



ELSEVIER

Contents lists available at ScienceDirect

Journal of World Business

journal homepage: www.elsevier.com/locate/jwb

Multinational country risk: Exposure to asset holding risk and operating risk in international business



Seyda Z. Deligonul

St. John Fisher College, Department of Management and Marketing, Rochester, NY, 14618, United States

ARTICLE INFO

Keywords:

Multinational enterprise
Investment
Risk
Country risk
Holding assets
Operating assets

ABSTRACT

We address the phenomenon of country total risk, confounded by the risk of holding assets abroad and operating them in the foreign market. The findings point to deep differences in risk patterns as ownership of intangible assets exposes the holders to a higher risk. Indeed, the asset-specific risk is the dominant component of advance market volatility, explaining more than 80 percent of the cross-sectional variance. The model in the study accounts for the deficiencies in the related research streams and attempt to alleviate the typical problems in popular estimation methods.

1. Introduction

The risks, rooted in country level factors, have been a critical part of internationalization practice and the literature. In fact, findings of meta studies designate country level risks as the most influential determinant of success in internationalization efforts (Zhao, Luo, & Suh, 2004). Plausibly, there are many reasons to prompt this. By investing abroad, multinational enterprise (MNE) managers expect a premium at least matching their capital's second-best use. In return, they bear risks driven by a multitude of factors and concede to their hazards. The question is how and why they misjudge the conditions and sometimes fail to assess the adjunct risks. That is the central question in this study.

Our empirical findings suggest that MNEs expose themselves to asset holding risk but also asset operating risks. In international business, operating risks are discretionary, and they are considered to be a random or near random effect across the companies under the conventional theory. This logic is based on thinking that the operating risk has the expected value of zero due to its diversifiability under strategic choices. If so, the firm perceives a lessened expected risk which reduces the required profit target (hurdle rate). The result is biased to incentivize market-entry. Also, a lesser foreignness risk understates the requisite investment, favoring non-equity entry modes. When a company enters an abroad market prompted by neglecting operating risks, understating entry hurdle, and moving in under-funded, the result is withdrawal from the market after a few years of struggle.

Consider the case of Walmart incurring high sunk cost after each failure in Germany, South Korea and Japan (Aoyama, 2007; Christopherson, 2007). Similarly, Marks & Spencer's of U.K. abruptly withdrew from the Canada and US market after a disappointing

performance (Burt, Mellahi, Jackson, & Sparks, 2002; Jackson, Mellahi, & Sparks, 2005). Home Depot exited from China and Chile (Bianchi & Arnold, 2004; Bianchi & Ostale, 2006), and Carrefour's failed in South Korea, Germany, and Japan (Aoyama, 2007; Christopherson, 2007); Best Buy failed in Turkey (Koc, 2016); Tesco in the U.S. Indeed, over the past 25 years, more than 100 companies left their host country only after staying in the foreign market in average of 4 to 6 years (Alexander, Quinn, & Cairns, 2005).

In this study, we conceptualize the country total risk having two components. One is the risk of holding assets abroad; second is the risk of operating assets in the foreign environment. The first refers to ownership of assets in a foreign country. The latter is exemplified by propelling them in action for the business. In either case, the risks are only partially be averted by strategies such as diversification or favorable treatment contracts. The probability is low that any combination of legal arrangements, insurance, and trading in financial instruments are capable of entirely shielding income streams from such risks. In fact, foreign investors who focus on engaging financial hedges may even increase their country risk exposure (Henisz & Zelter, 2010).

Of the two components of country risk, operating asset risks remain as the key issue in MNEs foreign investment decisions and adjustment of expected returns. In particular, Campbell, Lettau, Malkiel, and Xu (2001) apply monthly data over 1962–1997 and find that average operating risk is the most essential component of average risk. Malkiel and Xu (2002) corroborate this finding. Yet, the conventional view factors in only equity and credit risk at the equilibrium and omits asset operating risk as the diversifiable component (e.g., Gruca & Rego, 2005; McAlister, Srinivasan, & Kim, 2007). Consequently, only a few studies have assessed firms' operating risk as part of the international business

E-mail address: sdeligonul@sjfc.edu.

<https://doi.org/10.1016/j.jwb.2019.101041>

Received 12 November 2018; Received in revised form 9 August 2019; Accepted 7 October 2019

1090-9516/© 2019 Elsevier Inc. All rights reserved.

performance (e.g., Luo & Bhattacharya, 2009).

The operating risk puzzle may blur the market entry decision. Yet, MNEs are adamant about expanding their international footprint when their overgrown size saturates the domestic market. Indeed, foreign equity investments and participation have accelerated tremendously over the past several decades, leading to a tightly connected world. The United Nations (2018) World Investment Report notes that despite significant political uncertainties and the geopolitical risks, global foreign direct investment (FDI) was \$1.43 trillion in 2017 (United Nations, 2018), increasing to 6.9 per cent of GDP. This is significant because FDI remains the largest external source of finance for developing economies. It makes up 39 per cent of the total incoming capital flow. This evidence confirms that the global economy tends to be more connected than ever to create interdependence, and hence, the globalization trend propagates the business risk across the globe.

Regulating institutions are not passive onlookers of this process, with their policy efforts, they aim at attracting FDI. In 2017, 65 countries adopted at least 126 investment policy measures, of which 84 per cent were favorable to investors (United Nations, 2018). Any regulatory ruling of this kind reverberates positive or negative feedback loops. As an example of the negative, a decision causing a drop in foreign investment grows the current account deficit and paves the way to lower economic growth. The resultant conditions, especially in emerging economies, potentially trigger pressure, which circles back into higher country risk. These feedback loops make the problems causally ambiguous. With their tangled nature, government policies often exploit them for short term political interests and gains. For politicians at the helm, it is always more convenient to adopt stopgap remedies rather than taking the poison pill to reduce the country risk level.

The intent of the present study is to advance our knowledge of MNE risk by developing a model to address the asset holding and operating risks in a foreign market. The motivation behind this investigation is the puzzle of how an MNE with many years of operating experience elsewhere, invests a large sum in a foreign market only to take a significant sunk cost and exit subsequently. Our argument points to profound differences in risk patterns in different environments and operating conditions. Particularly, ownership of the intangibles, by being inexact, exposes the holders to a higher operating risk. In general, where the intangible assets are dominant, the risk of operating them higher than holding them. If so, the asset-specific risk is the dominant component of market volatility, explaining more than 80 percent of the cross-sectional variance.

Our approach is in this paper divergent from the typical treatment of risk. The conventional framework adopts a top down approach. The overseas risk for them is specified exogenously as a lump-sum level, which is subsequently subject to decomposition if need be. There may be several reasons for this choice. First, this type of treatment is qualitative, simple, and convenient in view of the fact that it avoids the methodological drawbacks in modeling risk. In fact, modeling risk is a messy endeavor, considering such problems as the distribution being non-normal; tails thick; shape, non-symmetrical, and the analytical process prone to endogeneity problems. Additionally, the conventional approach favors the needs of lenders. In fact, the credit institutions' first concern is gauging the risk for collateral specification, not developing a managerial strategy. In result, the agencies subjectively evaluate multi factor hazards and make the assignments for risk levels. This is the reason that the risk ratings change for the same country from one rating agency to another.

In contrast to the current convention, this paper applies the bottom up approach. We take the country risk component as endogenous as opposed to the exogenous choice of the conventional method, then build up toward the total risk. The dependent variable is the subjective ratings. (Actually, any other variable that could proxy the entire risk would work for our approach.) By utilizing a quantile regression, we bypass the methodological problems that handicap in part, the current practice. In our regression application, the results enable a unique

perspective of overseas strategic decisions. Moreover, the approach lends itself to developing confidence intervals, leading to rich interpretations.

The objective of this paper is not to evaluate a particular country or time period. In the paper. The idea is to provide a different perspective to demarcate the concept of total risk, asset holding risk, operational risk. These concepts are tangled and their delineation far from consensual. For that reason, the data set is a single point data, and it is intended only for the exercise; it is not for analysis. A targeted analysis would require a panel data collected over a large sample and over many countries in time series. Still, the findings point to promising clues about specific analysis.

The problem we study also takes a typical firm as centroid in a country. It does not differentiate industries or firm types. In that, being a pioneering view, it opts for parsimony and simplicity over complexity. The external forces and resulting imperatives on the firms are treated what the Wall Street analysts dub as "cockroach theory." This theory in few terms implies that in an environment common forces shape all the firms in liabilities and opportunities so that if you see one firm with a certain level performance, there are more in the cracks delivering the same.

