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Jean-François Hennart

The Theoretical Rationale for a Multi-nationality-Performance Relationship

Abstract and Key Results

- This paper reviews the theoretical rationale that has been advanced so far for a positive relationship between multinationality (i.e. international diversification) and performance.
- We show that transaction cost/internalization theory implies no direct and general relationship between international diversification and performance.

Key Words

Multinationality, International Diversification, Performance, Transaction Cost Theory, Scale Economies, Flexibility, Learning

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Introduction

A flourishing empirical literature has, in the last ten years, attempted to find out whether a firm's multinationality, *M*, (i.e. its international diversification – the extent to which it undertakes value-adding activities in many different foreign markets) affects its performance (*P*).¹ More than 100 empirical studies have investigated this relationship, many of them published in top ranked journals such as *Management International Review*, the *Journal of International Business Studies*, the *Academy of Management Journal*, the *Journal of Finance*, and the *Strategic Management Journal* (Liu 2004). These studies have used a diversity of theoretical approaches, from the finance theory of portfolio diversification (e.g. Kim/Hwang/Burgers 1993, Reeb/Kwok/Baek 1998), to the resource-base view (e.g. Kotabe/Srinivasan/Aulakh 2002), and to organizational learning theory (e.g. Ruigrok/Wagner 2003), to predict a generally positive and monotonic (but in more recent studies a U-shaped or sigmoid) relationship between multinationality and performance. As many authors have noted (e.g. Ruigrok/Wagner 2003, Hitt/Hoskisson/Kim 1997), the findings of this literature have been disappointing. In spite of the very large number of studies, they have not been robust, as the relationship between *M* and *P* has been found to be negative (e.g. Denis et al. 2002, Click/Harrison 2000), insignificant or very weak (e.g. Tallman/Li 1996, Bodnar/Tang/Weintrop 2003), positive (e.g. Kim/Lyn 1986), U-shaped (e.g. Ruigrok/Wagner 2003), inverted U-shaped (e.g. Gomes/Ramaswamy 1999), and sigmoid (e.g. Contractor/Kundu/Hsu 2003, Lu/Beamish 2004).

What accounts for these unconvincing results? With few exceptions (e.g. Dess/Gupta/Hennart/Hill 1995, Goerzen/Beamish 2003, Li/Goerzen/Verbeke 2005), the search for explanations has not delved on possible weaknesses in theoretical underpinnings, concentrating instead on how to measure *M* and *P* and on the specific form of the relationship (linear or non-linear, and if non-linear, two stages or three stages) (Annavarjula/Beldona 2000, Contractor/Kundu/Hsu 2003, Sullivan 1994).

It is not my goal here to do a comprehensive review of this vast literature, or, following most authors, to discuss in detail which operationalization of *M* and *P* should be chosen. Given the lack of robust empirical findings after more than one hundred investigations, the time seems ripe for a re-evaluation of the theoretical bases of this literature. The goal of this paper is, therefore, to critically evaluate the theoretical arguments offered in the *M/P* literature for the existence of a relationship between *M* and *P*.

The first section of this paper summarizes the main theoretical arguments made by the *M/P* literature for the existence of such a relationship. As a background for a critical evaluation of these arguments, Section 2 succinctly summarizes some salient facts about MNEs and foreign direct investment (FDI), and briefly sketches one of the main theories which have been developed to explain them, the transaction

cost/internalization (TCI) model. Based on this rapid summary of TCI and of what we know about MNEs, Section 3 presents a critical evaluation of the theoretical arguments of the M/P literature and argues that there is no strong theoretical support for the existence of a universal and positive relationship between M and P. I follow with a short discussion of methodological issues, before offering some conclusions.

The Main Arguments of the M/P Literature

The M/P literature has made two main predictions. First, it has sought to relate an MNE's international diversification to its riskiness, with the prediction that the more internationally diversified an MNE (the larger the number of countries where it has affiliates), the lower its risks (at equivalent level of profits). Second, it has related an MNE's international diversification to its profitability, generally predicting that the more internationally diversified an MNE, the greater its profitability.²

The initial impetus for the M/P literature came from the theory of portfolio diversification in finance. Markowitz (1959) showed that it was possible to reduce the risk of a portfolio of securities by investing in assets whose returns were uncorrelated. By analogy, a number of authors argued that firms should experience lower risk at any given level of returns if they had activities located in a portfolio of countries which were not economically integrated (Shapiro 1978). Hence the early M/P literature argued that firms with operations in many diverse countries would enjoy lower risk (at any level of profit) compared to their less geographically diversified rivals (Kim/Hwang/Burgers 1993).

More recent work has largely shifted focus from this initial interest in testing the impact of international diversification on a firm's return/risk profile to the substantially different proposition that firms which are internationally diversified should enjoy higher profits. Three basic arguments have been used in this literature to predict a positive relationship between a firm's profitability (usually measured by its ROA or ROS) and its international diversification.³ Being internationally diversified is supposed to increase profitability because (1) it makes it possible to exploit scale economies; (2) it provides better and more flexible access to resources; (3) it allows for more learning.

The "economies of scale argument" is that international diversification allows firms to spread fixed costs over a larger market, and hence to increase their profitability. Contractor, Kundu, and Hsu (2003, p. 5), for example, write that "advantages of international expansion accrue by spreading common and central overheads over more and more nations; this is especially critical in R&D-intensive industries that require amortization of R&D from more than a few markets". Similarly, Hitt, Hoskisson, and Kim (1997, p. 771) write that "international diversification provides

greater opportunities to achieve economic scale and to amortize investments in critical functions such as R&D and brand image over a broader base.” In other words, firms which invest heavily in fixed costs (such as R&D) will be more profitable the larger the number of countries in which they do business.

A second reason why, according to M/P scholars, internationally diversified firms should be more profitable, is that having dispersed foreign operations provides better and more flexible access to resources. For example, Contractor et al. state that international diversification grants “access to cheaper and idiosyncratic resources in foreign countries: these could include cheaper labor, better technology, or any country-specific resource” (Contractor/Kundu/Hsu 2003, p. 6) while Kim, Hwang, and Burgers (1993, p. 276) argue that “the multiplicity of national markets allows firms to minimize the effect of adverse changes in a country’s interest rates, wage rates, and commodity and raw material prices by providing the added option to more readily shift production and sourcing sites to other more favorable national markets.”

A third argument why international diversification increases profitability is that “the diversity of national markets exposes firms to multiple stimuli which provides [sic] with a broader learning opportunity to develop more diverse capabilities than are available to purely domestic firms” (Kim/Hwang/Burgers 1993, p. 276). Contractor, Kundu, and Hsu (2003, p. 6) argue that international diversification provides “greater learning or international experience” and better “global scanning of rivals, markets, and other profit opportunities”. And Hitt, Hoskisson, and Kim (1997, p. 774) write that “international diversification provides the opportunity for new and diverse ideas from a variety of markets and cultural perspectives. This suggests that internationally diversified firms have greater opportunities to learn (increasing organizational knowledge) than do purely domestic firms”. Hence having affiliates in many foreign countries increases organizational learning, which in turn increases profitability.

Multinational Enterprises: The Facts and the Theories

Before critically assessing these arguments, it may be useful to relate them to the salient facts about MNEs and FDI, and to TCI theory. The following is a partial summary of what we know about MNEs and their expansion abroad.

