Subsidiary Capabilities in an Era of Regionalization

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Abstract: We explore the effects of regional distance on the capabilities of multinational enterprise (MNE) subsidiaries, with an empirical application to 60 foreign subsidiaries operating in Canada. Building upon new conceptual insights on MNE regional strategy, we empirically test the hypothesis that the regional distance (or lack thereof) of an MNE parent to a host country affects its foreign subsidiary’s capabilities. We conclude that subsidiaries of outsider MNEs (meaning non-North American ones) do face a liability of inter-regional foreignness as compared to insider MNE subsidiaries. However, such liability tends to diminish over time, though at a different pace for the various value chain activities considered.

Key words: Regional Strategy; Subsidiary Development, Expansion and Growth; Internalization Theory; Regional Distance; Subsidiary Capabilities.

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INTRODUCTION

In the late 1990s, two major energy companies, one from Europe and the other from the United States, almost simultaneously began exploring foreign direct investment (FDI) opportunities to access the oil sands in Alberta, Canada. The European firm was a Fortune Global (FG) 500 firm, whereas the American firm, though a multi-billion dollar company, was much smaller. Considering the size and stature of the European company, an oil major, the expectation inside the parent company was that the Alberta expansion would occur quickly and smoothly. However, whereas the American company was able to establish itself as a credible participant in the Alberta oil sands sector within a two-year time span, the European firm was still struggling to do the same, more than four years after its initial entry in Alberta. A senior manager of the European firm complained that “we are not familiar with the legal process here in Canada, and we have to re-build our network.” This manager also evaluated the Canadian subsidiary’s capabilities as being much weaker in most value chain activities, than those of its main competitors in Canada.

The above real-life example suggests that even a FG 500 firm may face substantial difficulties when expanding outside its home region. This is not an isolated case. Rugman and Verbeke (2004) have demonstrated that most of the world’s largest 500 companies are home region oriented, with an average of more than 80% of sales in their home triad region (the triad regions being the NAFTA zone, the European Union, and Asia). Among the FG 500 companies, only 9 can be considered truly global, with at least 20% of total sales in each triad region. Dunning, Fujita and Yakova (2006) have confirmed this multinational enterprise (MNE) home-region focus by looking at macro-level data on FDI stocks and flows. The above studies imply that intra-regional expansion is much easier to achieve than inter-regional growth. At the micro-level, Rugman and Verbeke’s (2004) study also suggests differential MNE subsidiary capability development and expansion trajectories in the home versus host regions.

The regional effect means that geographical, cultural, economic, and administrative differences (Ghemawat, 2001, 2003) among regions may limit the transferability of the MNE’s non-location bound firm specific advantages (FSAs) - supposed to confer scope economies across geographic markets - to
subsidiaries located in host regions. It may also hinder the subsidiaries’ ability to develop and exploit the location-bound FSAs required to achieve national/regional responsiveness in host regions (Rugman and Verbeke, 1992). However, over time, a learning effect may occur, which may help the “outsider” subsidiary overcome its liability of inter-regional foreignness, and develop capabilities at par with those held by “insider” subsidiaries (Rugman and Verbeke, 2004: 16).

Throughout the remainder of the paper, we shall use the terms FSAs (an IB concept) and capabilities (a strategy concept) interchangeably: these are strengths relative to competitors, derived from the tangible and intangible assets held by the parent or subsidiary, as well from their routines and entrepreneurial abilities. Given the importance of knowledge recombination in IB, especially when the subsidiary needs to adapt parent knowledge transferred from the home country, our use of the FSA/capability concepts embodies Teece et al.’s (1997) idea of dynamic capability, describing the firm’s capacity to adapt to its changing environment.

Importantly, the above regional and learning effects are likely to vary as a function of the value chain activities involved. According to Rugman and Verbeke (2005a), the regional effect on subsidiary capability development when penetrating a host region as opposed to the home region, is likely to be less pronounced at the upstream side of the value chain than at the downstream side. The main reason, according to Rugman and Verbeke (2005a) is that FDI focused on the downstream end of the value chain, constitutes a one-sided commitment by the MNE, not matched by equivalent commitments from key stakeholders, in this case the potential customers, that would guarantee a financial pay-off.

The remainder of the paper is organized as follows. In the next section, we formulate five hypotheses, building upon conventional internalization theory and Rugman and Verbeke’s (2004, 2005a) recent work on regionalization. We discuss the data and research methods in the third section, and present the empirical results in the fourth section.

THEORY AND HYPOTHESES
Determinants of subsidiary capabilities

The literature on subsidiary capabilities has generally focused on three groups of determinants: corporate headquarters assignment, subsidiary autonomous decisions, and host country environmental factors (Birkinshaw and Hood, 1998). The corporate headquarters can influence a subsidiary’s capabilities through giving it a specific mandate and commensurate resources. The subsidiary can also attempt to strengthen its current business and seek new businesses through entrepreneurial activities (Birkinshaw et al., 1998). Finally, local environmental factors, such as government support or “diamond” characteristics in the Porterian sense (Frost et al., 2002), may contribute to subsidiary capability development.

Past empirical studies on environmental factors have largely focused on the subsidiary’s immediate business relationships, such as its linkages with local customers and suppliers (Andersson et al., 2002) and the local industry “diamond” (Frost et al., 2002), while macro-environmental factors at the regional level have received only limited attention. A notable exception is the recent study by Benito, Groggaard, and Narula (2003), which argues that regional integration may affect the characteristics of host locations, and thereby indirectly subsidiary capabilities and the scope of subsidiary activities. First, a more integrated region leads to a larger, unified market, creating the possibility of gaining regional scale economies by specializing the subsidiaries located inside the region. Second, an integrated region may facilitate scope economies through the sharing of, e.g., brand names and best practices in specific value-chain activities.

Subsidiary capabilities and internalization theory

Mainstream international business theory, and more specifically the internalization/eclectic paradigm view of the MNE (Buckley and Casson, 1976; Dunning, 1988; Hennart, 1982; Rugman, 1981, 1999) explains how the configuration of the company’s ownership (or firm-specific) advantages, location advantages, and internalization advantages affects the extent, the forms, and the patterns of international expansion. First, successful international expansion requires that firms possess a bundle of proprietary assets /skills and/or a superior capability to coordinate and control international activities. These FSAs
determine which firms will operate abroad. Second, the location advantages reflect the relative attractiveness of alternative FDI recipient countries, and determine where firms will invest. Third, internalization advantages determine the comparative efficiency of alternative entry modes (e.g., exports, joint venture, wholly owned subsidiary), and determine how the MNE will access foreign markets.