The remainder of this paper is organized as follows. We first offer a discussion of country risk and the pertinent literature. We follow with two sections developing the conceptualization of country total risk and introduce the proposed model. Next, we address the operationalization of the model and its estimation. We conclude with a discussion of empirical findings and explore implications for management.

2. Country risk and the background literature

Consider first the Walmart example and its exit from Germany. In retrospect, Germany's average market return was 9.6% while the U.S. return was 5.71% over its operating period between 1998 and 2006.¹ So, each one percent return at home coincided with a 68 percent higher return in the target market (that is, $1.68 = 9.6/5.7$). At first blush, a 68 percent premium over home returns, other things constant, is reassuring. However, 'other things were not constant,' and Walmart lost the bet. On the go-no-go day, the risk should have included not an asset holding risk but additionally, the operating risk. The fact of the matter was that Walmart could have made more money by holding an index portfolio in DAX (9.6%), instead of expanding into Germany.

When an international firm which holds assets and operates them for returns, the firm engages in risks that deter returns and possibly cause financial, or strategic losses. Again, consider the Walmart case. Given that the U.S. and Europe share: (1) similar structural fundamentals (economic, cultural and political); and (2) encounter similar economic disturbances, one might give a U.S.-based enterprise an excellent chance of success in Europe. Yet, Walmart had the opposite experience (Christopherson, 2007). Among many contributors to its failure, one culprit was Walmart's blindness to the operational risk of the union-based workforce. Other conditions, such as foreign exchange parity and inadequate embeddedness in business networks were also relevant. Under such operational hazards, the episodes of investment failures abound in the literature.

The present study predicates the country risk on the concept of operating with the liability of foreignness. Liability of foreignness is originally defined as the residual risk from country total risk after the removal of equity risk (Zaheer, 1995). That means country total risk, in general, refers to all additional losses a foreign firm incurs that an indigenous firm would not incur by reason of its local roots (Zaheer, 1995, p. 343; Zaheer & Mosakowski, 1997).

¹ These figures are averages between 1998-2006 for DAX and S&P 500, considering that Walmart entered Germany in 1997. In 2006, Walmart abandoned Germany's lucrative \$370 billion retail market after a long struggle.

There are other conceptualizations of operating with the liability of foreignness, hence country risk in the literature. Some studies refer to such risk by its precursors (e.g., Håkanson & Ambos, 2010; Katsikeas, Skarneas, & Bello, 2009; Morgan, Kaleka, & Katsikeas, 2004), and others draw on the aftereffects (e.g., Leonidou, Barnes, & Talias, 2006). Bartram, Brown, and Stulz (2008) offer four factors with the caveat of incompleteness: country level issues, investor protection, financial infrastructure, and information environment. Others have the country risk as composed of spatial considerations, local embeddedness, local knowledge, and capabilities, along with the ability to cope with institutional diversity (Qian, Li, & Rugman, 2013). Zaheer (1995) extends the list of factors to include local embeddedness, issues about not having roots in the foreign country, economic nationalism, and home country mandates such as restrictions on high-technology sale (Zaheer & Mosakowski, 1997).

A majority of the studies attribute the risk to choices against the incongruous conditions between home and host environment. Cultural separation or business climate differences fall into this category. The delineation in Shenkar (2012, p. 15), Shenkar, Luo, and Yeheskel (2008, p. 905) and Luo and Shenkar (2011, p. 2) describe it as an effect in the form of “friction” and “drag” in doing business. In that view, foreignness inhibits information exchange (Skarneas, Katsikeas, Spyropoulou, & Salehi-Sangari, 2008) and hinders adopting appropriate strategies (Bello, Chelariu, & Zhang, 2003). An adjoining stream of research adopts the managerial behavior, based on cognition, dispositions, and behavior. Evans, Treadgold, and Mavondo (2000, p. 165) describe the foreignness as “the mind’s processing ... of the cultural and business differences.” Related research connects foreignness to mis-categorization of perceptions and meaning (Obadia, 2013), to misconceiving the foreign environment (Johanson & Vahlne, 1977, 2009), to obstructing positive attitudes and inducing “cognitive disorientation” (Obadia, 2013).

The foreignness implies disparity in that the home and host country factors that lead to delineating country risk as a manifestation of proximity or distance (Leonidou et al., 2006; Zaheer, Schomaker, & Nachum, 2012). In studies, the distance vernacular include culture, institutions, psychic elements, language, legal and economic systems, business practices and other country-level factors (Dow & Karunaratna, 2006; Ellis, 2008; Katsikeas et al., 2009; Lohtia, Bello, Yamada, & Gilliland, 2005; Lohtia, Bello, & Porter, 2009; Shenkar, 2001). Ha, Karande, and Singhapakdi (2004) draw on geographical distance. Calantone, Kim, Schmidt, and Cavusgil (2006, p. 177) offer “market similarity” as a form of proximity. In essence, scholars juxtapose foreignness with psychic distance, economic, institutional or cultural distance and another myriad of variants (e.g., Verbeke, Puck, & van Tulder, 2017; Sousa & Bradley, 2006, 2008).

A common element in all these delineations is the premise that country level factors induce a risk in the specification and perhaps quantification of prospective hazards. The idea is that misjudgment follows from “cultural, political and economic differences and from the need for coordination across geographic distance (Zaheer, 1995, p. 341)”. In this sense, risk phenomenon is a threat-inducing concept. Opposite from this view, an exception is Zhang, Cavusgil, and Roath (2003) who present the risk as an opportunity. They argue for the positive impact of foreignness on trust and relational norms to govern the relationship. A greater distance between the parties enhances special efforts to bridge any relational gap. Hence, the risk is instrumental in inducing value.

The common view takes the risk as a threat and particularly points to the difficulty in shaking off country risks. From the early studies on, the evidence suggests an increase in systematic risk (country level risk), which MNEs find difficult to avoid. The difficulty is linked to a long list of impediments including exchange rate risk (Reeb, Kwok, & Baek, 1998) political risk (Delios & Henisz, 2003), and social impediments (Yaziji, 2004). The list extends with risks arising from agency issues, asymmetric information (Reeb et al., 1998), and so on. The verdict is

that impediments in the environment offset the risk reduction benefits from imperfectly correlated returns. The exception is holding a diversified and broad portfolio of investments outside the domain of the systematic risk (Campbell et al., 2001; Malkiel & Xu, 2002).

The upshot of the above review points to an overextended nature of the risk concept. Scholars draw our attention to demarcation problems and confounding risk with other constructs. In operationalization, such a concept deficiency creates biases; and leads to endogeneity in empirics. It creates a long list of validity problems. We relay the notable takeaways from the literature in Table A1 in the Appendix A.

3. Conceptualization of country total risk

All commercial risks hinge on either holding an asset and operating the asset. We conceptualize the act of holding assets in a foreign market as having rights to them in a foreign location. Debasing of a firm’s assets involves not only tangibles but also intangibles such as capabilities, property rights, and so on. We also know that any undertaking in a foreign market exposes capital expenditures to loss that arises from local political, social, or economic instability. Indeed, owning and holding rights to assets in a foreign country involves such risks as imposed restrictions on remittances of capital dividends, interests, fees, or royalties to foreign lenders and/or investors, payment rescheduling and writing off due to moratoria, repudiation or renegotiations.

Once an MNE holds assets in a foreign country, it springs them into action. The deployment of the assets for future cash flow is subject to the second type of risk, operating risk. The operating risk is about volatility and potential loss from the firm’s future cash flows. In short, the total risk encompasses operating risks and holding risks that a country imparts on its investors. The sum of holding and operating assets in a foreign domicile is what we call the country risk.

A risk to be a country risk, all or much of it should be country specific. In other words, it should exhibit low correlation across countries. A consequent to this condition is that the risk then will be diversifiable across markets. In this scenario, for its diversifiability, the risk will not command a country premium. In the opposite scenario, if the returns across countries have a significant positive correlation, the risk remains not diversifiable and can command a premium. Whether the correlation across markets is sufficiently small to permit, diversification remains a controversial issue.

Most country level risks are composite; they inherently mesh, cloak and change in complex ways that they are not well construed and often miscalculated. Repeatedly the result is that a company with aptly run home operations miscalculates its risk in a foreign country and fail. Brealey, Cooper, and Kaplanis (1999) argue that institutional investors can actually hold country index funds or index futures combined with cash that can deliver a return that avoids the risk by way of diversification without directly holding the assets. The question, therefore, remains why investors do not simply exploit these opportunities. Why would you take your business abroad if high risks were to impair your capital that will earn less than its alternative uses? Indeed, Walmart could have made more money on its capital by simply investing in DAX² rather than taking its business to Germany.