First, MNEs have been defined as firms which own value-adding activities (Dunning 1993) or which have employees (Hennart 1982, 2001) outside their own country. One of the implications of this definition is that whether or not a firm is likely to be an MNE depends, *ceteris paribus*, on the size of its domestic market. For example, if the United States were to be divided into 50 independent states, the number and international diversification of its MNEs would jump. Similarly, *for a*

given total firm size, a firm based in a small country will be more internationally diversified.⁴

Second, MNEs undertake direct, rather than portfolio, investments. In spite of a lack of systematic data, there is evidence that MNEs invest large, and often full stakes, in their foreign affiliates in order to control them. For example, 74 percent of the foreign affiliates of US MNEs were wholly-owned in 1975 (Beamish/Delios/Lecraw 1997) and majority-owned affiliates accounted in 1999 for 84 percent of the employment of all US foreign affiliates (Mataloni/Yorgason 2002). Even Japanese MNEs, which are generally seen as preferring joint ventures, had a tendency to seek full ownership, with 57 percent of their foreign affiliates wholly-owned in 1994 (Beamish/Delios/Lecraw 1997, tables 5.5 and 5.6).

Third, the goods and services that MNEs produce abroad are overwhelmingly those they produce at home: 83 percent of the sales of foreign affiliates of US MNEs were in 1966 in the same BEA classification (roughly equivalent to a 3 digit SIC) as their parents (Hennart 1982); likewise, 80 percent of the US manufacturing affiliates of Japanese MNEs were, in the mid 1980s, manufacturing the same product as was manufactured by their parents in Japan (Hennart/Park 1994).

Fourth, the value-adding activities established abroad by MNEs are quite varied: extractive operations or plantations to supply raw materials for further processing (backward vertical investments), sales affiliates to handle exports (forward vertical investments), manufacturing or service operations to exploit the MNE's intangibles, or R&D operations to source them (horizontal market-seeking or asset-seeking investments) (Hennart 1982, 2000).

A large number of affiliates are set up abroad by MNEs to exploit new products and processes (Vernon 1966, Johanson/Vahlne 1977, Buckley/Casson 1976). In spite of a recent increase in the share of R&D that MNEs do outside their own country (United Nations Conference on Trade and Development 2005), these new products and processes are overwhelmingly the outcome of R&D expenditures made at the firm's HQ (usually in its home country). This is shown by looking at the share of all US patents taken by a country's largest MNEs that were assigned to their domestic R&D units. For example, over the 1981-86 period, 99.4 percent of the patents filed by Japanese MNEs in the US came from research done in Japan. The percentage of US patents taken by US firms that came from research done in the US was 97 percent, and so was the percentage of US patents taken by French firms that came from research done in France. German MNEs did 93 percent, and UK MNEs 83 percent of their research at home (Patel/Pavitt 1991). There are not been recent dramatic declines in these percentages, with estimates over the 1987-1990 period of the share of patenting done at home at 90 percent for US firms, and 82 percent for French and German firms. The overall figure for US and European firms was 81 percent (Cantwell 1995). The only MNEs that did a significant amount of research outside their own country were those based in small home markets (the Netherlands, Belgium, and Switzerland).⁵ Hence MNEs exploit abroad knowledge

and reputation earned at home, and this explains why a firm's domestic R&D and advertising intensity is a significant predictor of the level of its investment abroad (e.g. Swedenborg 1979, table 5.7 for Swedish firms, Hennart/Park 1994 for Japanese firms).

Sixth, the foreign operations of most MNEs are not internationally diversified, in that they are concentrated in a limited number of countries. Looking at the sales dispersion of the world's largest 500 MNEs, Rugman and Verbeke found that 320 of the 380 largest MNEs for which geographic sales data was available had an average of 80 percent of their sales in their home region of the Triad. In other words, if they were based in a European country, the bulk of their foreign sales were in Europe, if in the US in North America, and so on (Rugman/Verbeke 2004). This pattern is consistent with the oft noted fact that MNEs expanding abroad tend to go first to culturally close countries (Davidson 1980), and that the geographical distribution of an MNE's affiliates reflects this (Veugelers 1991). Hence Spanish firms have a disproportionate share of their foreign affiliates in Latin America, German and Finnish firms in Eastern Europe, and Japanese MNEs in South, East, and South-east Asia (United Nations Conference on Trade and Development 2004, Annex table A.I.26).

It is to make sense of these facts that a few scholars started to develop in the 1970s a number of separate versions of what has come to be called transaction cost or internalization (TCI) theories of the MNE (Buckley/Casson 1976, Rugman 1981, Hennart 1982, 2001).

MNEs are firms that cross national boundaries. Hence a theory of the MNE must fundamentally be a theory of the size and scope of firms. The basic insight of TCI theory is that firms and markets are alternative institutions to organize interdependencies between economic agents located in different countries. Each of these two institutions experiences different efficiencies in organizing a specific interdependency because they use a different mix of the two basic organizing principles, the price system and hierarchy, with firms organizing interdependencies mostly through hierarchy, and markets mostly through prices (Hennart 1993, 2000).

TCI theory has a standard explanation why a particular interdependency is likely to be organized within the firm rather than on markets. That explanation hinges on the comparative efficiency of the hierarchical mode of organization over the price system in informing parties of the potential gains from organizing the transaction, eliminating bargaining over the distribution of tasks and rewards, and enforcing the agreement (Williamson 1985, Hennart 1982, 2001). Firms will organize internally interdependencies whenever these interdependencies would be less efficiently organized on markets. This will be the case for some raw materials, some types of marketing services, and some intangibles, especially tacit knowledge which has often weak property rights and is therefore less efficiently transacted on markets.⁶

Because there is wide variety in the types of international interdependencies which are most efficiently organized internally, TCI theory explains why the foreign

operations of an MNE are a mix of extractive operations undertaken to bypass inefficient markets in raw materials, service operations set up to remedy imperfect market in reputation, marketing operations undertaken in response to imperfections in the market for marketing services, and manufacturing plants undertaken to bypass inefficient markets for knowledge by incorporating it into products and services sold to the public.

It is important to contrast the TCI view of MNEs as efficient organizers of interdependencies from the imperfect competition view developed by Hymer (1976), Caves (1971) and Kindleberger (1969). Hymer and his followers argued that MNEs have unique assets, sometimes called monopolistic advantages, such as new and/or differentiated products, which they transfer abroad in order to reap monopolistic profits. In their view, MNEs arise from imperfections in final product markets. That view differs from TCI in three important ways. First, while Hymer et al. stress imperfections in *final output* markets, transaction costs theorists see MNEs as arising from inefficient coordination through *intermediate input* markets. Such inefficient intermediate input markets can exist in competitive industries. Hence MNEs do not need monopolistic advantages to expand abroad. Second, TCI proponents have argued that having unique assets, such as new products and processes, does not necessarily confer “monopolistic advantages”, and hence does not guarantee super-normal profits, since many of the “unique” products sold by MNEs will have close substitutes, especially in the long run (Tece 1981). Third, the creation of such “monopolistic advantages” requires MNEs to bundle resources bought or rented on markets for human and non-human assets. If these assets are bought or rented at their capitalized value, the MNE will not earn any super-normal profits on them. Only luck and/or superior management skills will make it possible for MNEs with “distinctive competencies” or “superior resources” to extract more value from the factors of production used to generate these “monopolistic advantages” than they have to pay to create them, and hence to earn super-normal profits on them (Hennart 1994). Investments made by MNEs in generating unique products and processes, even if properly captured by accountants, will not therefore necessarily yield returns over the cost of the inputs used to generate them. In other words, it is mistaken to assume that a firm that has made large investments in research and development or advertising is necessarily making super-normal profits.

TCI Theory and the Theoretical Arguments of the M/P Literature

TCI theory has important implications for the possible existence of a relationship between international diversification and performance. I first discuss what it has to say on the specific rationale given in the M/P literature as to why international

diversification should reduce risk and increase profitability. I then argue that TCI theory shows that there is no general relationship between international diversification and performance.