Internalization theory considers the existence of FSAs and their (relatively) easy transfer across borders as requirements for successful international expansion. Although the assumption of market failure, as the main reason for setting up wholly owned subsidiaries is much debated (Kogut and Zander, 1993, 1995; Love, 1995; McFetridge, 1995; Verbeke, 2003), MNEs are widely acknowledged as the key vehicle for knowledge transfer across borders. As noted by Martin and Salomon, “(O)n a general level, knowledge-based arguments parallel the internalization premise that the most distinctive knowledge also has the greatest potential to support international expansion” (Martin and Salomon, 2003: 359-360).

However, international expansion through wholly owned subsidiaries usually cannot be reduced to the simple replication of the parent MNE’s FSAs in foreign subsidiaries (Goerzen and Beamish, 2003: 1294). There are three reasons for this. First, a variety of barriers, which can be synthesized under the heading of internal stickiness (Szulanski, 1996), may prevent the parent MNE from replicating fully its capabilities at the subsidiary level. Such barriers may result from particular FSA characteristics (such as the FSAs’ social embeddedness in the home country or ambiguity on how exactly they confer value and contribute to home country success), the frictions associated with knowledge transmission channels, and the subsidiary’s limited absorptive capacity (Gupta and Govindarajan, 2000).

Second, local adaptation may also be required to gain legitimacy and acceptance in the host country, inter alia as a function of location-specific consumer preferences (Cui and Liu, 2001), national cultural characteristics (Lemak and Arunthanes, 1997), and labor rules (Rosenzweig and Nohria, 1994).

Third, subsidiaries may be able to develop specific capabilities of their own (Rugman and Verbeke, 2001), as the result of either their entrepreneurial endeavors to exploit local opportunities, or their parent company’s objective to access host country knowledge clusters (Birkinshaw and Hood, 1998;
A subsidiary’s capability bundle may thus deviate strongly from the initial FSA bundle transferred by the parent company.

In spite of the expected differences between the parent company’s FSA bundle and the subsidiary’s capability bundle, for the three reasons outlined above, we still do expect, in accordance with internalization theory, at least some linkage between the level of the parent company’s FSAs and the level of the subsidiary’s capabilities, when benchmarking these against both the parent’s and the subsidiary’s most important competitor(s). As we shall discuss further below, this is especially important when assessing strengths in individual value chain activities, such as innovation, production or sales and marketing. Thus, we propose:

**Hypothesis 1:** the level of a subsidiary’s capabilities (all value chain activities included) depends upon the level of its parent’s FSAs.

**Subsidiary capabilities and regionalization**

Recent analyses of semi-globalization (Ghemawat, 2003) and regional MNE strategies (Ghemawat, 2005; Rugman and Verbeke, 2004) have acknowledged both the macro-level reality of regional trade and investment blocs, and most MNEs’ regional rather than global approach to their international operations. Specifically, regional trading blocks have been found to affect both the scope of subsidiaries’ activities and subsidiary competences (Benito et al., 2003).

National markets are neither completely isolated nor integrated. After reviewing extensive data sets measuring the cross-border integration of product markets (including trade flows, foreign direct investment stocks, and commodity prices) and factor markets (including capital, labor, and knowledge), Ghemawat (2003) concluded that most measures suggest the reality of incomplete integration or semi-globalization. This reality is also reflected in the regional trading and investment bloc development in North America, Europe and Asia. Trading and investment blocs have led to increased economic integration within each region, particularly through increased intra-regional trade and investment among all the countries within each region, sometimes at the expense of inter-regional trade and investment. For
example, intra-regional exports in NAFTA, the EU, and Asia, as a percentage of total trade, have risen from 33.6%, 52.1%, and 35.3% respectively in 1980 to 56%, 61%, 50% in 2002 (Rugman, 2005).

This reality of regionalization allows us to augment conventional internalization theory, see below.

*Dimensions of distance between regions and the regional effect*

Substantial recent evidence suggests that MNE strategy is strongly affected by regional factors. On the one hand, the sales dispersion of MNEs tends to be skewed towards the home region, as noted above (Rugman and Verbeke, 2004). On the other hand, many MNE strategies, expressed publicly by their senior executives or in their official documentation, appear to include a regional factor. As one example, Fujio Cho, Vice Chairman of Toyota, has stated: “We intend to continue moving forward with globalization…by further enhancing the localization and independence of our operations in each region” (Ghemawat, 2005: 100). As another example, Nestlé’s management often explicitly differentiates among global, regional and local business components of corporate strategy and organization (Nestle, 2006).

Such regional focus can be evaluated in terms of the various dimensions of distance among regions. Ghemawat (2001) analyzed how distance may affect business and unbundled the distance concept into four dimensions: cultural distance, administrative distance, geographic distance, and economic distance. Cultural distance represents differences in language, social norms, and religion; administrative distance includes not only differences in public policy, but also differences (or lack thereof) in preferential trade arrangements and political associations; geographic distance refers to the physical distance and lack of communication links between countries; and economic distance includes differences in consumer income, and in costs and quality of natural resources, human resources, and infrastructure. The greater the overall distance between a (potential) host country and the home country, the less attractive that host country becomes.

Deep integration schemes, such as the EU and NAFTA, represent deliberate efforts to reduce one of these distance components, namely the administrative distance within the region, given that the other types of distance are not simply changeable through public policy. For example, in the case of NAFTA, tariff and non-tariff barriers have largely been removed to promote the free flow of goods, services, and
capital; national treatment has been applied to foreign investors; and national tax policies have also been harmonized through bilateral tax treaties (Eden, 1996). For MNEs, the NAFTA region as an integrated investment regime, allows them to pursue more integrated strategies through rationalized production plants and marketing strategies, see Rugman and Verbeke (2005b). In the EU case, integration efforts have gone even further, as expressed in the single market and the widely applied principle of mutual recognition whereby rules of origin prevail, the creation of a single currency, and the harmonization of fiscal and monetary policies (Malhotra et al., 1998).