3.1. Country risk and returns

Return expectations are adjusted in part by country risk. By risk adjusted, we suggest that an investment return should include a premium to compensate for the variability (volatility) of the firm’s cash flows. Thus, higher volatility warrants higher rates of return to

² The DAX (Deutscher Aktienindex /German stock index) is an index of basket of blue-chip stocks consisting of 30 major German companies trading on the Frankfurt Stock Exchange. Similarly, S&P500 is an index including 500 U.S. companies.

compensate for lower predictability of cash flows. Indeed, finance theory informs us that if an investment is twice as volatile as the benchmark, an investor should receive twice the premium for assuming the additional volatility risk. If an investment is less volatile than the benchmark, then an investor could agree to a less return than the benchmark and still be fairly compensated for the degree of volatility-risk taken. The variability-based risk is the perspective adopted in international business research (Gruca & Rego, 2005; McAlister et al., 2007).

If a company deals with a potentially unavoidable risk, this type of risk then needs to be compensated with a premium for potential loss. Under this premise, the holder of equity, for which the risk is difficult to control, expects a premium in the form of a higher return. This expectation justified by the fact that all assets deliver value under the impact of economy-wide events. As being macro conditions, these risks affect not only the focal firm but all its peers. If interest rates rise, for example, the value of a manufacturing firm's value will likely fall in line with all other capital-intensive firms.

Conversely, firm-specific events and strategic decisions (operating risk), to a degree, are within managers' control (Chatterjee, Lubatkin, Lyon, & Schulze, 1999). Such risks are idiosyncratic risks; they are endemic to a particular company and its operating choices. Accordingly, idiosyncratic risk can be thought to result from the company's own choices. Management decisions on financial policy, investment policy and operations are all the source of risks specific to a particular firm. Representing the opposite of asset risk (the overall risk that affects all assets, like fluctuations in the interest rates), idiosyncratic risk is considered to be diversifiable. Conventional theory suggests that idiosyncratic risk can be mitigated at the degree of correlations between their returns and by hedging.

3.2. Country risk and diversification

The current view supposes that idiosyncratic risk has little or no correlation with market risk, and can, therefore, be substantially mitigated or eliminated from a portfolio by using adequate diversification. Also, it is a belief that idiosyncratic risk explains a relatively small variation in the total country risk encountered by a firm over time. Then, in international business, conventional theory tells us that the only risk that is relevant for the country total risk is the host market risk (systematic risk). To alleviate such risk, the internationalizing firm needs to seek uncorrelated return opportunities either across investments in the country (segmented market) or across countries (open markets). Only then will the risk be curtailed in diversification. If, on the other hand, returns across investments have a significant positive correlation, the risk is not diversifiable and can command a premium.

Whether returns across countries are positively correlated is an empirical question. Studies from the 1970s and 1980s suggest that the correlation was low, and this was a stimulant for global diversification (Damodaran, 2003). Since then, markets remained only partially segmented. In fact, a higher degree of connectedness among countries increased the correlation across the territories, hindering the risk reduction by geographical diversification. Partly because, economies around the world have become increasingly intertwined over the last several decades, increasing return correlations. This is evident in how the propagation of troubles in one market, say in Turkey in 2017, could spread to Argentina with which Turkey has little or no apparent relationship. However, various obstacles, such as high unemployment caused by the rigid labor market and low labor mobility, make the full convergence at open market conditions difficult.

Some scholars believe that while the barriers to trading across markets have dropped, investors still have a home bias in their portfolios and that markets remain partially segmented. While globally diversified investors have an increasing role in the pricing of equities around the world, the resulting increase in correlation across markets has meant that a portion of the risk is non-diversifiable – i.e., market

risk. This means markets remain partially segmented. Ghemawat (2003) in his diagnosis notes that markets are neither entirely isolated by nor integrated across borders. Instead, they fall in between these extremes. More specifically, most measures of market integration have scaled new heights in the last few decades, yet remain short of the ideal of perfect integration. The diagnosis of semi-globalization does more than just provide a relatively stable frame of reference for thinking about the risks in cross-border operations.

In short, company-specific risk matters. However, in the real world, a very few MNEs are able to diversify their country portfolios to the full safety of diversification strategy. Campbell et al. (2001) suggest, and Malkiel and Xu (2002) corroborate, that the number of randomly selected investments needed to achieve relatively complete portfolio diversification is about 50. If investors do not hold many assets in their portfolios, Levy (1978) theoretically shows that idiosyncratic risk affects equilibrium asset prices. Merton (1987) argues that expected idiosyncratic volatility may explain expected asset returns if investors are under-diversified. Therefore, firms with higher total (or idiosyncratic) variance require higher returns to compensate for imperfect diversification.

Early internationalization literature adopts a broad-brush approach regarding risk diversification. Hughes, Logue, and Sweeney (1975) and Rugman (1976) hypothesize that MNEs diversify away the risk and provide risk reduction benefits to shareholders when they possess cash flows in imperfectly correlated markets. Similarly, Agmon and Lessard (1977) and Fatemi (1984) conjure that MNE risk reduction strategies reduces the present value of bankruptcy costs and allow increased risk tolerance in multinationals.

3.3. Country risk and drivers

Country risk shapes up under a long list of forces. The forces drive interactions, which are very difficult to untangle. In general, a spike in risk at any of those propagates and culminates in reputation loss for the country, capital market turmoil, real output, and consumption loss. Investments decline as higher borrowing costs and uncertainty causes reluctance to commit resources through long-term investments. The cause and interaction between such factors are not clear, however. It seems these factors co-feed each other in a multitude of ways.

3.3.1. Stage of economic development and country risk

The resilience of a country to economic shocks differ with the development stage of the economy. Generally, shocks are infrequent, keeping the economy stable with punctuated disruptions. In a typical market, a recession or recovery can easily display double-digit ups and downs. In contrast, advanced economies usually resist the shocks with lower swings. Such stability is in part, related to production competence, capitalizing on broad and diversified economic activity. Also, the reliance on high economic value creation improves tenacity to shorten the recovery period. Indeed, the banking crisis of 2008, which caused equity markets in the United States and Western Europe to drop by about 25–30 percent, while resulted in drops of 50 percent or higher in many emerging markets. In short, a country in an early development stage exposes its investors to a higher risk than an advance economy (Damodaran, 2018).

3.3.2. Stage of political development and country risk

One of the most indigenous forces that determine country risk is its governance and political maturity. A system relies on fortified norms, the strength of the government, and its ability to lock in policies for the long term. In most countries, democratic governments fall short of such strength. In the advanced economies political compromises, and in other markets institutional weaknesses are major causes of policies which carry smaller but steady risk. In contrast, in authoritarian systems, measures can potentially be substantial, infrequent, and more disruptive. Under this pattern, shocks punctuate the system with more

significant disruptions, usually accompanying other costs of authoritarian systems. These include corruption, violence, the ineffective legal system, nepotism, favoritism, and so on.

3.3.3. Social development and country risk

The value systems prevalent in a country stand adjunct to political and economic forces. The acceptance of rules and shared norms is critical in determining country risk. Uneven application of norms, lack of transparency in bureaucracy always impede business performance. A country where rules suffer capriciously, corrupt judgments and unforeseen costs add to liabilities and opportunity cost. Indeed, increased corruption translates into higher borrowing costs for companies and lower asset values.

3.3.4. The legal system, property rights development, and country risk

Investors and businesses are dependent upon legal systems that respect their property rights and enforce those rights in a fair, and timely manner. Against the contracting risks, one can seek protection and indemnity by hedging, and in case of breach of contract, the recovery requires a system that respects property rights. When contracts are often taken lightly, profits are expropriated by unexpected taxes, or by the nationalization of assets. It is worth emphasizing that legal risk is a function not only the fairness in property and contract rights but also how efficiently the system operates. If enforcing a contract or property right takes years or even decades, it is essentially the equivalent of a system that does not protect these rights in the first place.

4. A model for the country total risk

Our model delineates the country total risk combining asset holding and operating risks. Country total risk reflects the condition as induced by external impediments. Thus, it affects the cohort of all companies performance in the country-market. Typically, the higher the country risk, the greater is the required premium from the foreign market. Although this is not a rule, an entrepreneur needs to be additionally compensated for taking their business to a foreign country (Goyal & Santa-Clara, 2003).

