.5</b>

Source: Swiss Re, 2003

**Table 2: Top Ten Global Property/Casualty Insurance Companies (By Revenues, 2003)**

Rank	Company	Revenues <sup>1</sup> (\$ millions)	Country
1	Allianz	\$114,950	Germany
2	American International Group	81,303	United States
3	Berkshire Hathaway	63,859	United States
4	Munich Re Group	59,083	Germany
5	State Farm Ins. Co.	56,065	United States
6	Zurich Financial Services	51,357	Switzerland
7	Allstate	32,149	United States
8	Swiss Reinsurance	27,087	Switzerland
9	Millea Holdings	24,574	Japan
10	Royal & Sun Alliance	19,259	United Kingdom

Source: International Insurance Fact Book, 2005

Available from: <http://www.internationalinsurance.org/international/rankings/><sup>1</sup>Revenues include premium and annuity income, investment income and capital gains or losses but exclude deposits; include consolidated subsidiaries, exclude excise taxes.

**Table 3A: Descriptive Statistics, Independent and Control Variables**

<b>Independent Variables</b>	<b>Frequency</b>	<b>Percent of Sample</b>
<b>Firms Type</b>		
Wholly owned subsidiary	56 firms	28.57%
Joint venture	16 firms	8.16%
Locally owned firms	124 firms	63.27%
<b>Firm Location</b>		
Latin America	101 firms	51.53%
Asia	95 firms	48.47%
<b>Line of business</b>		
Non-life only	106 firms	54.08%
Both life and non-life	90 firms	45.92%
<b>MNE Nationality</b>		
MNE HQ in W.Europe	30 firms	15.31%
MNE HQ in U.S.	14 firms	7.14%
MNE HQ in Japan	7 firms	3.57%

**Table 3B: Descriptive Statistics, Independent and Control Variables, Contin...**

<b>Variable</b>	<b>Mean</b>	<b>Std. Dev</b>	<b>Min</b>	<b>Max</b>
Total Firm Assets	6.21e+07	3.56e+008	326	3.92e+09
Liberalization Index	.2732	.1605	.08	.75
Population in the Host Country	7.21e+07	7.27e+07	2,580,000	2.14e+08
GDP in the Host Country	2.22e+11	2.09e+11	7.41e+09	6.48e+11
Political Stability in the Host Country	.3488	.7076	-1.85	1.53
Rule of Law in the Host Country	.3083	1.041	-1.16	2.5
Profits before taxes adjusted for firm size	.0247	.0941	-.8429	.4558

**Table 3C: Correlation Matrix**

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 Firm located in Latin America														
2 Line of business	.14***													
3 Host country population (log)	.28***	.24***												
4 Host country GDP (log)	.14***	.13***	.77***											
5 MNE HQ in W.Europe	.10**	.03	-.05	.04										
6 MNE HQ in U.S.	.15***	.06	-.04	.004	-.12***									
7 MNE HQ in Japan	.08*	.04	.12***	.17***	-.01	-.05								
8 Political stability	.13***	.08*	-.001	-.01	.16***	.02	-.19***							
9 Rule of law	.04	.13***	.001	.003	.19***	-.02	-.13***	.88***						
10 Wholly owned subsidiary	.09**	.01	-.13***	.06	.67***	.44***	.00	.15***	.13***					
11 Joint venture	-.08*	.02	.09**	.08*	-.13***	-.08*	.14***	.14***	.16***	-.19***				
12 Host country liberalization	-.14***	.15***	.35***	.31***	-.07*	-.12***	.06	-.01	.05	-.12***	.16***			
13 Wholly owned subsidiary* liberalization	.08*	.04	-.01	.19***	.56***	.28***	.02	.12***	.10**	.83***	-.16***	.16***		
14 Joint venture* liberalization	-.12***	.001	.11**	.09**	-.11**	-.07*	.16***	.13***	.18***	-.16***	.87***	.32***	-.14***	
15 Adjusted Profits	-.21***	-.02	.11**	.14***	-.04	-.21***	.08*	-.10**	-.06	-.12***	.12***	.28***	-.06	.16***

\*significant at p<.05

\*\*significant at p<.01

\*\*\*significant at p<.001

**Table 4: Results of Time Series Cross Section Analyses**

<b>Adjusted Profits Before Taxes</b>				
<b>Independent Variables</b>	<b>Model 1</b>		<b>Model 2</b>	
	<b>b</b>	<b>s.e</b>	<b>b</b>	<b>s.e.</b>
<b>Controls</b>				
Firm located in Latin America (as opposed to Asia)	<b>-.0306**</b>	.0107	<b>-.0289**</b>	.0108
Line of business	-.0043	.0099	-.0036	.0100
Host country population (log)	.0087	.0134	.0064	.0135
Host country GDP (log)	.0064	.0157	.0104	.0158
MNE HQ in W.Europe	-.0177	.0232	-.0214	.0233
MNE HQ in U.S.	<b>-.0707**</b>	.0269	<b>-.0790**</b>	.0273
MNE HQ in Japan	.0201	.0268	.0187	.0269
Political stability in the host country	-.0085	.0147	-.0071	.0147
Rule of law in the host country	-.0008	.0099	-.0022	.0100
<b>Direct Effects</b>				
Wholly owned subsidiary	.0169	.0210	.0503	.0296
Joint venture	.0197	.0183	.0127	.0361
Host country liberalization	<b>.1177***</b>	.0329	<b>.1409***</b>	.0395
<b>Moderating</b>				
Wholly owned subsidiary*liberalization	-	-	-.1201	.0757
Joint venture*liberalization	-	-	.0150	.0914
Constant	-.1222	.1169	-.1570	.1184
Observations	784		784	
R <sup>2</sup>	.1534		.1605	
Δ R <sup>2</sup>			<b>+.0071**</b>	

\*significant at p<.05

\*\*significant at p<.01

\*\*\*significant at p<.001