Given a reduction in administrative distance, the existing economic distance within a region can further promote intra-regional economic specialization (Buckley et al., 2001; Ghemawat, 2005), for example through concentrating labour-intensive activities in the cheaper labour economies within the region. The large economic differences between the United States and Mexico, together with the reduced administrative differences and the geographic proximity, have encouraged many American firms to “nearshore” production facilities to Mexico.

Importantly, the micro-level benefits accruing to firms as the result of regional integration schemes, especially the reduction in administrative distance, may largely be appropriated by insider MNEs (i.e., MNEs based in another country of that region) rather than outsider MNEs (i.e., MNEs based in another region). The existing administrative differences among regions, including trade barriers and differential public policies (Anwar, 2005) remain in place, so that improving the relative location advantages of insider MNEs (Buckley et al., 2003; Rugman, 2001), creates a new, implicit “discrimination” against outsider MNEs. This discrimination makes it comparatively harder for outsider MNEs to develop the required location-bound FSAs in the host region.

In addition, convergence of consumer behavior inside the home region, driven by the reduction in administrative distance, for example, when this reduction supports regional rather than national marketing efforts and facilitates cross-border shopping, may result in a comparative “decay” of the exploitation potential of outside MNE parent FSAs when transferred to subsidiaries located in another region. In conceptual terms, the outside MNE parent’s non-location-bound FSAs now command a lower value in the
host region (irrespective of possible difficulties associated with the actual technical transfer of the relevant knowledge base across borders).

Thus, we propose, in line with Rugman and Verbeke (2004):

**Hypothesis 2 (direct regional effect):** outsider MNE subsidiaries will exhibit a lower level of capabilities than insider MNE subsidiaries.

**Hypothesis 3 (indirect regional effect):** outsider MNE subsidiaries will, relative to insider subsidiaries, exhibit a weaker relationship between their capabilities and their parent FSAs.

**The learning effect**

The internationalization model (Johansson and Vahlne, 1977) of foreign expansion emphasizes a learning effect, meaning that firms will gradually expand from culturally proximate countries to culturally distant countries, and only incrementally invest abroad, thereby moving from lower resource commitments to higher resource commitments. After establishing themselves abroad, firms will reduce the cultural and other barriers they face through experiential learning, thereby leading to higher performance (Luo, 1999).

When discussing the implications of regional MNE strategies, Rugman and Verbeke (2004) suggest that host region characteristics may severely hamper the MNE’s expansion potential in that region, in case of a low value attributed by host region customers to the MNE’s FSAs, and the related need to develop additional, location-bound FSAs.

Both the internationalization model as well as Rugman and Verbeke’s (2004) work suggest that the learning effect, meaning the comparatively higher “burden” imposed on outsider MNEs, is highly time-sensitive. Tailoring the parent company’s non-location bound FSAs to meet host region needs and creating new, location-bound FSAs at the subsidiary level requires a process of “learning by doing”, itself dependent on the MNE’s tenure in the host region.

First, as regards the tailoring of the MNE’s non-location bound FSAs to host region requirements, the required “linking” investments to match these FSAs with host region characteristics will be associated with the MNE acquiring more knowledge on the local market as time goes by (Luo et al., 2002). The
tenure of local operations may help the subsidiaries to establish local linkages, identify useful local practices, and learn from their own experiences as well as those of their local partners (Mezias, 2002), thereby facilitating the exploitation of the parent company’s non-location bound FSAs.

In a recent study on the impact of internal and external networks on subsidiary capability development, Andersson, Forsgren, and Holm (2002) found that the subsidiary’s adaptation of its product and production development as a function of external customer or supplier requirements actually improved the subsidiary’s market performance. Further, the adaptation of the subsidiary’s “ways of doing business” improved the MNE’s products and production technologies.

Second, over time, outsider MNEs may be able to develop entirely new, location-bound FSAs in the host region, through subsidiary entrepreneurial activities (Birkinshaw and Hood, 1998; Rugman and Verbeke, 2001). The discussion in the academic literature on competence-creating subsidiary mandates (Cantwell and Mudambi, 2005), subsidiary evolution in capabilities (Birkinshaw and Hood, 1998), and subsidiary specific advantages (Rugman and Verbeke, 2001) all suggest the possibility of new capability development at the subsidiary level, after a substantial period of learning and adequate resource commitments.

We thus propose that the regional effect is likely to diminish over time. Put in other words, outsider MNE subsidiaries may face a liability of inter-regional foreignness, but such liability will gradually decline. However, we must unbundle this learning effect into two components: a direct learning effect and an indirect learning effect. The direct learning effect implies that a longer experience of a subsidiary in the host country will lead to stronger capabilities. For example, Luo (1999) found that time-based experience in a host country positively affects subsidiary performance.

The indirect learning effect indicates that subsidiary tenure may interact with the direct regional effect, in the sense that the direct regional effect is likely to diminish over time. In other words, outsider MNE subsidiaries face a liability of inter-regional foreignness, but such liability will gradually decline. Thus, we propose, again in line with Rugman and Verbeke (2004):
**Hypothesis 4.1 (direct learning effect):** the tenure of MNE subsidiaries will strengthen their capabilities.

**Hypothesis 4.2 (indirect learning effect):** the tenure of outsider MNE subsidiaries will moderate the negative impact of their outsider status on their capabilities.

Differences associated with value-chain activities

In contrast to their strong, home-region oriented sales distribution, many large MNEs appear relatively unconstrained in their geographic dispersion of upstream activities such as R&D, sourcing, and sometimes even production (Rugman, 2005).

For example, the North American region accounted for $2.4 billion of Levi Strauss’ $4.1 billion in total sales in 2004 (Levi, 2004), showing a strong concentration of sales in the home region. However, Levi Strauss scheduled to shut down all its manufacturing factories in North America in 2003 and to move these comparatively high cost, upstream activities to other countries in Asia and Latin America (Levi, 2003). In this example, the possibility of a regional effect does not appear to have prevented the entire relocation of the upstream activities, and the associated MNE expansion in host regions. Many triad-based MNEs have in recent years engaged in similar relocation exercises for entire upstream activity bundles, as described extensively in the popular business press.