Our approach for estimating risk for an emerging market is straightforward. We suggest that any productive asset in a foreign market is subject to (1) asset-holding risk; and (2) asset-operating risk. We define the productive asset as any resource that generates economic value added (EVA). The concept, asset-holding risk, refers to exposure to credit and equity risk in doing business in a foreign market. Finally, asset-operating risk refers to the strategic risk of conducting commercial activity at a foreign market. In practice, these two risks are not independent of each other. Therefore, any model which tries to decompose the total risk into these two components must be cognizant of this fact.

A largely neglected component of the country total risk is operating risk. This study delineates the asset operating component as an unknown fraction of the total country risk. It is the risk which explains the disparity between the asset holding risk and country total risk. For instance, the lack of experience in the target country, or poor connections in indigenous business networks are typical sources for operating risk. Such factors handicap an MNE's foreign operations with increased disadvantages and impose liabilities relative to domestic firms (Johanson & Vahlne, 1977; Mezas, 2002). Recognizing such disadvantages, Caves (1971) argues earlier that firms investing abroad must possess enough specific advantages to counter its liability of foreignness. Specifically, a firm must have some offsetting superiorities relative to local firms for it to become a multinational.

An MNE enters a country with a risk which we model as follows:

$$r_i = \beta_o r_d + e_i$$

r_d = asset holding risk

r_i = country total risk

e_i = residual term

Δ = bias in beta risk

σ_d = standard deviation of bond yield

σ_i = standard deviation of equity yield

ρ_{di} = correlation of returns between bond and equity yield

β_o = indicator of operating risk, measuring the country total risk wrt asset holding risk

The conventional theory takes $E(\Delta) = 0$ based on the assumption that $E(e_i) = 0$ and, accepts it is a white noise. Also, it assumes that $Cov(r_d, e_i) = 0$. We show that we have the Δ bias in the conventional estimate as expressed in the following. (See, the footnote for derivation).³

$$\beta_o = \hat{\beta}_o + \frac{Cov(r_d, e_i)}{\sigma_d^2} = \hat{\beta}_o + \Delta$$

Beta gauges the tendency of total risk to move in line with holding risk. A beta closer to 1.0 implies lower operating risks. A beta greater than 1.0 indicates the expected total risk is higher than the asset holding risk. The disparity must be due to an asset operating risk. For instance, beta having a value of 2 implies that operating and holding asset risks, each makes up fifty percent of the total risk.; or the beta value being 3, implies that one can attribute 33.3 percent of the total risk to asset holding risk and 66.6 percent to operating the assets.

Being the ratio of total risk to asset holding risk, our conceptualization of the operating risk is consistent with the distance idea in the literature. Actually, it is the logarithmic distance conformable with the earlier conceptualization (From our model, $\log \beta_o = \log r_i - \log r_d$ given that $E(e_i) = 0$).

5. Operationalization of the model and data

5.1. Total risk

The total risk consists of the components of the asset-holding risk and asset-operating risk. We operationalize total risk starting from the credit rating agency rating. In principle, rating agencies address default risk (rather than equity risk) however, they also include into the assessment many of the factors that drive equity risk such as country's political and monetary stability, its budget deficit, the trade balance, and so on. This approach is consistent with Damodaran (2003). Damodaran takes the default spreads corresponding to the sample country Moody's credit ratings. Then he factors in the equity effect by multiplying it by a volatility ratio between equity and bonds. Finally, to account for the advance market risk, he adds a premium calculated from U.S. S&P 500 (Damodaran, 2003). This is the procedure this study mimic for specifying country total risk.

5.2. The asset holding risk

The asset-holding risk arises because of carrying credit or holding equity in a country. We represent this risk with the sovereign credit default swap (CDS) spread of the country. As a proxy CDS spread is a useful indicator of the country business climate. Indeed, a one percentage point rise in the spread leads to a decrease in the foreign direct investment in the assets of 11.5% (Bekaert, Harvey, Lundblad, & Siegel, 2014).

We start with the credit default swap for proxying the risk as net of the nearly risk-free economy. We then add the U.S. premium to factor in an advance equity market premium. Our approach relies on the implied equity risk premium calculated from the S&P 500. As a result, our asset-holding risk represents the risk as a form of insurance against a risk-

³We have, $\hat{\beta}_o = \frac{Cov(\beta_o r_d + e_i, r_d)}{Cov(r_d, r_d)}$, $\hat{\beta}_o = \frac{\beta_o Cov(r_d, r_d) + Cov(e_i, r_d)}{Cov(r_d, r_d)}$, $\hat{\beta}_o = \beta_o + \frac{Cov(e_i, r_d)}{\sigma_d^2} = \beta_o + \Delta$.

event. We use the market price of this insurance is a proxy for a country's business climate.

5.3. The asset operating risk

The second risk in our model, the asset-operating risk is not directly decomposable. Correlated country level factors in feedback loops and cycling blur the extraction of the asset operating risk as an independent latent. We go around this problem by delineating operating risk as a fractional risk. In operational terms, we model it in terms of two known data arrays, the country total risk and assets holding risk. Then the total risk equals to a coefficient beta, times the asset holding risk. That means the operating risk is hidden in the coefficient beta.

This approach presupposes that any appraisal will be undertaken in the currency associated with the base premium. In other words, following Damodaran, the cash flows relating to the investment appraisal will be converted into US dollars, such that U.S. dollar cash flow for the perspective opportunity will be discounted at a U.S. dollar denominated discount rate that captures the systematic country risk.

5.4. The empirical analysis and data used in the study

We employed data from 151 countries. However, not all countries have CDS'. Eliminating those with no CDS records, we ended up with 73 data points from the first array of countries. The total risk construction starts from rating agency risk assignments as given in Table 1. Those are adjusted with a volatility ratio following Damodaran (2003). Also, a baseline advance market risk premium is added to the calculation. The resulting data exhibit all the difficulties that are listed in Table A1 of the Appendix A.

The country risk distribution is skewed; tails are heavy, the shape is asymmetrical, oblate, unimodal, but non-normal for most practical purposes. For 73 countries, country total risk data have a mean 271.78, with a standard deviation of 226. The median is 226, quite apart from the mean. In fact, skewness is 1.21. Kurtosis is 0.77. The data range between 5 percent and 95 percent cover the risk premia in basis points 0.00 to 820.30. (Please see Fig. 1 and its attached box.)

The data reflects the cross section by June 2018. The standard deviations for the equity and treasuries are calculated much longer series. This study borrows them from Damodaran (2018). He provides the data 2013 to 2018 July to July daily record. CDS spreads are from 2018 first six months.

Table 1
Moody's default spread conversion to ratings.

| Rating | Default spread in basis points |
|--------|--------------------------------|
| A1 | 81 |
| A2 | 98 |
| A3 | 139 |
| Aa1 | 46 |
| Aa2 | 57 |
| Aa3 | 70 |
| Aaa | 0 |
| B1 | 521 |
| B2 | 636 |
| B3 | 752 |
| Ba1 | 289 |
| Ba2 | 347 |
| Ba3 | 416 |
| Baa1 | 185 |
| Baa2 | 220 |
| Baa3 | 255 |
| C | 1800 |
| Caa1 | 867 |
| Caa2 | 1041 |
| Caa3 | 1156 |

Moody's ratings (by company)

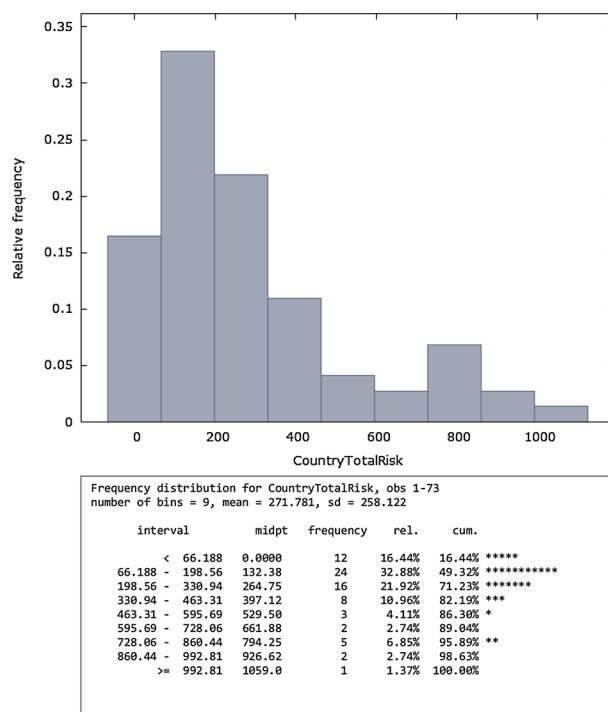


Fig. 1. Country total risk frequency diagram.