International Diversification and Risk Reduction

TCI theories explain why MNEs are poor vehicles for overall risk reduction. Risk reduction requires investment in countries with different business cycles. TCI theories predict instead that MNEs will invest in countries that are culturally close, and hence economically integrated. Hennart (1982, 1991), for example, argues that, in contrast to market governance that is based on decentralized information and measurement of output, hierarchical coordination is based on central direction and observation of behavior.⁷ This implies that the costs of firm governance rise dramatically with cultural, institutional, and geographical distance, because such distance increases the amount of information managers must collect to effectively direct the actions of employees while geographical distance increases the cost of observing their behavior. This explains the noted preference of MNEs for investments that are geographically, institutionally, and culturally close to their home country but that, unfortunately for unsystematic risk reduction, have also often business cycles that are in synch with those of the home country. Second, risk reduction benefits from product diversification. But product diversification implies that the firm will venture into unfamiliar activities, thus increasing its management costs (Jones/Hill 1988). As a result, an MNE's foreign affiliates (with the exceptions of forward and backward integration) are likely to be in the same industry as their parent, thus yielding little product diversification. Third, diversification requires taking many small stakes in many firms. Instead, TCI theory tells us that firms expand whenever control of behavior is more efficient than measurement of output; since controlling the behavior of employees is easier when the parent has full ownership, it is not surprising that MNEs typically invest in a small number of majority or fully owned affiliates rather than spreading their investments over a large number of small stakes, as would be required for optimal diversification. All in all, TCI theories predict that MNEs will provide very limited portfolio diversification benefits.

Consistent with theory, the observed pattern of MNE international diversification abroad does not lead us to expect a large reduction in unsystematic risk. As we have noted above, (1) MNEs have a consistent preference for full ownership; (2) they exhibit very little unrelated product diversification; (3) the international dispersion of their assets does not seem to reflect a desire to reduce unsystematic risk, being concentrated in countries with similar business cycles.⁸ It is therefore not surprising that, when it comes to reducing diversifiable risk, US investors will do much better buying a geographically diversified portfolio of foreign securities than in-

vesting in US-based MNEs. Using 1966-1974 data, Jacquillat and Solnik (1978) found the latter reduced risk by 19 percent over a portfolio of US domestic securities, while buying an appropriately diversified portfolio of international stocks reduced risk by 50 to 70 percent. Madura (1989) replicated this study with data from the 1974-1987 period and found similar results.⁹ The empirical evidence thus shows that MNEs are not efficient vehicles for unsystematic risk reduction through international diversification.

While the international diversification of MNEs is unlikely to achieve large reductions in unsystematic risk, it should lead to increases in systematic risk. These increases in systematic risks come from non-PPP exchange rates which result in foreign exchange risk, and from the fact that to diversify geographically MNEs must operate in unfamiliar countries, with attendant increases in political risk and in management costs, resulting in a “liability of foreignness” (Hymer 1976, Zaheer 1995). It is therefore not surprising that Reeb, Kwok, and Baek (1998), analyzing 880 US firms with international operations, found that their systematic risk increased with their ratio of foreign to total sales and foreign to total assets.

To sum up, risk diversification does not appear to drive MNE strategies, and the net impact of geographical diversification on their profit stability may in fact be negative, as large increases in systematic risk may more than compensate for small decreases in unsystematic risk.

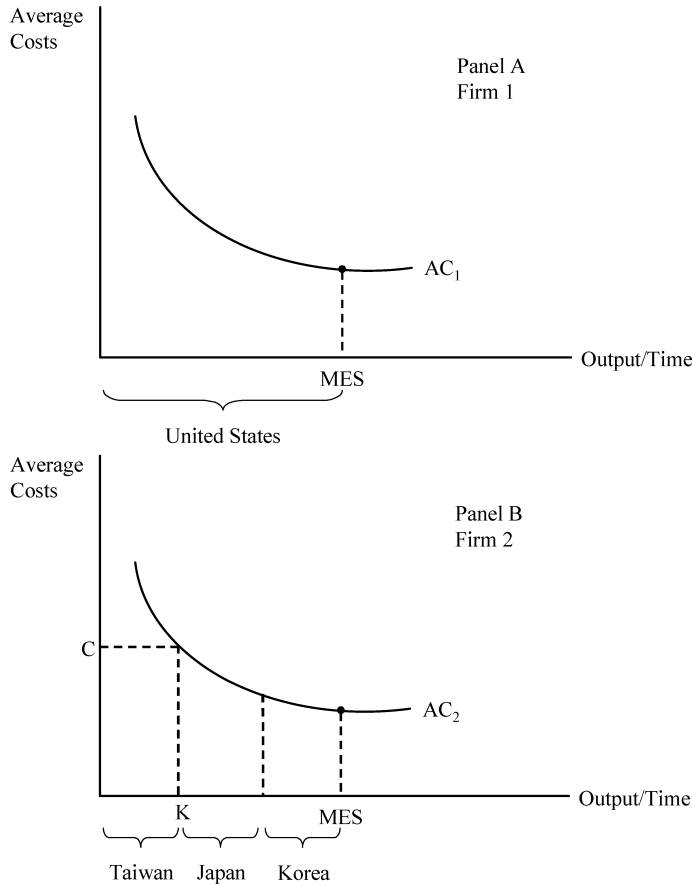
Multinationality and Profitability

The second argument of the M/P literature is that internationally diversified firms should be more profitable. Three main reasons are put forth: internationally diversified firms are better able to spread their fixed costs; they have better and more flexible access to resources; and finally they learn more from their environment.

The Economies of Scale Argument

As we have seen, the M/P literature has argued that firms which are more internationally diversified will be more profitable because they will have a larger market to spread their fixed costs. It is true that high fixed costs, such as R&D, result in an average cost curve which falls with the volume of production per unit of time until minimum efficient scale (MES) is reached. However, what matters for the exploitation of scale economies is not international diversification per se, but being able to tap a market sufficiently large to reach MES. While the M/P literature argues that obtaining such a market size by selling in many separate foreign countries (being internationally diversified) results in higher profitability than the alternative of selling in only one foreign country (i.e. having low “international diversification”)

Figure 1. Scale Economies and Multinationality, Two Firms in Same Industry



or selling exclusively at home, we will show that, even if one assumes that selling overseas incurs similar costs as selling at home, selling in many foreign countries does not necessarily provide advantages over selling in only one, or even selling in none.

Economies of scale occur both at the plant and at the firm level. At the plant level, fixed costs, such as machinery, cause declining average costs as the volume of production increases per unit of time. However, because total costs are the sum of fixed and variable costs, the average cost curve stops falling and flattens out past the point called Minimum Efficient Scale (MES) where reductions in fixed cost per unit of product are increasingly small. Panels A and B of Figure 1 map plant level economies. They graph the average costs curves of the plants A and B of two firms, 1 and 2. Each firm consists of a single plant, using the same level of fixed costs, and hence having exactly the same average cost curves. Consequently for both plants

MES is reached at the same point. We assume that both plants face similar aggregate demand curves. Plant A of firm 1 in panel A is located in the United States. We assume that this market is so large that it can provide by itself the market volume necessary to reach MES. Plant B of firm 2, in panel B, is located in Taiwan. Because the home market for its products is small, it must, to reach MES, sell in three countries, its home market and two foreign markets, Japan and Korea. Firm 2 is thus more internationally diversified than firm 1, and should, according to M/P theorists, be more profitable. In fact, figure 1 shows clearly that minimizing average costs (and hence maximizing profitability) depends on being able to tap sufficient market size to reach MES. Failure to manufacture at MES increases average costs, and hence reduces profitability. For example, if firm 2 manufactures at output K, its average costs will be C, and its profitability, *ceteris paribus*, lower than if it manufactured at MES. But, ignoring for the time being the additional cost of selling abroad, and keeping everything else constant, as long as both firms operate at MES, they should be equally profitable. In other words, what matters is the total size of the market, not the size of its foreign component (or the ratio of the two, the most commonly used measure of multinationality in the M/P literature), and not the number of separate foreign countries in which the firm is selling (another measure of multinationality used in the M/P literature).