The above discussion thus suggests that the regional effect may vary according to the value chain activities considered. Specifically, subsidiary tenure has been found not to contribute to subsidiary capabilities in manufacturing (Frost et al., 2002), suggesting that the direct learning effect may not be important for upstream activities. Further, the indirect learning effect is also likely to vary with the value chain activities considered, because of its association with the direct regional effect (see Hypothesis 4.2).

Below, we formulate hypotheses related to the differential, regional and learning effects on upstream and downstream activities. This group of hypotheses is illustrated in Figure 2, with Figure 2.1
referring to subsidiary capabilities in the downstream activities and Figure 2.2 to subsidiary capabilities in the upstream activities.

**Hypothesis 5.1 (unbundled, direct regional effect):** outsider MNE subsidiaries will exhibit a lower level of capabilities than insider MNE subsidiaries in downstream activities (such as sales and marketing), but such differential will not be present in upstream activities (such as production).

**Hypothesis 5.2 (unbundled, indirect regional effect):** outsider MNE subsidiaries will, relative to insider subsidiaries, exhibit a weaker relationship between their capabilities and parent company FSAs in downstream activities, but such differential will not be present in upstream activities.

**Hypothesis 5.3 (unbundled, direct learning effect):** the tenure of MNE subsidiaries will have a strong positive effect on their capabilities in downstream activities but not in upstream activities.

**Hypothesis 5.4 (unbundled, indirect learning effect):** the tenure of outsider MNE subsidiaries will moderate the negative impact of their outsider status on their capabilities in downstream activities.

DATA AND METHOD

In order to test the hypotheses above, this paper examines foreign-owned subsidiaries in Canada, with parent company headquarters located in either the EU or the United States. Inward FDI from the Asia/Pacific region has a relatively minor importance, as its share of FDI coming into Canada between 1987 and 2003 fluctuated between 4.6% and 8.3% (Statistics Canada, CANSIM II database), while the EU share fluctuated between 23.1% and 30.3%, and the US share between 61.4% to 70.8% (Statistics Canada, 2005).

We targeted the population of 157 foreign subsidiaries included in the *National Post Business 500 (2003)*. The Conference Board of Canada, which acted as funding agency for this research project, provided most of the senior management contact information. The explicit purpose of the project was to
understand the differential impact of regionalization (i.e., functioning in the NAFTA environment) on “insider” (US) subsidiaries versus “outsider” (EU) subsidiaries. We collected substantial background information on each firm included in this sample, during the period 2004 - 2005, with a focus on corporate history, strategy and organizational structure, and essentially wrote short case studies on each. We then personally contacted the senior managers (typically the chief executive officer or chief operating officer) of all the subsidiaries on the list and conducted interviews with them to complete the questionnaire, often complemented with open-ended questions on the Canadian subsidiary’s capabilities so as to check the reliability of the data provided.

The resulting usable data set includes 60 foreign subsidiaries operating in Canada, with 37 from the United States and 23 from the EU. On average, the subsidiaries had been operating in Canada for 47 years. The response rate of 38.2% is significantly higher than that of similar surveys administered to foreign-owned companies in Canada (e.g., the response rate in Frost et al., 2002, based on a mail survey, was 13%). Common method bias can be a problem if all variables are collected from a single source. To avoid common method bias in our data, we used the sales data from the National Post Business 500 (2003) and attempted to triangulate the answers to the survey questions given by the senior managers, by evaluating consistency with the substance of our case studies. Following Podsakoff and Organ (1986), we also inspected the extent of common method bias in our data by applying the Harman’s one-factor test. The unrotated factor analysis showed nine factors with eigenvalues greater than 1.0, with the first factor accounting for only 24.34% of the variance and the nine factors together accounting for 73.94% of the total variance. The presence of several distinct factors combined with the relatively low amount of variance explained by the first factor indicated the absence of a problematic level of common method variance in the data set (Podsakoff and Organ, 1986).

Examinations of skewness and kurtosis values indicated that the distributions of the variables generally conformed to the normality assumption of regression analysis. Although some of the correlations between the independent variables shown in Table 1 were quite high, variance inflation
factors (VIF) (Hair et al., 1998: 193) in all models in the paper were below the common cutoff threshold of 10, indicating that multicollinearity was not a problem.

The major reason for the lack of multicollinearity is that each model in the paper only included a subset of the independent variables. For example, though overall parent FSAs were highly correlated with parent FSAs in innovation (0.408), production (0.505), sales and marketing (0.648), and support activities (0.865), each of those parameters was used in a separate model. Moreover, except for one pair of variables (subsidiary age and subsidiary size), most of the highly correlated independent variables were not used in the same model. In addition, the linkage between the two correlated variables (0.337) was only modest, and far from the range of a moderate or good relationship (0.5 to 0.75) (Colton, 1974).

Measures

**Dependent variables: Subsidiary Capabilities**

Following Porter (1985), which includes the best known decomposition of value chain activities in the strategy field, we identified thirteen areas of activity in the questionnaire, including innovation, purchasing, logistics (transportation, warehousing, and distribution), production, sales and marketing (including advertising), after sales service (including distributor support), financial management, management information systems, human resources management, legal issues management, management of political issues, coordination/control of the international operations, and management of stakeholders (other than shareholders).

Each firm’s set of main competitors was used as the benchmark against which subsidiary capabilities were assessed. We first asked the respondents to identify the 3 strongest competitors of the Canadian subsidiary, i.e., the Canadian-based or foreign-based firms most likely to reduce its market share if they could improve further their cost structure or provide more value to the customers. Then, on a
seven-point scale, where –3 = “the subsidiary is very much weaker”, +3 = “the subsidiary is very much stronger”, and 0 = “the two firms have equal strengths”, respondents were asked to rate the capabilities of the Canadian subsidiary within the 13 activity areas, compared to the single most important competitor in the set identified above. On the basis of those scores, overall subsidiary capabilities were measured as the mean value of the subsidiary capabilities in the 13 activity areas. Subsidiary capabilities in support activities were measured as the mean value of subsidiary capabilities in financial management, management information systems, human resources management, legal issues management, management of political issues, coordination/control of the international operations, and management of stakeholders (other than shareholders).