In order to extend the ratings to include country total risk, Damodaran (2018) uses a volatility ratio between equity and bond series. The use of such a multiplier has been justified in both practice and scholarly work (Reeb et al., 1998; Rego, Billett, & Morgan, 2009). Following Damodaran, the multiplier is a ratio of a pair of standard deviations based on daily recordings of market yields. One is the BAML Public Sector Emerging Markets Corporate Plus Index Yield. It is available at FRED (Federal Reserve St. Louis Datasets). The other standard deviation pertains to the S&P Emerging BMI Index. It is provided by the Standard and Poor's. The ratio is the standard deviations from BAML and BMI Index. Therefore, the ratio represents the volatility of the equity market in a country relative to the volatility of that country's bonds.

6. Estimation of the model by quantile regression

Our model does not lend itself to covariance methods. For instance, the use of ordinary least square estimation will violate many assumptions including error independence, normality, constant variance (heteroscedasticity), tail shapes and so on. In order to provide a robust procedure, we apply the quantile regression (QR) in this study.

The standard regression estimates the mean value of the response variable for given levels of the predictor variables. The quantile regression model, on the other hand, shows the relation between a set of predictor variables and specific percentiles (or quantiles) of the response variable. It specifies changes in the quantiles of the response. For example, a median regression (median is the 5th decile) of the total risk is related to the predictors.

In linear regression, the regression coefficient represents the increase in the response variable produced by a one unit increase in the predictor variable associated with that coefficient. The quantile regression parameter estimates the change in a specified quantile of the response variable produced by a unit change in the predictor variable. This allows the study to compare how some percentiles of the response variable may be more affected by certain independent variables than other percentiles. This is reflected in the change in the size of the regression coefficient. Coefficient estimates for quantile regression and

Table 2
Nine decile (quantile) regression with no constant term.

| | tau | coefficient | std. error | t-ratio |
|-------------------------|-------|-------------|------------|---------|
| Sovereign CDS net of US | 0.100 | 1.19101 | 0.133626 | 8.91304 |
| | 0.200 | 1.33333 | 0.146818 | 9.08155 |
| | 0.300 | 1.51502 | 0.146790 | 10.3210 |
| | 0.400 | 1.70053 | 0.167258 | 10.1672 |
| | 0.500 | 2.02078 | 0.176205 | 11.4684 |
| | 0.600 | 2.14917 | 0.143149 | 15.0136 |
| | 0.700 | 2.38083 | 0.206557 | 11.5262 |
| | 0.800 | 2.43125 | 0.217222 | 11.1925 |
| | 0.900 | 3.12389 | 0.363256 | 8.59971 |

Median depend. var 226.0000; S.D. dependent var 258.1220.

Model: Quantile estimates, using observations 1-73.

Dependent variable: CountryRiskPremium6.

Robust (sandwich) standard errors.

Table 3
Median (quantile) regression with no constant term.

| | Coefficient | Std. Error | t-ratio | p-value |
|---------------------|-------------|--------------------|----------|--------------|
| SovereignCDSnetofUS | 2.02078 | 0.176205 | 11.47 | < 0.0001 *** |
| Median depend. var | 226.0000 | S.D. dependent var | 258.1220 | |
| Sum absolute resid | 6133.865 | Sum squared resid | 922795.4 | |
| Log-likelihood | -447.0716 | Akaike criterion | 896.1431 | |
| Schwarz criterion | 898.4336 | Hannan-Quinn | 897.0559 | |

Model: Quantile estimates, using observations 1-73.

Dependent variable: CountryTotalRisk.

tau = 0.5.

Robust (sandwich) standard errors.

the linear regression coefficient estimates for the response variable are presented in tables. (Please see Table 2 for the nine-decile quantile regression. Also, please see the median quantile regression in Table 3.)

As the results show, our models fit excellent in every possible indicator. The errors are close to random. The correlation between the error array and the independent variable is acceptably small

6.1. Unique characteristics of quantile regression

The success of quantile regression in our study is driven by its tenacity against the complexity of interactions between different factors. When data with an unequal variation of one variable for different ranges of another variable, the quantile regression method is robust against the violations of assumptions of covariance-based methods. Also, it is consistent with the idea of segregating the response variable (total risk) into tranches. This is an alternative way to a qualitative assessment of the categories by the risk rating agencies. (These are discussed in the next section).

The quantile regression offers a multitude of advantages. First, unlike the method of least squares which minimizes the squared errors, quantile regression is based on linear programming via the simplex method. Second, inference via quantile regression does not require the variance covariance matrix be directly estimated. For that reason, it can deliver robust results even with rank-score or with the bootstrap methods. Third, quantile regression remains robust to outliers and is semiparametric as it avoids assumptions about the parametric distribution of the error process. Fourth, while OLS can be inefficient if the errors are highly non-normal, QR is asymptotically efficient in the presence of non-normal errors and extreme values. Furthermore, QR is invariant to monotonic transformations, such as log conversions, and the inverse transformation may be used to translate the results back to the original scale. QR also provides a richer characterization of the data, allowing us to consider the impact of an independent variable on

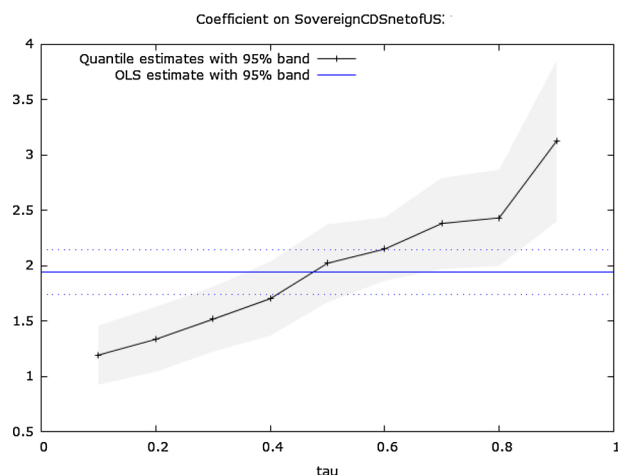


Fig. 2. Nine decile (quantile) regression with no constant term.

the entire distribution of the response variable, not merely its conditional mean.

7. Findings from demonstrative example and discussion

We employed two models to secure the results. In the first, we used median regression (50 percent quantile). In the other estimation, we used nine progressive deciles to take another look at different risk abroad. The results are provided in Tables 2 and 3 along with graphs presented in Figs. 2 and 3.

The findings illustrate that the total risk increases as we move from advanced economies to developing economies. The pattern of increase is steadily non-linear while accelerating at higher risk abroad. This conclusion is evident in the beta coefficients of quantiles and consistent with the expectations. With the increasing beta, the hazards too increase due to factors such as unfamiliarity with the indigenous practices, rules, regulations, and government actions, and so on (Makhija, 1993).

One of the most significant findings of the study is that, at the lower end, the beta is always above the value of one. This implies that there is always an operating risk no matter what level of a risk abroad the country dwells. Moreover, the beta value increases as we go from advanced economies to the developing economies. This pattern suggests that in developing economies, as the country total risk grows, also the portion of the operating risk in the total surges. In other words, we see a hike in the operating risks portion of the total risk as a result of accelerating asset operating risks.

This study provides evidence for the thinking that in developed markets, the percentage of total risk attributed to asset-specific risk is higher. This finding corroborates earlier research. In the U.S., asset holding risk is close to 76 percent (Campbell et al., 2001) while in the

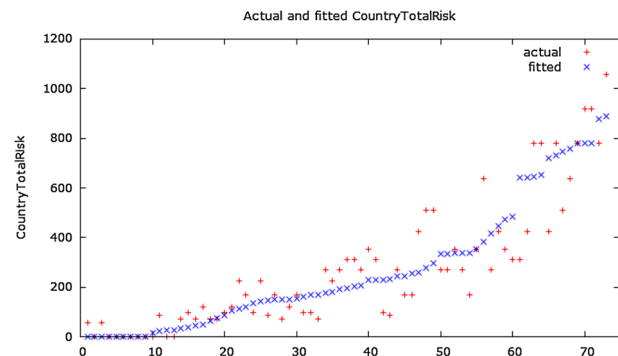


Fig. 3. Fit at each decile in median (quantile) regression with no constant term.