The very same arguments can be used for firm-level scale economies. These economies arise because the building up of intangibles, such as technological and reputational assets, is characterized by high fixed costs. Hence firm-level average costs will decline as output increases until MES is attained and the average cost curve flattens out (as in the case of plant-level scale economies, this flattening occurs because variable costs typically make up a significant share of total costs and do not decrease per unit of output with an increase in output volume). Hence firms which invest in R&D must sell enough products to amortize their R&D investments or their advertising campaigns. The MES for an advertising campaign or an R&D project can therefore be seen as the output which fully amortizes the fixed costs of generating goodwill or putting a new product on the market. Again, what is important is that the firm has enough customers to reach MES. If, as a first approximation, one assumes that selling at home incurs the same costs than selling abroad, then there is no reason why, as argued in the M/P literature, firm 2, which sells in three countries to reach MES (to amortize its R&D), should be more profitable than firm 1, which sells only in its home market.

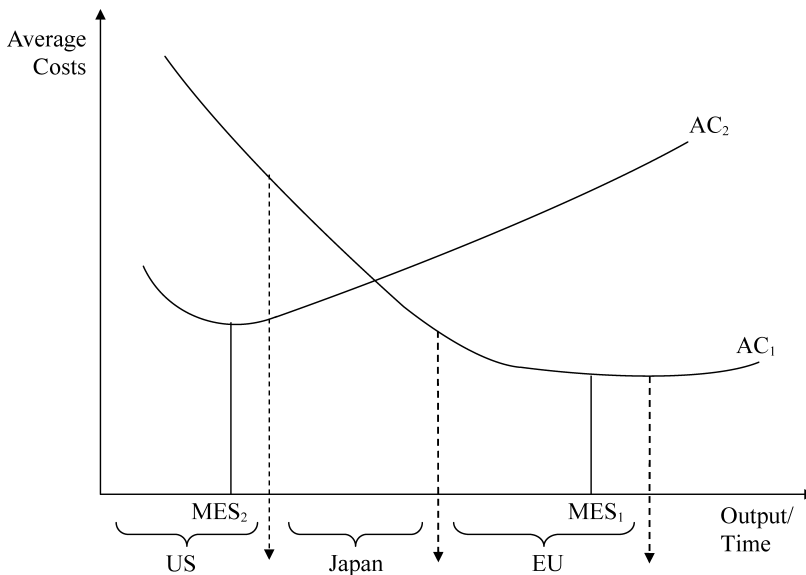
In fact, one would expect selling abroad to be generally more costly than selling at home. To exploit its plant-level scale economies abroad, firm 2 will have to export its products to Japan and Korea. Hence, compared to firm 1, it may have to shoulder the additional cost of overcoming trade barriers. While trade barriers are not a problem for the exploitation of firm-level scale economies, as these economies can be exploited by setting up a plant abroad, manufacturing and selling abroad typically also involves higher costs than doing it at home, as they almost always

require modifications in production process and marketing mix to adapt products to local conditions (Usenier 1996). Any such adaptations will lower potential economies of scale. Conversely, the optimal exploitation of scale economies, including the exploitation of intangibles, occurs when the firm can use abroad exactly the same production process and marketing mix as at home. Hence firm 1, which is able to exhaust economies of scale in its own market, and can thus avoid the costs of overcoming trade barriers and the loss of scale economies due to product or process adaptation, should be, *ceteris paribus*, more profitable at MES than firm 2.

It should therefore be more profitable, everything else constant, for firms to exploit both plant and firm level scale economies (and hence intangibles) without crossing borders, or, if this is not possible and expansion into foreign markets is necessary, in countries that require as few adaptations as possible. Therefore, at any given MES, and consequently at any given level of intangible investment, purely domestic firms should outperform MNEs, and firms with operations in a small number of culturally or institutionally similar countries should outperform those which have to operate in a large number of diverse markets, i.e. which are internationally diversified, a conclusion which is directly contrary to that of much of the M/P literature but which has received empirical support (see Goerzen/Beamish 2003).

The analysis has compared so far two firms which have the same average cost curves and only differ in the size of their home markets. In fact, the samples used in M/P studies typically contain firms from a variety of industries. Because the benefits of investing in fixed costs, either at the plant or at the firm level, and hence

Figure 2. Scale Economies and Multinationality: Two Firms in Two Industries



the strength of scale economies, varies across industries, firms in different industries are likely to have different cost curves, with different levels of MES. Those which specialize in products benefiting from investments in intangibles, such as R&D, will need, *ceteris paribus*, a larger output to amortize their investments than firms which make products requiring less intangible investment. Because even the largest domestic market may be too small to fully amortize the investments of firms in high fixed costs industries, such firms may have to go abroad to reach MES. Figure 2 contrasts firm 1 which assembles cars, with average cost curve AC_1 , to firm 2 which manufactures bread, with average cost curve AC_2 . Because bread is subject to lower plant and firm scale economies than cars, firm 2 reaches MES without having to leave home, in contrast to firm 1 that must sell in many countries.

What does this graph tell us about the relationship between multinationality and performance? Only that firm 2 would incur higher short run costs if it entered Japan and the EU, and that firm 1 would be less profitable if it had not entered these two countries. Only in that sense is multinationality related to performance. Since whether or not firms are at MES cannot be told from the number of markets they have entered or from the relative importance of their foreign activities, multinationality as measured in M/P studies is basically unrelated to a firm's level of average costs, and hence to profitability.¹⁰

Note also that the conditions that lead to efficient exploitation of a given level of investment in intangibles, i.e. no foreign operations, or limited operations in culturally close countries, are exactly the converse of those that are assumed by M/P authors to lead to the next two categories of benefits of international diversification, global flexibility and access and global learning, since, as we will see below, both global flexibility/access and global learning are maximized by a thorough dispersion of operations in culturally and economically heterogeneous countries.

The Flexibility Argument

The second reason put forth by M/P theorists as to why international diversification should increase profitability is that owning spatially dispersed affiliates provides firms with better and more flexible access to resources. Let us first consider the issue of better access. The argument implies, for example, that an MNE with affiliates in six Asian countries is better able to take advantage of the Far East's cheap labor costs than one that has none.

For the argument to have traction, one must be able to show that the only, or the most efficient, way to obtain access to goods and services is to own the plants and offices producing them. TCI theory argues that this is not the case: only in specific cases where spot markets or contracts experience high transaction costs will sourcing inputs and selling outputs through a network of owned affiliates be more efficient than contracting with independent parties (Williamson 1985, Hennart

1982, 2001). If markets work well, there should be no penalty from having a relatively small network of owned affiliates, and hence a low level of international diversification, and for using instead independent suppliers and distributors. The empirical evidence is supportive. Firms like Nike or Dell obtain the bulk of their Asian supplies from independent subcontractors, not from owned manufacturing plants, without any apparent cost disadvantage. While vertical integration into manufacturing is the most profitable option in specific cases (Williamson 1985, Hennart 1982), there are no reasons to expect that owning a large number of affiliates always provides better access than owning a few, and hence that high international diversification always leads to high performance.

M/P theorists have also argued that firms which have captive operations in a large number of countries will be more profitable than those without because the former can be more flexible and minimize the impact of adverse changes in the environment by shifting production to more favorable locations within their network. This argument seems to overlook the fact that to be able to shift production across subsidiaries, one must have similar operations in a portfolio of countries, each with excess capacity. Hence the benefits of flexibility must be weighted against their costs, which are giving up plant specialization and maintaining excess capacity. When this is taken into account, more flexible firms will not necessarily be more profitable.