Similar “relative” measures of subsidiary capabilities have been suggested in Bartlett and Ghoshal (1986) and applied in Roth and Morrison (1992). The latter study measured subsidiary capabilities relative to other subsidiaries within the MNE. However, in this paper we were interested in the subsidiary’s capabilities vis-à-vis its external rivals in the host country market.

Independent variables

(1) Parent FSAs. Similar to the measuring of subsidiary capabilities, parent FSAs were identified through benchmarking the parent against its major competitors. We first asked the respondents to identify the 5 strongest international competitors of the parent company. The respondents then rated the parent company FSAs in the above-mentioned 13 areas as compared to the parent’s single most important competitor. Similar to the measuring of the overall subsidiary capabilities and subsidiary capabilities in support activities, we measured the overall parent FSAs and parent FSAs in support activities using the mean value of the scores provided.

(2) Region. The regional dummy variable indicates the location of the parent company (coded as 1 = Europe, 0 = United States).

(3) Subsidiary Age. Subsidiary age is measured as the number of years the subsidiary has operated in Canada.
(4) Subsidiary Size. Subsidiary size was included as a control variable since larger subsidiaries tend to develop stronger capabilities (Benito et al., 2003). It is measured as the logarithm of the Canadian subsidiary’s sales volume.

Results

We ran regression analyses to assess the effects of the independent variables on subsidiary capabilities. Table 2 presents the results of the regressions used to test the hypotheses. The following equations synthesize the models we ran:

1. Overall subsidiary capabilities = Overall parent FSAs + Region + Subsidiary age + Subsidiary size + Region*Overall parent FSAs + Region*Subsidiary age + Error.

2. Subsidiary capabilities in production (as key indicator of upstream activities) = Parent FSAs in production + Region + Subsidiary age + Subsidiary size + Region*Parent FSAs in production + Region*Subsidiary age + Error.

3. Subsidiary capabilities in sales and marketing (including advertising) (as key indicator of downstream activities) = Parent FSAs in sales and marketing + Region + Subsidiary age + Subsidiary size + Region*Parent FSAs in sales and marketing + Region*Subsidiary age + Error.

4. Subsidiary capabilities in innovation = Parent FSAs in innovation + Region + Subsidiary age + Subsidiary size + Region*Parent FSAs in innovation + Region*Subsidiary age + Error.

5. Subsidiary capabilities in support activities = Parent FSAs in support activities + Region + Subsidiary age + Subsidiary size + Region*Parent FSAs in support activities + Region*Subsidiary age + Error.

In accordance with the five above equations, Table 2 has been divided into five sections. The dependent variables (DVs) in the five sections vary. For example, the DV in the overall model refers to
overall subsidiary capabilities, while the DV in the production model reflects subsidiary capabilities in production. Similarly, the independent variable “parent FSAs” also varies across the five sections. For example, parent FSAs in the production model refer to capabilities in production, while parent FSAs in the sales model reflect capabilities in sales.

Models 1, 2 and 3 in the first section of Table 2 represent the first equation, i.e., the overall model. Hypotheses 1, 2, and 4.1 address the main effects, namely the strength of the parent FSAs, the parent’s region of origin, and the effect of subsidiary tenure on subsidiary capabilities, with the latter as the dependent variable (Model 1 in Table 2). Hypotheses 3 and 4.2 address the interaction effects (Models 2 and 3).

Models 4 and 5 in the second section of Table 2 represent the second equation, i.e., the production model, whereas Models 6 and 7 in the third section of Table 2 reflect the third equation, i.e., the sales model. These models are based on hypotheses 5.1, 5.2, 5.3, and 5.4, which suggest that the regional and learning effects will differ according to the value chain activities considered. Equation 2 and equation 3 in Table 2 thus allow to test the difference between upstream and downstream value chain activities, since the former focuses on what we consider the core upstream activity (production) and the latter the core downstream activity (sales and marketing), of each subsidiary considered, irrespective of the strategic motivation for FDI, the two main motivations in our sample being natural resource seeking FDI and market seeking FDI.

However, we did run regressions using innovation as another proxy for the upstream activities, as shown in section 4 of Table 2. There, equation 4 is reflected in models 8, 9, and 10, and this builds upon the increased attention devoted to new knowledge development in most MNEs.

Finally, we included equation 5, as found in the fifth section of Table 2, and reflected in models 11, 12, and 13 to explore the regional and learning effects associated with support activities. Here, we did not formulate ex ante, specific hypotheses for these activities, as they are supposed to support both the main upstream and downstream activities in the value chain.
When testing the hypotheses, we followed the procedure suggested by Cohen et al. (2003). We first entered the variables without the interactions, to analyze the main effects. Afterwards, we entered the interaction variables and examined the F-value change across different models. Insignificant F-value change and interaction relationships resulted in the application of the models without interaction effects.

**Our results support hypothesis 1.** In Model 1, the coefficient for overall parent FSAs is positive and significant. **The findings also support hypothesis 2.** In Model 1, the coefficient for the regional variable is negative and significant, indicating that outsider MNEs indeed incur an inter-regional liability of foreignness, as compared with insider MNEs.

**The results do not support hypothesis 3.** In Model 3, the coefficient of the interaction term between region and parent FSAs is not significant.

**The results do not support hypothesis 4.1.** In Model 3, the coefficient for subsidiary age is not significant.

**The results do support hypothesis 4.2.** In Model 2, the coefficient of the interaction term between region and subsidiary age is significant and positive. This indicates that outsider MNEs, though incurring an inter-regional liability of foreignness as compared with insider MNEs, at the beginning of their investment in the host region, experience a reduction of this gap over time. To illustrate this pattern, we present the interaction between region and age on subsidiary capabilities in Figure 2. This figure shows that the capability gap between subsidiaries of outsider MNEs and insider MNEs tends to go down over time. In the very long run, US subsidiaries and EU subsidiaries should therefore not experience any difference in capabilities because of their region of origin. However, it should be noted that the regression lines in Figure 3 suggest only a general trajectory. The regression lines based on the present, relatively small sample, do not allow assessing the precise timing of the disappearance of the capability gap, nor the exact form of the reduction path.