U.K., depending on the weighting scheme, it ranges from 75 to 97 percent (Angelidis & Tessaromatis, 2008). Furthermore, in ten European markets, it ranges from 61 to 80 percent (Angelidis & Tessaromatis, 2008), while (Kearney & Poti, 2008) provide evidence in favor of the observation that the average asset-specific risk is more important than the market risk.

There are several consequences of the coefficient pattern that grows toward the high-risk countries. First, indigenous hazards reduce the likelihood of foreign investment via equity investments (Delios & Henisz, 2003; Feinberg & Gupta, 2009). Second, if entry via equity occurs, the relationship between potential hazards and the percentage of equity held by the multinational is negative (Delios & Henisz, 2000; Uhlenbruck, Rodriguez, Doh, & Eden, 2006). Third, potential hazards drive MNEs to either avoid or at least minimize their equity exposure in high-risk countries (Feinberg & Gupta, 2009).

On the lower side of the beta coefficients, the operating risks fall behind asset holding risks in advance markets. One possible reason is that a firm in an advance market tends to have less fixed assets and more intangible assets in comparison to developing countries (Demirgüç-Kunt & Maksimovic, 1999). Many of the assets such as intangible capital are prone to an abrupt loss of value (a software company can easily lose its best programmer. A pharmaceutical company's blockbuster drug goes out of patent protection, wiping out its asset value overnight.⁴) Indeed, the asset-specific risk is the dominant component of advance market volatility, explaining more than 80 percent of the cross-sectional variance.

While the tangibles are prone to losses in advanced economies where the intangibles are dominant, the developing economies deal with a higher operating risk. MNEs in fewer advance markets strategize around more prudent actions. They select less risky projects or structure their balance sheet, for instance, by less leverage (Lee & Kwok, 1988).

The pattern of beta in quantile regression shows that risk inherently meshes and combines nonlinearly. Then, the total risk is not the linear sum of the parts (Perold, 2004). For instance, because the returns move mainly in tandem with the success of the firm specific strategy, even firms with broad hedges and diversification will have exposure to the combination of a variety of operating risk inherent in internationalization. That is the essence of diversification, which can be seen with an example. Suppose we imagine two assets with the same expected return and the same standard deviation of return. By holding both assets together, one obtains an expected return on the portfolio that is the same as either one of them, but a portfolio standard deviation that is lower than any one of them individually. Diversification thus leads to a reduction in risk without any sacrifice in expected return (Perold, 2004).

The confidence interval estimation points to a higher uncertainty of beta coefficients as we step into the section of developing countries. This means the margin of error increases in that cluster. Particularly after 8th decile, there is a sudden widening of the confidence interval. This indicates increased uncertainty that at the given confidence level (90%) the beta falls into a broader range of possible values.

Confidence intervals in the midrange support the assumption $E(e_i) = 0$. This is apparent by the overlapping of confidence interval between OLS and Quantile regression estimation. That means the traditional covariance methods will be applicable within this range. Outside the mid-range, the covariance-based methods such as standard

⁴ AstraZeneca's blockbuster stomach ulcer drug Prilosec saw sales drop by 70% after patent expiration. Sanofi announced earnings drop of 15% after losing protection for three drugs. Mega-blockbuster Plavix, a blood thinner, alone suffered a sales drop of 70%, loss of a \$2.6 billion revenues to the generic competition. Glaxo faced the generic erosion of antidepressant Paxil sales. The company admitted 40% of Paxil sales were lost within weeks of the launch of generic competition. Pfizer's blockbuster cholesterol drug Lipitor lost patent protection in 2011; it accounted for a fourth of the company's sales.

regression are severely biased. At the lower deciles of the total risk range, they underestimate asset holding portion of the total risk, and at the higher deciles, they overestimate.

As a final comment, the present study agrees that conditions inherent in the host market

affect asset holding risk and cannot be evaded without sunk costs. However, the risks of holding assets are only part of the country total risk. Embedded in the target country, and exposed to the liability bearing hazards, a firm carries even more significant risk in operating its assets. In spite of the importance of asset carrying risk, FDI studies frame foreignness risk as hedgeable by means of discretionary actions. This study argues it is not easy to disengage strategies soon after the business climate turns unfavorable. Put simply, the exit costs of direct investments are high for operating assets in cross border operations.

8. Managerial relevance

Subsequent to the 1970s, the foreignness risk has evolved to become a key issue for international managers. The concern grew deeper as the foreign direct investors experienced significant shortfalls during the oil crises. This era also marks a growing scholarly interest in the topic. In parallel, the 1980s witnessed the first-time introduction of overseas risk insurance initiatives. The periods of re-broadening of FDIs followed. Since then, FDIs have been trending in boost and bust modes in selective geographies as firms adopt more cautious assessment of returns and risks from foreign markets.

Considerations of country risk is an intrinsic part of MNE adaptation to host country environments. Mindful of this fact, managers need to calibrate (restrain or spur) the risk exposure in foreign markets. Indeed, firm-level evidence shows that when a company raises an international portion of its sales by 10 percent, it raises the exposure of its return to a macro level shock by 2 percent (Brooks & Del Negro, 2005). Coca-Cola, with its exposure to 196 countries, lost 8 percent of its consolidated operating revenues to foreign currency adjustments in 2015. In that year the company recorded an \$832M foreign exchange loss in dollars. In 2017, this figure was \$57 million. For noting the complexity, the company in its 10-K reports that it concurrently deals with the volatility of more than 70 foreign currencies in its international markets.⁵

Any managerial neglect in assessing risk has critical consequences in terms of sunk costs. A withdrawal from a foreign market involves undertaking billions of dollar withdrawal expenses. Carrefour's failure in Japan carried a price tag between €200-300 million (Aoyama, 2007; Sousa & Bradley, 2006). Sony's acquisition of Columbia Pictures in 1989 triggered a \$3.2 billion write-off in 1994, primarily because of the Japanese unfamiliarity with practices in Hollywood. A prominent retailer, Target incurred exit cost of more than \$5.4 billion after two years of operating in Canada. Tesco's U.S. adventure was no less, a loss of £1.5 billion, in addition to the losses accumulated over a five-year span. References to other examples and discussion see Mata & Freitas (2012) provide many other examples of cases where the liability of foreignness

⁵ The issue of risk in diversification has long been in debate. The market diversion literature abounds in two sided findings. On the one hand, the early literature (i.e., Servaes (1996) find that diversified firms trade at an average discount relative to single-country firms. This finding has often been interpreted as evidence that diversification destroys value. On the other hand, Graham, Lemmon, and Wolf (2002) argue that the acquisitions by diversifying firms were discounted prior to their acquisition. Given that both diversifying firms and their targets trade at a discount prior to diversification, it is not surprising that diversified firms exhibit a discount Villalonga (2004). Certain in this debate are the findings that the inconsistencies may emerge from data, modelling, and methods. However, the conceptual work in this paper enriches the explanation by stressing the risk miscalculation on the part of the management. Within our explanation, diversification at least in part is affected by how the hidden cost of the hazards treated as an implicit cost of the diversification strategy. This effect more pronounced when you cross the borders.

and foreign investment volatility (being footloose) serve as possible reasons for withdrawal from a foreign market.

The country risk is an implicit tax for an MNE. Implicit tax refers to the cost of an activity that is not collected by the government but may be the result of external conditions to render the activity worthless over time. For example, if the government is encouraging economic growth and accepting a high inflation rate, one may consider this as an implicit tax on the firm's cash flow. With the same logic, corruption is a drain on cash flow as it curbs the firm's income. That means in real terms the implicit tax rate for a morally loose domicile will be higher than the statutory tax rate elsewhere.

The risk as an implicit levy is a source of unfair competitive advantage or disadvantage, as it distorts workings of the economy, hence the firms. It transfers rents from one to another, as the local companies that are not only eager but are also more skillful at playing the game, gain a leg up in competition. On the other hand, if an activity is tax-preferred, its market value will be bid up to reflect the tax preference. For instance, the tax treatment of unpaid interest on a tax-exempt bond is dependent on whether the price of the bond is supposed to reflect the benefit of tax exemption.