The second problem with the argument is that it implicitly assumes that firms cannot obtain flexibility through markets. However, as pointed out by TCI theories, firms can also use markets to shift production. For example they can drop a supplier in a high cost country and replace her with one in a low cost country. Hence for the flexibility argument to work, one must show that firms with an extensive network of affiliates can shift production faster and at less cost than those using markets.

One must distinguish here between variable and fixed costs. The variable cost comparison is between the cost of shifting production within an existing network of affiliates pre-positioned in favorable locations and that of using the market. In this case, internal supply saves on the cost of finding reliable market partners and of setting up safeguards, contractual or otherwise (Rangan 2000). Internal supply might then be easier for products whose procurement would incur high market transaction costs, but this is only a fraction of all goods and services exchanged internationally.

When fixed costs are considered, the argument becomes even less persuasive. The problem is that affiliate networks take time to build and, in some parts of the world like Europe, are very costly to disband. Unfortunately, yesterday's ideal location is unlikely to be today's (Doz/Santos/Williamson 2002). Both gradual and sudden changes in economics and politics may therefore make having a network of owned affiliates more a problem than a solution. European firms such as Philips experienced considerable difficulties in the 1960's and 1970's because they were

operating from a network of dispersed European affiliates set up when European markets were separated by high trade barriers. Their US rivals entered after European integration with a smaller number of more efficient pan-European plants located in cheaper locations. Philips was stuck with plants which proved politically difficult and economically costly to close down (Franko 1976, Humes 1993).

To sum up, the arguments of the M/P literature that a large network of dispersed affiliates provides both better and more flexible access to resources is questionable. Only for transactions subject to high market transaction costs does a network of owned plants provide better access. But MNEs owning these plants are likely to have fewer degrees of freedom in reconfiguring their network in response to changes in the environment than firms with no pre-existing plants. Hence the argument that a network of captive affiliates overseas provides firms with both better and more flexible access to resources, and thus greater profitability, requires further critical scrutiny.

The Learning Effect

The third argument mustered by M/P scholars to justify a positive relationship between international diversification and performance is based on learning. As countries tend to have idiosyncratic environments, M/P scholars argue that MNEs can learn from these diverse environments by having operations there, and this learning will increase their capabilities and contribute to their profits. This argument is inspired by the work of a number of authors who see today's MNEs as "heterarchies" or "transnationals" which use matrix organizational structures to allow all members of the network to generate and share knowledge with one another (Hedlund 1986, Bartlett/Ghoshal 1989). Indeed, the very competitive advantage of MNEs would be their capacity to pool this geographically dispersed knowledge (Kogut/Zander 1993). If this is true, then the larger and more diverse the portfolio of countries in which MNEs have subsidiaries, the greater their ability to learn, and the greater their profitability (Hitt/Hoskisson/Kim 1997, Ruigrok/Wagner 2003).

This interesting argument is based on a number of implicit assumptions. The first one is that the knowledge an MNE needs is both dispersed and locally embedded. The second is that a manufacturing, a sale, or an extractive subsidiary in a given foreign market is the main way for an MNE to access this locally-embedded knowledge, and to incorporate it into its own practices. The third one is that all foreign subsidiaries do in fact learn from their environment and transfer this knowledge to all the other units of the MNE. If all of the above is true, then the larger the number and diversity of countries where the MNE has subsidiaries, the greater the amount of knowledge it garners.

It is unclear, however, that the number of countries where an MNE has affiliates has a direct relationship to how much it learns, and to how profitable it is. First, a

good deal of the dispersed knowledge that MNEs need is codified and footloose, and can be accessed from a single location, for example through a central research department examining patents and scientific publications. Even when the needed knowledge is locally embedded, it is often not dispersed: the MNE can then tap it by locating its HQ and R&D facilities in that location. For example, a Japanese cosmetics firm could learn how to develop fragrances by locating the HQ and R&D facilities of its perfume division in Southern France. In both these cases, knowledge can be captured with a single foreign affiliate. Second, even if knowledge is embedded in dispersed locations, it does not follow that a network of affiliates is the only way to tap it. Firms can and do learn from outside their network of affiliates, for example from international suppliers or customers (Von Hippel 1988). Indeed, Doz, Santos, and Williamson (2002) see this as increasingly necessary, as many innovations come from peripheral markets in which the MNE may not have affiliates.

M/P theorists argue that the geographical dispersion of foreign affiliates measures the amount of learning done by their parents. This implicitly assumes that each foreign affiliate learns from its environment and shares that knowledge with the rest of the MNE. This is highly questionable. First, because exploration and exploitation require different structures, processes, strategies, capabilities, and cultures, they are typically done in separate organizational units (March 1991, He/Wong 2004). Hence while some affiliates will be assigned to explore, others will be asked to exploit. Business historians and TCI theorists generally agree that while MNEs do acquire some affiliates abroad to obtain their know-how, the bulk of their affiliates is set up to exploit intangibles received from HQ (Wilkins 1970, Vernon 1966, Buckley/Casson 1976, Rugman 1981, Hennart 1982, Doz/Santos/Williamson 2002). As argued earlier, the more these intangibles can be exploited "as is", with as little local adaptation as possible, the greater the economies of scale, and hence MNE profitability. This has two implications. First, the MNE is better off operating in culturally similar countries. International diversification does not add to an MNE's stock of knowledge, and should have a negative impact on its profitability, since diverse markets hamper the exploitation of scale economies. Second, if MNEs set up foreign affiliates to exploit the knowledge generated at HQ, then we would expect them to be organized in product divisions, as this is the most efficient organizational structure to exploit scale economies (Stopford/Wells 1972). In such a structure, the firm organizes the global management of its activities by products. All foreign activities are run from a global product division HQ and its associated R&D facilities, which may be located at the firm's HQ or in a foreign subsidiary with a global mandate. Global product divisions are efficient in that case because they maximize the commonalities between markets and limit the power of local subsidiary managers to make local adaptations that would hamper the exploitation of scale economies. In this model, foreign subsidiaries are not asked to explore and share their know-how with the rest of the MNE network. They are neither funded nor rewarded for doing so.

Sometimes the knowledge obtained from HQ is difficult to exploit “as is” given the particularities of the local environment. In those cases, the technology received from HQ will have to be adapted to local conditions, and some local R&D capability will be required. But its role will be limited to locally adapting the product (United Nations Conference on Trade and Development 2005). The typical organizational structure chosen will then be the global area division, in which some autonomy will be given to the local operations. While more knowledge will be accumulated locally than in the case of global product divisions, there are no built-in incentives in such a structure to transfer it to HQ or to other divisions, since the local subsidiary will be typically rewarded on the basis of local results, and will have limited incentives to share knowledge with the rest of the MNE (Solvell/Zander 1998).

Whether international diversification increases an MNE’s stock of knowledge or not, and hence whether or not it contributes to profitability, depends therefore on which model of the MNE is empirically more prevalent. If HQ and a few select affiliates explore while most of them exploit, then having subsidiaries in a large number of culturally different countries will have little impact on an MNE’s stock of knowledge, and, as argued earlier, a negative impact on its ability to exploit its intangibles. If, as M/P scholars suggest, the “transnational model” of the MNE is the dominant one, where knowledge flows both ways between HQ and affiliates, and between the affiliates themselves, the more internationally diversified an MNE, the greater its access to knowledge, and hence its profitability.

While it is undeniable that MNEs make some acquisitions abroad to acquire the knowledge held by targets, and that this type of investment is particularly common for MNEs based in emerging economies (Hoskisson/Kim/White/Tihanyi 2004), the evidence, while clearly not definitive, strongly suggests that the bulk of the MNE foreign affiliates exploit rather than explore, and hence that an MNE’s total number of foreign affiliates or the number of countries in which they are present bears very little relationship to the stock of knowledge it possesses.