---

Insert Figure 3 about here
---
The results support hypothesis 5.1. The coefficient of the regional variable is significant and negative in Model 6, but is not significant in Model 4, indicating that the direct *regional effect* does occur at the level of sales and marketing activities, but not at the level of production activities.

The results do not support hypothesis 5.2. The coefficients of the interaction term between region and parent FSAs in production/sales and marketing in Models 5 and 7 are not significant.

The results support hypothesis 5.3. The coefficient of the subsidiary age variable is significant and positive in Model 6, but is not significant in Model 4, indicating that the direct *learning effect* does occur at the level of sales and marketing activities, but not at the level of production activities.

The results do not support hypothesis 5.4. The coefficients of the interaction term between region and subsidiary age in Models 5 and 7 are not significant.

The innovation model and the support activities model reveal some interesting results. First, the direct *regional effect* is present in the innovation and support activities models, with the coefficient of the regional variable being significant in Model 8 and Model 11. Second, an indirect *regional effect* is absent in the two models, a result similar to what we found in the prior models. Third, an indirect *learning effect* can be observed in both models. The coefficients of the interaction terms between region and subsidiary age in Models 9 and 12 are significant and positive. Fourth, a direct learning effect exists in the support activities model, but does not exist in the innovation model. The coefficient of the age variable in Model 8 is insignificant, but the coefficient of the age variable in Model 11 is significant and positive.

**DISCUSSION**

In this paper we investigate whether subsidiary capabilities are subject to a *regional effect*. The presence of a *regional effect* means that the subsidiary’s location in the parent company’s home region (in this case North-America) versus a host region (as is the case for European MNE subsidiaries) affects the subsidiary’s capabilities. More specifically, the *regional effect* implies a liability of inter-regional foreignness imposed on the latter category of subsidiaries. We also investigate whether the *regional effect* moderates the international transferability of the parent FSAs and whether the inter-regional liability of
foreignness in the host region may disappear in the long run as a result of a learning effect. Finally, we assess whether the regional and learning effects vary as a function of the value-chain activities considered. In the following, we further elaborate on the significance of the results reported above.

**Transferability of parent FSAs.** The results on the transferability of the parent FSAs are consistent with internalization theory, but provide no support for an indirect regional effect. The results suggest that MNEs are able to transfer successfully parent FSAs to their subsidiaries (which is the main result predicted by internalization theory): a higher level of parent strengths translates systematically into a higher level of subsidiary capabilities. As shown in all the models in the paper, parent FSAs - whether overall FSAs, FSAs in production, sales and marketing, innovation or support activities - are consistently critical contributors to subsidiary capabilities. Since no interaction effect between the regional variable and parent FSAs could be observed, the parent’s home region does not appear to affect the transferability per se of parent FSAs to subsidiaries. Obviously, these results do not imply that international FSA transfer can easily or cheaply be accomplished by all MNEs. The results merely suggest that EU MNEs do not face stronger challenges than US MNEs when transferring parent FSAs to foreign subsidiaries.

**The direct regional effect and the learning effect.** Operating in the host region does create additional difficulties for outsider MNEs, as compared to those faced by insider MNEs. Irrespective of the ease of parent FSA transfer, leading to scope economies, the results suggest that the major cause of a lower level of subsidiary capabilities in the host region is the difficulty associated with local learning and local adaptation, i.e., with the creation of location-bound FSAs conferring benefits of national/regional responsiveness.

The above distinction is somewhat arbitrary, since adaptation of parent FSAs can occur before and during the transfer process (Jensen and Szulanski, 2004). However, the two facets are helpful when considering the relative importance of knowledge transfer vis-à-vis local adaptation. Our results do suggest that sufficient attention should be paid by outsider MNEs to the problem of “linking” investments in the host region (Rugman and Verbeke, 2005a). Here, it is not the parent company knowledge bundles per se that need to be altered; rather, these non-location bound knowledge bundles need to be
complemented with new, location-bound knowledge bundles to build up subsidiary capabilities in the host region.

Further, as expected the results point to strong, direct *regional effects* in the overall model and the sales and marketing model, but not in the production model. Interestingly, our examination of the direct *regional effects* in the innovation model and the support activities model also suggest strong, direct *regional effects* associated with support and innovation activities.

As regards the direct and indirect *learning effect* at the level of individual value chain activities, the former only appears relevant for the sales and support activities, and this for all subsidiaries, irrespective of their home region. An indirect *learning effect* occurs in the innovation and support activities, whereby *outsiders* appear to experience more significant learning than *insiders*. No *learning effect* whatsoever can be observed in production.

It appears that production activities are positioned at one end of the spectrum, experiencing neither a *regional effect*, nor a *learning effect*. Although all the other activities do suffer from the *regional effect*, the actual difficulty of dealing with this *regional effect* varies. Sales activities appear to be the least receptive to learning; this holds for both *insiders* and *outsiders*. Support activities suffer from a similar learning problem, but here insiders enjoy a better starting position, whereas *outsiders* experience more learning over time. Finally, innovation activities appear more receptive to learning than sales and support activities.

Crafting local embeddedness and creating location-bound FSAs, thus appear easier to achieve in the innovation area than in the sales and support activities areas for *outsider* MNEs. One possible reason is that the employees/groups involved in innovation activities, converse in the same technical language, and interact relatively easily within their technical/scientific community irrespective of regional origin, whereas this is not the case for sales and support activities, where it may be much more difficult to gain legitimacy, as perceived by a variety of host region stakeholders (e.g., financial institutions, public agencies, and external pressure groups).
Figure 4 illustrates the variation in the magnitude of the learning effect as a function of the value-chain activities considered.

The regional effect, value chain activities, and costs of doing business abroad. The presence of a regional effect may deepen our understanding of the costs of doing business abroad (CDBA) (Eden and Miller, 2001). Mainstream thinking on this topic suggests that four categories of distance between home country and host country (Ghemawat, 2001) determine the CDBA, leading to the normative implication that MNEs should invest primarily in low distance markets (Rugman and Verbeke, 2005b, chapter 9). Regional trade and investment arrangements may reinforce such a focus on intra-regional investment. However, our analysis also suggests that the CDBA depend fundamentally on the specific value chain activities involved in the international expansion process. Host region sales and marketing efforts may be associated with the highest costs, followed by support activities, innovation activities and finally local production.