Any activity which involves risk entails two types of implicit costs. One is the pre-activity coverage of the hazards (e.g., insurance); second is the post-event recovery, in case, the losses materialize. Both sources of implicit costs change the valuation of overseas business decisions. Authors lament that this issue is overlooked in practice (Crane, 1999). Indeed, the pre-tax profit requirement for overseas projects invariably overlooks the implicit taxes and, therefore, is likely to overstate the value, making decision potentially incoherent (e.i., Weisbach, 1999). In short, the country risk is the critical issue for an international manager in decisions of diversification, and operating an MNE. Through implicit taxes, it may have links to agency problems, hubris, and even entrepreneurial competence. As a distinct reason, in this paper, we bring the fore the concept of implicit taxing and how those are neglected as part of the decisions at MNEs.

Appendix A

Table A1

Summary of takeaways from the literature.

1. In terms of operationalization, literature warns that measuring the concept of foreignness with respect to a baseline reference may have practical consequences. Indeed, Wang, Kayande, and Jap (2010) conjure that such discrepancy creates uncertainty and increases the perceived risk associated with the exchange partner. Others argue that the managers in charge of internationalization process do not deal with their home market and often lack the required experiential knowledge to see the disparity (Prime, Obadia, & Vida, 2009).
2. Some studies set out the construct in the firm (Chelariu, Bello, & Gilliland, 2006; Child, Rodrigues, & Frynas, 2009; Katsikeas et al., 2009; Leonidou et al., 2006); others consider it at the country level addressing the macro-environment and the third group in both levels (Yamin & Sinkovics, 2006) —namely, a comparison of the firm's experience in other markets (including the home market) with the firm's experiences in the focal foreign market. Literature laments about inconsistent conceptualization, operationalization, and theorizing (for example, see the conjectures in Zhang et al. (2003) versus Katsikeas et al. (2009)).
3. Another major problem the literature points is misspecification. The foreignness phenomenon is operationalized often as the sum of its components, depending on the preferred variant of the conceptualization. For instance, some studies prefer measuring the concept with an index. For instance, Nes, Solberg, and Silkoset (2007) and Zhang et al. (2003) operationalize foreignness based on an earlier scale (Kogut & Singh, 1988). Others have been the critical validity of this scale construction (Dow & Karunaratna, 2006; Shenkar, 2001). Obadia (2013) laments about the misspecification of the scales, which plagues, in his estimation two-thirds of the studies on the topic. He particularly notes the possible irrelevance of some of the manifest variables (e.g., climatic conditions in Sousa & Bradley, 2005). Obadia (2013) also questions measurements, based on aftereffects (e.g., Nes et al., 2007; Solberg, 2008; Zhang et al., 2003).
4. In one stream of the literature, studies use proxy indicators, which are factors that cause foreignness. Thus, causality flows from the indicators to the construct, namely the formative approach. However, the others adopt a reflective specification, in which causality flows from the construct to its indicators. Critics argue against such an approach, the namely reflective specification for assessing the foreignness is erroneous. With causal indicators, they argue, a formative approach is necessary (Diamantopoulos & Winklhofer, 2001).
5. A reflective treatment of a formative construct reduces the variance of the construct, because the variance of a reflective construct equals the common variance of its indicators, whereas the variance of a formative construct encapsulates the total variance of its measures. Consequently, misspecification reduces the variance of the exogenous variable while the level of the variance of the endogenous variable is maintained (Diamantopoulos, Riefler, & Roth, 2008). In result, the variance of parameter estimates for their relationship is biased. This skews the testing process.
6. Approaching the idea of foreignness as a sum of numerous factors and the possible exclusion some others creates misspecification, namely endogeneity problem. Evidently, this is the reason for relying on indexing multiple factors in a balanced card approach. There is anecdotal and empirical evidence against this approach (See for discussion, Henisz & Zelnner, 2010). It would be ideal for defining risk in a robust analytical approach.
7. The major stream of conventional models supposes that (1) Idiosyncratic risk (unsystematic risk) can be thought of as the factors that affect an asset and its underlying company at the microeconomic level, (2) Being endemic to the underlying asset, idiosyncratic risk has little or no correlation with market risk, (3) can therefore be

(continued on next page)

9. Conclusion

Two crisscross patterns have been evident. In one, foreign direct investment has been accelerating with lower barriers to capital flows. At the same time, very capable MNE's are struggling in foreign markets, suddenly withdraw, and incur high sunk costs from foreign investments. This observation suggests miscalculation of opportunity versus risks involved in doing business abroad.

One reason may be certain assumptions in risk evaluations. Although the current risk models may lend themselves to inference on equity returns, asset pricing, and cost of capital calculations, they do not encapsulate asset operating risk in foreign investment. The extant models do factor in systematic risk (market risk) but find operating risk hedgeable or diversifiable. In reality, this supposition is open to debate. For that reason, operating risk is extremely relevant to active risk management

The present study investigates the behavior and implications of country risk in a wide array of markets. For any range, extending from advanced to developing economies, the constituents of total risk matter for MNEs. The empirical analysis revealed here suggests that the percent of total volatility that is attributable to asset-holding risk is lower in the developing economies than that of the advanced economies.

This study also contributes to the research in liability of foreignness (LOF), a core insight in international business. This concept underlines that firms face social and economic costs when they operate in foreign markets. Extant literature acknowledges that the ability of firms to overcome LOF in host locations varies; however, it does not discuss the possibility that the LOF itself could vary for different firms at the same location. We contribute this stream of literature by examining how a firm's strategic risk in its interaction with the host environments affect the LOF that it faces in foreign markets.

Declaration of Competing Interest

None.

Table A1 (continued)

| | |
|-----|---|
| | mitigated or eliminated by using adequate diversification. Examples of this view abound the literature (e.g., Fu, 2009; Kwok & Reeb, 2000) Although the current theory supposes little and no correlation between idiosyncratic risk and market risk, empirical findings are contentious about the supposition. In fact, Bartram et al. (2008) find a strong relation between firm characteristics, country characteristics, and firm idiosyncratic volatility. |
| 8. | The financial market variables measured over short time intervals (i.e., intra-daily, daily, or weekly) may be uncorrelated, but not independent. In particular, it has been observed that although the signs of successive movements seem to be independent, their magnitude, as represented by the absolute value or square of the increments, is correlated in time. This phenomenon is denoted volatility clustering and indicates that the volatility of the series is time varying. Small changes in the data tend to be followed by small changes, and large changes by large ones. Since volatility clustering implies a strong autocorrelation in the absolute values of data, a simple method for detecting volatility clustering presents methodological challenges. |
| 9. | In practice, financial models will be influenced by time, both by time resolution and time horizon. The concept of resolution signifies how densely data are recorded. In application, the choice might vary from seconds to years. The finer the resolution, the heavier the tails of the return distribution are likely to be. For intra-daily, daily or weekly data, failure to account for the heavy-tailed characteristics of the financial time series will undoubtedly lead to an underestimation of risk. Hence, market risk analysis over short horizons should consider heavy-tailed distributions of market returns. |
| 10. | The earlier literature points to the usage of higher discount rates in evaluating the international project and posits that a positive relationship between risk and degree of firm's internationalization. MNCs experience higher risk, according to Reeb et al. (1998), owing to an increase in the standard deviation of cash flows from internationalization, which offsets the reduced volatility due to lower correlation from diversification. The challenge is the accurate decomposition of the country risk into its components. If the decomposition is accurate, it can reveal various opposing forces within the country risk assessment process. |
| 11. | Literature warns us that there are problems with setting the risk model at the country level and then making inferences to firm level (Lessard, 1996). The level crossing inferences are known to be problematic. It is widely discussed outside finance and international business research that when a unit of analysis crosses from one level to another, that is, when it starts at country level and proceeds with predictions at the firm level, the empirical model requires special attention. Without remedies for multi-level structure in data, the findings will encounter reliability problems and taper their theoretical rigor. See, Hitt, Beamish, Jackson, and Mathieu (2007). |
| 12. | The special distribution of non-idiosyncratic (systemic) forces is skewed right. That means there are more cases distant from the global average. However, literature cautions that most studies measure risk as volatility, assuming precisely symmetrical or almost symmetrical in shape. While the distribution appears to be nearly symmetric in log scale (because the shallower arrays of points near the upper and lower ends are about the same size), the lower tail of the distribution is slightly more pronounced than the upper tail (the shallow string of points in the lower left is somewhat more pronounced than that in the upper-right corner of the display). |
| 13. | The measures of non-idiosyncratic forces are not commutative. that is If you swap the countries they will change. Nor it is commutative in addition that is $(a + b)$ is not equal to $(b + a)$. Additionally, they do not satisfy transitive property ($a = b$, and $c = b$ then $a = c$ does not hold.) Nor they follow addition property. (If $a = b$ then $a + c = b + c$ rule does not hold) Finally, metrics representing these forces do not follow cancellation property of addition that $a + c = b + c$ then $a = b$. In other words, if you cancelled the same quantity from both sides of an equation (by subtracting), equality does not hold |