First, the data on patenting shown earlier shows that the overwhelming share of an MNE’s exploration is done at home, not in the subsidiaries. In fact, this data provide an underestimate of the concentration of exploration at HQs, because some of the exploratory R&D undertaken outside an MNE’s home country arise from the co-location of product division HQs and R&D facilities in key foreign subsidiaries. This increases the share of an MNE’s R&D performed outside its home country, because divisional HQs and their co-located R&D facilities may be located outside of the country of the MNE’s corporate HQ, but does not fundamentally change the distribution of tasks within the MNE, which remains one where HQ explores and the subsidiaries exploit. Hence most knowledge will flow from HQ to the subsidiaries, rather than the other way round, thus reducing the amount of knowledge the MNE receives from its foreign affiliates. This is particularly true for US and Japanese MNEs, which make up the most frequent samples in M/P studies.

This conclusion that the bulk of the knowledge stock of MNEs comes mostly from HQ, and not from the network of foreign affiliates, is also reinforced by a survey of executives at 144 of the world's largest firms. Asked about the role of their various geographical units in building competitive advantages, "the sample firms perceived that their domestic operations and/or indigenous resources and capabilities of their own countries continued to provide the main sources of competitiveness – especially in terms of technological capacity and skilled professional manpower" (Dunning 1996 cited in Doz/Santos/Williamson 2002, p. 47).

It is therefore not surprising that Doz sees the main logic of knowledge flows in MNEs as one of "projection" of HQ knowledge into subsidiaries, a logic that he describes as follows: "recipes imported from the home country of the MNC [MNE] are usually to be followed faithfully, with no departure from the procedural script. This is perhaps best illustrated by the Intel strategic motto: 'copy exactly' " (Doz 2004, p. 14). With such a logic, it is unlikely that MNEs will learn from their foreign subsidiaries.

Indeed, Doz, Santos, and Williamson provide evidence that MNE headquarters are not particularly interested in doing so, and routinely turn down innovations proposed by their foreign subsidiaries. Hence Motorola, then a leader in mobile phones, failed to learn from its Indian and Japanese operations that the mobile phone could be a successful replacement for fixed-line networks and that it would become a fashion accessory. Similarly IBM turned down the idea of the programmers of its German affiliate that standard programming solutions could be profitably sold to clients; these programmers left and went on to found SAP.

That most MNEs fail to tap the knowledge of their affiliates is confirmed by Birkinshaw and Ridderstrale's empirical study of subsidiary initiatives in MNEs. If, as argued by M/P theorists, MNEs behave as transnationals, learning from their network of internationally diversified affiliates, then we would observe HQ positively responding to ideas originating from their foreign affiliates. Yet after reviewing subsidiary initiatives by the Canadian-based affiliates of US MNEs and the extent to which they are successfully implemented, the authors conclude that "the organization (in its totality) will often view subsidiary initiatives with suspicion and hostility. It seems that there are disparate forces at various levels and locations within the organization that act to suppress subsidiary initiatives with the result that many efforts probably do not come to fruition. One way of viewing this process, we suggest, is to see the initiative as alien body that the 'corporate immune system' seeks to destroy." (Birkinshaw/Ridderstrale 1999, p. 150).

Another piece of evidence is provided by Piscitello and Rabbiosi (2005). They asked managers at the HQ of Italian MNEs whether a particular foreign subsidiary had transferred some kind of knowledge or competence to them, and the extent to which it had had an impact on the parent's capacity to innovate. This was scored 0 (no impact), 1 (low to medium impact) and 2 (medium-high to high). The average score for all affiliates was a very modest 0.673.

If the dominant strategy of MNEs were to tap the knowledge of their subsidiaries, then they would be organized through some type of matrix structures (Bartlett/Ghoshal 1989, Humes 1993). This does not seem to be the case. According to Turner and Henry (1994, p. 427), “It is clear that for most international companies the transnational model is more of an aspiration than a reality. [Globalization trends]... have induced many companies to organize around worldwide product divisions. This trend was anticipated in the 1970s by Stopford and Wells. However from the evidence available we would hypothesize that the worldwide product division is becoming the “standard” model in most situations, with the other three ideal-typical structural solutions [area, functional, and matrix] increasingly marginalized.”

While global product structures tend to discourage the generation of knowledge by foreign subsidiaries and their adoption by HQ, global area structures, which give more autonomy to local affiliates, encourage them to tap the idiosyncratic knowledge that is embedded in the local environment (Young/Tavares 2004). However, as argued earlier, such subsidiaries tend to be evaluated on their local results, and hence have limited incentives to share the knowledge they have acquired with the rest of the MNE system. The result, as Doz, Santos, and Williamson (2002) remark, is that horizontal transfers of innovations between the subsidiaries of MNEs organized by area divisions are truly “miracles” that often occur by sheer coincidence.¹¹

Based on this and other evidence, Doz, Santos, and Williamson (2003, p. 161 et seq.) conclude: “In our research we studied conventional multinationals companies and found little evidence that they were exploiting their potential for innovative advantage by melding dispersed knowledge – a capability which at least in theory they should be uniquely well placed to develop”.

In conclusion, there are reasons to doubt the overall empirical strength of the argument of M/P scholars that the larger and more geographically dispersed an MNE’s network of subsidiaries, the greater the amount of knowledge it absorbs, and the higher its profits. First, owning subsidiaries is not the only way to learn from a diverse international environment. Second, there are theoretical reasons to believe that the bulk of MNE affiliates are set up for exploitation, not for exploration, and that this limits the amount of knowledge that they transmit to the MNE network.¹² These theoretical reasons are supported by a good deal of evidence that point out that the “heterarchical” or “transnational” model of the MNE in which subsidiaries acquire local knowledge and share it within the MNE is more ideal type than empirical reality (Harzing 1999). It is therefore difficult to subscribe to the general proposition that an MNE with many foreign affiliates systematically learns more from its environment than one with a smaller network of subsidiaries, that it would be better able to transform these new ideas into profitable products, and that it would therefore be more profitable.

To sum up, neither the economies of scale, the flexibility, nor the learning arguments made in the M/P literature make a strong case for a robust positive link between international diversification and performance.

Some Additional Implications of TCI Theory

Besides casting doubt on the specific arguments of M/P theorists, TCI theory has also wider implications that suggest that it is difficult to make clear-cut predictions as to the impact of international diversification on performance.

First, TCI theory highlights that having activities abroad arises from multiple motives. Foreign affiliates are set up to acquire parts or raw materials, to exploit tacit knowledge or reputation, or to access technology or brand names. Given this variety of motives for foreign expansion, it seems difficult to develop a single theory that would predict the effect of such expansion on profits. For example, two MNEs may have the same level of international diversification, one with affiliates abroad extracting its raw materials, the other with foreign sales subsidiaries selling its products. Can we assume that these two MNEs will derive the same scale advantages from their network of foreign affiliates? And that the extent to which they learn from the local environment will be similar?

According to TCI theory, agents decide whether their interdependence yields more rents if organized via the price system (with agents coordinating their interdependence on markets) or within an MNE. Firms that choose the wrong governance structure (who organize an interaction through hierarchy when they should do it on the market, and vice versa) will obtain fewer rents than their peers who do choose the right governance structure (Hennart 1994, Williamson 1999). Assuming that economic agents can roughly predict the level of rents available under each organizing mode, and that they can correct mistakes rather quickly, the size of an MNE at any particular time will tend to be optimal. MNEs will shun from internalizing an additional interdependence that can be more profitably handled by the market, or from turning over to the market one that can be better handled internally. Hence TCI theory predicts that, absent mistakes and rigidities, an MNE's observed degree of international diversification should have no impact on its profitability. If it did, the MNE would integrate or disintegrate so as to attain the optimal scale and scope of activities. After controlling for all other factors that affect profitability, firms with high levels and firms with low levels of international diversification should be equally profitable because they are all at their optimal level of diversification.