The region-bound FSAs. The above discussion of the regional and learning effects may be helpful in the context of Rugman and Verbeke’s (2005a) new concept of region-bound FSAs and Ghemawat’s (2005) discussion of regional strategies.

First, the strategic management analysis of MNE operations has conventionally focused on the distinction between non-location-bound FSAs (leading to benefits of integration) and location-bound FSAs (leading to benefits of national responsiveness), see Rugman and Verbeke (2005b). Different value chain activities require different combinations of both FSAs types. However, the introduction of regional integration schemes at the macro-level may require MNEs to develop new, region-bound FSAs through linking investments (Rugman and Verbeke, 2005a: 120). Such region-bound FSAs imply that the new strengths developed can be exploited successfully throughout the region, rather than being restricted to a single nation in terms of profitable deployment. The importance of region-bound FSAs is confirmed by
the observation of a *regional* and a *learning effect* in our study. The presence of a *regional effect* suggests that *insider* MNEs are actually better at building up foreign subsidiary capabilities than *outsider* MNEs: this in itself represents a region-bound strength. In addition, the learning effect implies that, over time, *outsider* MNEs can also develop this strength, and are thus able to operate subsidiaries in host regions with capabilities similar in strength to those held by subsidiaries from *insider* MNEs.

Region-bound FSAs should thus be interpreted as the capability to attain simultaneously regional integration benefits and benefits of regional responsiveness at the micro-level. The former imply that previously location-bound FSAs, exploitable in a single nation only, are upgraded so as to become valuable in the entire region, thereby conferring some new benefits of scale, scope and exploitation of national differences. The latter imply the fine-tuning of non-location bound FSAs, so as to infuse them with a regional component, and increase their value in the region. The importance of developing region-bound FSAs is not only fully consistent with Ghemawat’s (2003) observation that semi-globalization is pervasive in international business, it paradoxically also suggests that firm-level strengths in the realm of national responsiveness are transformed into strengths leading to benefits of regional integration, whereas conventional strengths in global integration are infused with regional knowledge, thereby transforming them into strengths leading to benefits of regional responsiveness.

Second, regional strategies can be interpreted as attempts to develop and exploit specific region-bound FSAs. Ghemawat (2005) has classified regional strategies into 5 types, including the home base strategy, the portfolio strategy, the hub strategy, the platform strategy, and the mandate strategy. The home base strategy means that firms expand mainly in their home region, so as to avoid the difficulty of developing region-bound FSAs in host regions. The portfolio strategy means that MNEs set up foreign subsidiaries in the host region. These subsidiaries report directly to home country headquarters and gradually develop location-bound FSAs in their host country. This could be interpreted as a stepping-stone in the process of developing region-bound FSAs in the host region. When MNEs have developed sufficient experience in different regions, they can apply the hub strategy, establishing regional bases to provide shared activities to local/country operations. These MNEs then formally deploy region-bound
FSAs in each region as a complement to location-bound FSAs in the various host countries where they operate. This may then be complemented further with inter-regional shared activities and mandates, i.e., the platform strategy and the mandate strategy, where non-location bound FSAs are key.

Ghemawat’s (2005) regional strategies thus point to a variety of complex combinations and accumulation paths of region-bound FSAs, location-bound FSAs and non-location bound FSAs, inside the individual MNE.

CONCLUSION

In this paper, we have empirically tested whether foreign subsidiaries in Canada experience a regional effect and a learning effect in their capability development trajectories. We have contrasted the capability development trajectories of the Canadian subsidiaries of US MNEs (NAFTA insiders) and EU MNEs (NAFTA outsiders). We have also assessed the occurrence of variations in the above effects as a function of the value-chain activities considered.

Our results suggest that outsider MNEs do suffer from a liability of inter-regional foreignness vis-à-vis insiders (this is the regional effect), but such disadvantage goes down over time, as the outsider MNEs gain more experience in the host region (this is the learning effect). Moreover, different value-chain activities are associated with specific regional and learning effects: upstream activities appear to suffer less from the liability of inter-regional foreignness than downstream activities, and also incur less learning to reduce such liability.

Future research should investigate further the concepts of regional strategies and region-bound FSAs. Although Ghemawat (2005) has provided an insightful framework describing various regional strategy types, much work remains to be done in order to gain an in-depth understanding of the precise role of regional strategies, as one expression of semi-globalization positioned between the theoretical extremes of global integration and national responsiveness.

Our current research has some limitations. First, our sample size is relatively small as compared to similar studies on foreign subsidiaries operating in Canada (e.g., Frost et al., 2002). Our sample may
thus not be fully representative of the entire population of US and EU subsidiaries in Canada, though the dataset we collected through personal interviews, and which was in all cases augmented with substantial background company information, is probably highly reliable. Second, we viewed the NAFTA zone as an integrated region. Though such application is consistent with the work of, e.g., Benito et al. (2003), we should recognize that intra-regional heterogeneity is unlikely to disappear fully (Malhotra et al., 1998), meaning that US subsidiaries in Canada should not necessarily be considered as full insiders as compared to domestically owned and controlled firms, a further reflection of the continued challenges posed by semi-globalization.

Endnote:

i Earlier versions of this paper were presented at the 2007 ASAC Conference (Ottawa, Canada) and the 2007 SMS Conference (San Diego, US).

ii Here, we categorize a company as foreign-controlled if at least 50% of its voting interests are held by foreigners. We received 62 responses, but removed 2 incomplete questionnaires. Our final sample thus includes 38.2% (60 out of 157) of the population of the largest foreign-controlled companies in Canada in 2002 as published by the National Post Business (2003). Of the 60 foreign subsidiaries, 25 (42%) reported sales of over $1 billion in Canada in 2004, including five with sales over $15 billion. Our sampled companies cover a wide variety of industries. There are eighteen companies in manufacturing (30%), nineteen in oil and gas (32%), six in finance, insurance, and real estate (10%), seven in services (12%), five in transportation, communication, and utilities (8%), two in whole and retail trade (4%), and three in mining and construction (5%).

iii We did include Kogut and Singh’s (1988) cultural distance measure in our models, but the high correlation (0.85) between cultural distance and region led to high multicollinearity. Moreover, the explanatory power of the regional variable appeared much higher than that of the cultural distance parameter. Therefore, we dropped the cultural distance parameter from our models.
References:


Statistics Canada. 2005. CANSIM II Database

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**Figure 1.** Subsidiary capabilities in an era of regionalization
Figure 2. Unbundled subsidiary capabilities in an era of regionalization
### Table 1 Descriptive statistics and correlations

<table>
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<tr>
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<th>Mean</th>
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<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
<th>(10)</th>
<th>(11)</th>
<th>(12)</th>
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<tr>
<td>(1) Overall subsidiary capabilities</td>
<td>0.619</td>
<td>0.72</td>
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<td>(2) Subsidiary capabilities - innovation</td>
<td>0.642</td>
<td>1.47</td>
<td>0.524**</td>
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<tr>
<td>(3) Subsidiary capabilities - production</td>
<td>0.268</td>
<td>1.395</td>
<td>0.506**</td>
<td>0.257*</td>
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<td>(4) Subsidiary capabilities - sales</td>
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<td>1.324</td>
<td>0.710***</td>
<td>0.342**</td>
<td>0.319*</td>
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<td>(5) Subsidiary capabilities - support</td>
<td>0.613</td>
<td>0.808</td>
<td>0.881**</td>
<td>0.287*</td>
<td>0.263*</td>
<td>0.572**</td>
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<td>(6) Overall parent FSAs</td>
<td>0.7</td>
<td>0.653</td>
<td>0.598**</td>
<td>0.205*</td>
<td>0.337**</td>
<td>0.505**</td>
<td>0.498**</td>
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<td>(7) Parent FSAs - innovation</td>
<td>1.103</td>
<td>1.434</td>
<td>0.212</td>
<td>0.477**</td>
<td>0.103</td>
<td>0.252</td>
<td>0.084</td>
<td>0.408**</td>
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<td>(8) Parent FSAs - production</td>
<td>0.682</td>
<td>1.336</td>
<td>0.296**</td>
<td>0.067</td>
<td>0.418**</td>
<td>0.256*</td>
<td>0.115</td>
<td>0.505**</td>
<td>0.399**</td>
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<tr>
<td>(9) Parent FSAs - sales</td>
<td>0.383</td>
<td>1.3</td>
<td>0.271*</td>
<td>-0.012</td>
<td>0.152</td>
<td>0.409**</td>
<td>0.272*</td>
<td>0.648**</td>
<td>0.167</td>
<td>0.009</td>
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<tr>
<td>(10) Parent FSAs - support</td>
<td>0.65</td>
<td>0.688</td>
<td>0.696**</td>
<td>0.110</td>
<td>0.224</td>
<td>0.426**</td>
<td>0.634**</td>
<td>0.965**</td>
<td>0.239</td>
<td>0.297*</td>
<td>0.698***</td>
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<td>(11) Region (1=EU, 0=US)</td>
<td>0.413</td>
<td>0.496</td>
<td>-0.269**</td>
<td>-0.206</td>
<td>-0.045</td>
<td>-0.283**</td>
<td>-0.305**</td>
<td>-0.049</td>
<td>0.136</td>
<td>0.049</td>
<td>-0.074</td>
<td>-0.140</td>
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<tr>
<td>(12) Subsidiary age (log.)</td>
<td>1.507</td>
<td>0.405</td>
<td>0.250</td>
<td>0.225</td>
<td>-0.090</td>
<td>0.323**</td>
<td>0.280*</td>
<td>0.094</td>
<td>0.083</td>
<td>-0.029</td>
<td>0.083</td>
<td>0.097</td>
<td>0.061</td>
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<td>(13) Subsidiary size (log.)</td>
<td>6.181</td>
<td>0.717</td>
<td>0.009</td>
<td>-0.045</td>
<td>-0.119</td>
<td>0.122</td>
<td>0.037</td>
<td>-0.097</td>
<td>-0.072</td>
<td>-0.093</td>
<td>0.015</td>
<td>-0.057</td>
<td>0.019</td>
<td>0.337**</td>
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** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

### Table 2 Regression analysis for subsidiary capabilities

<table>
<thead>
<tr>
<th></th>
<th>(1) Overall model</th>
<th>(2) The production model</th>
<th>(3) The sales model</th>
<th>(4) The innovation model</th>
<th>(5) The support activities model</th>
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</thead>
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<tr>
<td>Parent FSAs</td>
<td>0.570 (5.611)**</td>
<td>0.624 (5.611)**</td>
<td>0.705 (5.552)**</td>
<td>0.399 (3.255)*</td>
<td>0.399 (3.255)*</td>
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<td>Region</td>
<td>-0.231 (-2.293)*</td>
<td>-0.221 (-2.284)*</td>
<td>-0.225 (-2.323)*</td>
<td>-0.24 (-2.129)*</td>
<td>-0.24 (-2.129)*</td>
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<tr>
<td>Subsidiary age</td>
<td>0.179 (1.666)</td>
<td>-0.002 (-0.017)</td>
<td>-0.021 (-0.161)</td>
<td>0.192 (1.629)</td>
<td>0.192 (1.629)</td>
</tr>
<tr>
<td>Subsidiary size</td>
<td>0.008 (0.071)</td>
<td>0.018 (0.173)</td>
<td>0.011 (0.103)</td>
<td>0.031 (0.262)</td>
<td>0.031 (0.262)</td>
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<td>Region*Parent FSAs</td>
<td>0.267 (2.297)*</td>
<td>0.263 (2.267)*</td>
<td>0.263 (2.267)*</td>
<td>0.262 (2.100)*</td>
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<tr>
<td>F-value</td>
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<td>10.675***</td>
<td>9.094***</td>
<td>2.97*</td>
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<td>df</td>
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<tr>
<td>F change</td>
<td>11.157***</td>
<td>10.675***</td>
<td>9.094***</td>
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<tr>
<td>R square</td>
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<td>0.451 0.451 0.451</td>
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** denotes p<0.001.
* denotes p<0.01.
* denotes p<0.05.
Figure 3
Regional and Learning Effects on Canadian Subsidiary Capabilities
Figure 4. Learning effect on unbundled subsidiary capabilities