Because not all firms may be able to correctly evaluate whether a particular transaction should be organized internally or externally, or because it may take them time to adjust to new conditions, firms may end up internalizing a transaction that should be externalized, or doing the reverse. Such "misfit" firms have been shown to be less profitable (Chiles/McMackin 1996, Brouthers/Brouthers/Werner 2003, Silverman/Nickerson/ Freeman 1997). For TCI theory, deviations from this optimum amount of international diversification are likely to be random, thus yielding no direct correlation between international diversification and performance. Thus TCI theory does not support the predictions made in some of the M/P literature that an MNE's performance will be systematically low at low levels of international

diversification, will increase as the MNE internationalizes further, and will decline again after a given threshold (e.g. Contractor/Kundu/Hsu 2003).

Methodological Issues

One criticism that can be levied against M/P studies is that they often suffer from contradictions between theory and operationalization of the main independent variable, international diversity, and from a lack of adequate controls.

While the usual argument of the M/P literature is that having production facilities in a collection of heterogeneous countries, that is being internationally diversified, should lead to better performance, many empirical studies have measured an MNE's international diversification by its foreign sales to total sales ratio. Geringer, Tallman, and Olsen (2000, p. 61), for example, argue in terms of "international diversity", but measure it by the ratio of foreign to total sales. Likewise, Ruigrok and Wagner (2003), who argue that international diversification makes it possible to learn from culturally unrelated markets, measure this diversification by the ratio of foreign sales to total sales. Yet the two are not the same thing, since a firm with a high ratio of foreign to total sales may in fact have most of its plants and offices in a small number of culturally close countries, and hence exhibit little international diversification.¹³

More generally, there needs to be a better match between theoretical argument and the measurement of the focal independent variable M. Hence if one argues that MNEs benefit from amortizing fixed costs by spreading them over a larger market, then M might be measured by the size of their foreign activities, for example the level of foreign sales, keeping home market size constant. Measuring this by the ratio of foreign to total sales (FSTS) is unsatisfactory, because the amount of foreign sales a firm needs to reach MES will depend on the size of the home market, and a firm located in a large market may reach MES with a low FSTS ratio while one located in a small home market may need a high FSTS to reach the same MES. Similarly, a firm in an industry with low MES may reach optimal scale at a low level of FSTS, while one in a high-MES industry may need a much larger FSTS ratio.

If one argues that MNEs benefit from learning and flexibility, then the appropriate measurement of M should be the dispersion and heterogeneity of the countries entered by the MNE. To accommodate both these theoretical arguments, some authors have used a multidimensional measure of M that integrates the relative size of a firm's investment and its spread across heterogeneous countries into a single composite index (e.g. Sullivan 1994, Gomes/Ramaswamy 1999). It would seem to me that, rather than building ever more sophisticated measures of M, a first step should be to ascertain whether and how M affects P, and if a strong causal link is found,

which of these dimensions of M, size of foreign sales vs. their dispersion, is theoretically and empirically more defensible. How to measure M should ultimately be guided by theory and by empirical evidence. Hence attempts towards ever more sophisticated measures of M without sound theoretical backing are misguided.

Another serious problem in the M/P literature has been a lack of controls. A common operationalization of performance in M/P studies has been an MNE's return on assets. Many M/P studies that have regressed this variable on a firm's ratio of foreign to total sales have obtained positive and significant coefficients (e.g. Lu/Beamish 2001, Contractor/Kundu/Hsu 2003, Gomes/Ramaswamy 1999). As Dess, Gupta, Hennart, and Hill (1995) have suggested, these results may have a simple explanation. Accounting rules generally specify that sums spent on building up intangibles should not be treated as investment, but instead as current expenditures. Yet in terms of their impact on future profits, these sums are similar to expenditures on new machinery, which are treated as investment. Hence firms which spend heavily in R&D or in building reputation have undervalued assets, in the sense that the assets reported on their accounts do not reflect the investments made in developing new products and in building up reputation, investment which will hopefully yield future profits. Because their assets are thus artificially undervalued, such firms should report a higher return on assets compared to firms for which assets are less undervalued because they make fewer tangible investments.¹⁴ Because, as TCI theory tells us, firms which invest heavily in intangibles also tend to exploit them by selling abroad, and hence have a high ratio of foreign to total sales, measuring the impact of international diversification on performance by regressing a firm's return on assets on its foreign sales ratio may lead to a spurious relationship.

In response to this potential problem, Delios and Beamish (1999) controlled for a firm's R&D and advertising intensities, and found that, in the case of Japanese firms, international diversification continued to have a significant and positive impact on performance (a scale combining return on assets, return on equity, and return on sales). However, other studies show that, once intangibles are controlled for, the impact of international diversification on performance becomes very small (Bodnar/Tang/Weintrop 2003) or can turn insignificant (Kim/Lyn 1986) or even negative (Click/Harrison 2000) (the dependent variable in these last two studies was Tobin's q).¹⁵ This suggests that the choice of dependent variable should be more carefully considered, and if ROA is chosen, one should control for a firm's investment in intangible assets.

Conclusions and Recommendations

The last ten years have witnessed an explosion of empirical research that seeks to uncover a general relationship between the dispersion of a firm's international

operations (its multinationality, or international diversification) and its performance. More than one hundred empirical studies have failed to produce robust results. The reaction of scholars to these mixed findings has been to increase the complexity of the functional form and the sophistication of the measurement of the variables. There has been insufficient questioning of the theoretical reasons advanced for a positive relationship between multinationality and performance.

This paper examines these theoretical bases. The M/P literature has advanced that international diversification should reduce risk and that it should increase performance because (1) it facilitates the exploitation of scale economies; (2) it gives greater access to resources and greater flexibility in shifting production and sourcing, and (3) it provides more opportunities to learn.

To evaluate these hypotheses, we fall back on what we know about MNEs and on one of the principal theories that has been used to explain them, the transaction cost/internalization (TCI) model. M/P theorists have argued that international diversification gives firms a larger market to spread their fixed costs. This argument overlooks the fact that the optimum exploitation of scale economies does not necessarily require going overseas. Firms which are located in large home markets and which are in low MES industries may be just as profitable or even more profitable with no foreign activities than highly internationally diversified firms active in high MES industries and based in small home markets.

M/P proponents have also argued that the more globally dispersed an MNE's network of foreign affiliates, the greater its access to resources, and hence its profitability. TCI theory tells us that this argument overlooks the fact that extending the firm to obtain resources is only efficient if these resources cannot be efficiently accessed on markets. Hence vertical integration into dispersed affiliates does not provide general advantages, but is only efficient in specific cases. The claim that owning a network of foreign affiliates provides greater flexibility is also weakened when subjecting it to a similar comparative institutional test.

The third argument of M/P scholars is that international diversification gives MNE access to locally embedded knowledge and that the amount of learning an MNE does, and hence how profitable it is, is directly proportional to the number and/or international dispersion of its affiliates. Again this argument disregards the alternative of learning from the market. We argue that it also overestimates the extent to which most MNEs learn from their foreign affiliates.

All in all, these arguments seem to provide rather weak support for the existence of a general positive relationship between international diversification and performance. TCI theory has also other implications which are relevant to that relationship. First, because the range of interdependencies internalized by MNEs is quite large, an MNE's international operations will be quite diverse, from sales subsidiaries established to organize marketing interactions, to manufacturing subsidiaries, and to captive mines. Summing up all these different forms and motives of foreign activity into an international diversification measure loses a considerable amount of information.

TCI theory also assumes that agents compare the costs of organizing each interdependency within the firm with those of organizing it on the market. Absent mistakes and imperfect adaptation, a firm's overall degree of international diversification should be optimal, and hence there is no reason to expect that increasing or decreasing it would increase its performance.

However, at any point in time it is possible that some firms will be too much or not enough internationally diversified, as it may have taken time to reach their optimum degree of international diversification. TCI theory thus predicts that firms which are not at their optimum degree of international diversification will experience lower performance. But there are no reasons to expect that these deviations from the optimal level of international diversification will not be random. Hence those who subscribe to TCI theory should not expect a positive relationship between international diversification and performance.

The preceding discussions suggest some directions for future research. First, given the lack of strongly developed theory underlying empirical M/P studies to date, it would seem that present studies are undertaken at too high a level of aggregation. The multiplicity of motives for international expansion, the limited evidence on global learning, and the difficulties of empirically modelling the efficient exploitation of scale economies means that studies examining the relationship between international diversification and performance should be performed at a much lower level of aggregation, for example at a detailed industry level.¹⁶ This would allow to control for some of the crucial variables which are likely to affect the relationship between international diversification and performance, such as the size of an MNE's home market, the cultural diversity of the markets it has entered, and its endowment of intangibles. Comparisons of firms within a given industry and following similar strategies, and hence having cost curves with similar MES, but based in home markets of different sizes would throw light on the costs and benefits of international diversification. This would also make it possible to investigate whether we see firms manufacturing a given product choosing strategies of global expansion while others decide to stay local, and whether and how this impacts their long-term profitability.

Second, the justification given in some M/P studies for a relationship between M and P is that firms are either below or above their optimal level of international diversification. Contractor et al. (2003), for example, argue that firms with low international diversity exhibit low performance because of the initial learning costs of operating abroad, while those with very high levels of international diversity also exhibit low performance because they have "over-internationalized." While this is an interesting hypothesis, it is one that should be tested longitudinally over longer periods than the five years used in Contractor et al's pooled cross section-times series or the ten years used in Lu and Beamish (2004). Indeed, a study of how firms expand overseas over long periods, and whether there are clear stages such as a learning stage and an over-expansion stage, would be of great interest.

Third, and as pointed out by Sullivan (1994) and Osegowitsch and Zalan (2005), the M/P literature underplays the role of management. It is as if MNEs captured the benefits of international diversification without any effort on their part. In fact, there are reasons to believe that the main source of super-normal profits in firms, besides luck, is superior management (Hennart 1994). If this is true, then the potential advantages of international diversification will only be realized if the MNE puts in place the right organizational structures and implement the right strategies. There is nothing automatic about it. Studies of the M/P relationship at a much lower level of aggregation would make it possible to see how the strategies followed by MNEs influence the extent to which they capitalize on the potential advantages that accrue from a given level of international diversification.

Lastly, I have critically compared the theoretical bases invoked by the M/P literature against TCI theory and the empirical evidence on MNEs. The persuasiveness of my arguments depends, in part, on whether one subscribes to TCI theory. I leave to others the task of confronting M/P arguments with the prediction of other theories. For example, it is quite possible that the assumptions made by TCI theories that an MNE's level of international diversification cannot remain suboptimal for long are too strong, and that systematic biases may cause more permanent deviations from the optimum level of international diversification.¹⁷ Hence managers with strong ethnocentric views may systematically under-invest abroad while excessive international diversification, on the other hand, may result from managerial preference for empire building, as argued by Click and Harrison (2000). These propositions could be tested by investigating how the experience of top managers or the incentives they face influence their firm's international diversification and its performance.

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Endnotes

- 1 As discussed later, while multinationality/performance arguments are usually about the impact of geographically diversified foreign *production* on performance, the operationalization of multinationality in empirical studies has sometimes been foreign *sales*/total *sales*, with foreign sales including exports from the home country.
- 2 While early studies proposed linear relationships, recent studies increasingly advance non-linear ones.
- 3 While the theoretical arguments of the M/P literature are usually in terms of international diversification (i.e. geographical dispersion of foreign sales), most empirical studies measure this dispersion by the share of foreign sales in total sales, which is a not a measure of international diversification. We discuss this mismatch later in the paper. An exception is Goerzen/Beamish (2003) who empirically separate the impact of asset dispersion from that of asset diversity.
- 4 One way to measure the extent to which firms have activities abroad is given by the Transnationality Index, which is the average of a firm's foreign to total assets, foreign to total sales, and foreign to total employment. The average transnationality index for 39 MNEs based in large home countries (the US, Japan and Germany) was 45.1 in 2003, while that of 39 MNEs based in smaller home countries was 68.0 (Hirsch 2005).
- 5 About 75 percent of the US patents filed by Swedish firms came from home based R&D. The figures for Belgian and Dutch firms were 40 percent and 48 percent, respectively.
- 6 Note that there is nothing in the theory that implies that firms must have firm-specific advantages to expand abroad. All that it says is that MNEs will arise when agents located in different countries will find it more efficient to organize the exchange of some goods and services internally than through the market. This means that foreign expansion may occur when firms want to sell goods and services (for example exploit their firm-specific advantages) as well as when they want to acquire goods and services (for example acquire the firm-specific advantages of other firms) (Hennart 2001).
- 7 While both firms and markets use a mix of price and behavior controls, the mix is more heavily tilted in firms towards centralized information gathering and behavior control. For a discussion of the limits to the use of the price system in firms, see Hennart (1991, 1993).
- 8 Hennart (1982) compared the 1966 geographical dispersion of US MNEs assets with that that would be predicted if MNEs optimally diversified risk, i.e. if they followed the pattern calculated by Levy and Sarnat (1970) for the 1951-67 period. The two patterns are drastically different, with US MNEs placing too many of their assets in countries with business cycles highly correlated with their home base. In 1966, for example, almost half of the US MNE assets abroad were held in Canada and Europe, countries with business cycles highly correlated with the US. By 2004 the percentage of total US MNE assets in non-bank affiliates located in Europe and Canada was more than two-thirds, and that of sales 62 percent, while the extent of correlation between the business cycles of the US and Europe had probably increased (US Department of Commerce website accessed at bea.gov/bea/international).
- 9 These studies neglect the fact that US investors have less information on foreign securities and that foreign firms may offer weaker shareholder protection than US MNEs (Karolyi/Stultz 2003, Cai/Warnock 2004). However, local listings (such as ADRs) and mutual funds now allow investors to diversify internationally at much lower costs and risks (Errunza/Hogan/Hung 1999), hence making reliance on MNE stocks relatively less crucial.
- 10 Because most accounting rules typically do not capitalize investments in intangibles, but instead treat them as current expenditures, the assets of firms which invest in intangibles are in some cases underestimated, and their returns on assets over-estimated, making them appear more profitable. See below.
- 11 Unilever's low cost Indian detergent Nirma was only transferred to Brazil by the dogged personal efforts of a young Brazilian manager seconded to Pakistan (Doz 2004) who discovered it by happenstance. Johnson and Johnson initially objected to the marketing of talcum powder as make-up by their Philippines affiliate and, in spite of its great success, refused to introduce the compact

- developed by the affiliate to other J&J subsidiaries (Prahalad/Lieberthal 1998). See also Jones (2002).
- 12 As noted above, MNEs based in emerging economies may be more focused on exploration than those based on advanced countries.
 - 13 General Motors, for example, had in 2004 36 percent of its assets outside the United States, but of these 39 percent were in Canada and Mexico and another 45 percent in Europe (General Motors Annual Report 2004).
 - 14 The situation is in fact more complicated, because expensing R&D expenditures reduces reported profits. Hence ROA is overstated in firms with high rates of growth of R&D expenditures. See Lev et al. (2005).
 - 15 Intriguingly, Bodnar/Tang/Weintrop (2003) found that international diversification led to higher performance for advertising intensive firms but lower performance for R&D intensive firms.
 - 16 See Verbeke/Brugman (2006) and Kumar (2006) for good examples.
 - 17 This seems to have been the case with product diversification. According to Berger/Ofek (1995), excessive product diversification led to a 13 to 15 percent value loss for US firms over the 1986-91 period.

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