References

- Agmon, T., & Lessard, D. R. (1977). Investor recognition of corporate international diversification. *The Journal of Finance*, 32(4), 1049–1055.
- Alexander, N., Quinn, B., & Cairns, P. (2005). International retail divestment activity. *International Journal of Retail & Distribution Management*, 33(1), 5–22.
- Angelidis, T., & Tassaromatis, N. (2008). Idiosyncratic volatility and equity returns: UK evidence. *International Review of Financial Analysis*, 17(3), 539–556.
- Aoyama, Y. (2007). Oligopoly and the structural paradox of retail TNCs: An assessment of Carrefour and Wal-Mart in Japan. *Journal of Economic Geography*, 7(4), 471–490.
- Bartram, S. M., Brown, G., & Stulz, R. M. (2008). *Why do foreign firms have less idiosyncratic risk than U.S. firms?*
- Bekaert, G., Harvey, C. R., Lundblad, C. T., & Siegel, S. (2014). Political risk spreads. *Journal of International Business Studies*, 45(4), 471–493.
- Bello, D. C., Chelariu, C., & Zhang, L. (2003). The antecedents and performance consequences of relationalism in export distribution channels. *Journal of Business Research*, 56(1), 1–16.
- Bianchi, C. C., & Arnold, S. J. (2004). An institutional perspective on retail internationalization success: Home Depot in Chile. *The International Review of Retail Distribution and Consumer Research*, 14(2), 149–169.
- Bianchi, C. C., & Ostale, E. (2006). Lessons learned from unsuccessful internationalization attempts: Examples of multinational retailers in Chile. *Journal of Business Research*, 59(1), 140–147.
- Brealey, R. A., Cooper, I. A., & Kaplanis, E. (1999). What is the International Dimension of International Finance? *Review of Finance*, 3(1 January), 103–119.
- Brooks, R., & Del Negro (2005). *Firm-level evidence on international stock market comovement*.
- Burt, S. L., Mellahi, K., Jackson, T. P., & Sparks, L. (2002). Retail internationalization and retail failure: Issues from the case of Marks and Spencer. *The International Review of Retail Distribution and Consumer Research*, 12(2), 191–219.
- Calantone, R. J., Kim, D., Schmidt, J. B., & Cavusgil, S. T. (2006). The influence of internal and external firm factors on international product adaptation strategy and export performance: A three-country comparison. *Journal of Business Research*, 59(2), 176–185.
- Campbell, J. Y., Lettau, M., Malkiel, B. G., & Xu, Y. (2001). Have individual stocks become more volatile? An empirical exploration of idiosyncratic risk. *The Journal of Finance*, 56(1), 1–43.
- Caves, R. E. (1971). International corporations: The industrial economics of foreign investment. *Economica*, 38(149), 1–27. <https://doi.org/10.2307/2551748>.
- Chatterjee, S., Lubatkin, M. H., Lyon, E. M., & Schulze, W. S. (1999). Toward a strategic theory of risk premium: Moving beyond CAPM. *The Academy of Management Review*, 24(3), 556–567.
- Chelariu, C., Bello, D. C., & Gilliland, D. I. (2006). Institutional antecedents and performance consequences of influence strategies in export channels to Eastern European transitional economies. *Journal of Business Research*, 59(5), 525–534.
- Child, J., Rodrigues, S. B., & Frynas, J. G. (2009). Psychic distance, its impact and coping modes. *MIR: Management International Review*, 49(2), 199–224.
- Christopherson, S. (2007). Barriers to 'US style'lean retailing: The case of Wal-Mart's failure in Germany. *Journal of Economic Geography*, 7(4), 451–469.
- Crane, C. (1999). Some explicit thinking about implicit taxes. *SMU Law Review*, 52(2), 339–372. Retrieved from http://www.law.northwestern.edu/faculty/fulltime/crane/papers/Some_Explicit_Thinking_About_Implicit_Taxes.pdf.
- Damodaran, A. (2003). Country risk and company exposure: Theory and practice. *Journal of Applied Finance*, 13(Fall/Winter), 64–78.
- Damodaran, A. (2018). *Country risk: Determinants, measures and implications*. New York.
- Delios, A., & Henisz, W. J. (2000). Japanese firms' investment strategies in emerging economies. *The Academy of Management Journal*, 43(3), 305–323. <https://doi.org/10.2307/1556397>.
- Delios, A., & Henisz, W. J. (2003). Political hazards, experience, and sequential entry strategies: The international expansion of Japanese firms, 1980–1998. *Strategic Management Journal*, 24(11), 1153–1164.
- Demirgüç-Kunt, A., & Maksimovic, V. (1999). Institutions, financial markets, and firm debt maturity. *Journal of Financial Economics*, 54(3), 295–336.
- Diamantopoulos, A., Riefler, P., & Roth, K. P. (2008). Advancing formative measurement models. *Journal of Business Research*, 61(12), 1203–1218.
- Diamantopoulos, A., & Winklhofer, H. M. (2001). Index construction with formative indicators: An alternative to scale development. *Journal of Marketing Research*, 38(2), 269–277.
- Dow, D., & Karunaratna, A. (2006). Developing a multidimensional instrument to measure psychic distance stimuli. *Journal of International Business Studies*, 37(5), 578–602.
- Ellis, P. D. (2008). Does psychic distance moderate the market size–entry sequence relationship? *Journal of International Business Studies*, 39(3), 351–369.
- Evans, J., Treadgold, A., & Mavondo, F. T. (2000). Psychic distance and the performance of international retailers: A suggested theoretical framework. *International Marketing Review*, 17(4/5).
- Fatemi, A. M. (1984). Shareholder benefits from corporate international diversification. *The Journal of Finance*, 39(5), 1325–1344.
- Feinberg, S. E., & Gupta, A. K. (2009). MNC subsidiaries and country risk: Internalization as a safeguard against weak external institutions. *The Academy of Management Journal*, 52(2), 381–399.
- Fu, F. (2009). Idiosyncratic risk and the cross-section of expected stock returns. *Journal of Financial Economics*, 91(1), 24–37.
- Ghemawat, P. (2003). Semiglobalization and international business strategy. *Journal of International Business Studies*, 34(2), 138–152.
- Goyal, A., & Santa-Clara, P. (2003). Idiosyncratic risk matters!. *The Journal of Finance*, 58(3), 975–1007.
- Graham, J. R., Lemmon, M. L., & Wolf, J. G. (2002). Does corporate diversification destroy value? *The Journal of Finance*, 57(2), 695–720. Retrieved from http://pages.stern.nyu.edu/~eofek/PhD/papers/GLW_Does_JF.pdf.
- Gruca, T. S., & Rego, L. L. (2005). Customer satisfaction, cash flow, and shareholder value. *Journal of Marketing*, 69(3), 115–130.
- Ha, J., Karande, K., & Singhapakdi, A. (2004). Importers' relationships with exporters: Does culture matter? *International Marketing Review*, 21(4/5), 447–461.
- Håkanson, L., & Ambos, B. (2010). The antecedents of psychic distance. *Journal of International Management*, 16(3), 195–210.
- Henisz, W. J., & Zelner, B. A. (2010). The hidden risks in emerging markets. *Harvard Business Review*, 4(April), 88–95.

- Hitt, M. A., Beamish, P. W., Jackson, S. E., & Mathieu, J. E. (2007). Building theoretical and empirical bridges across levels: Multilevel research in management. *The Academy of Management Journal*, 50(6), 1385–1399.
- Hughes, J. S., Logue, D. E., & Sweeney, R. J. (1975). Corporate international diversification and market assigned measures of risk and diversification. *The Journal of Financial and Quantitative Analysis*, 10(04), 627–637.
- Jackson, P., Mellahi, K., & Sparks, L. (2005). Shutting up shop: Understanding the international exit process in retailing. *Service Industries Journal*, 25(3), 355–371.
- Johanson, J., & Vahlne, J.-E. (1977). The internationalization process of the firm—A model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies*, 8(1), 23–32. <https://doi.org/10.1057/palgrave.jibs.8490676>.
- Johanson, J., & Vahlne, J.-E. (2009). The Uppsala internationalization process model revisited: From liability of Foreignness to Liability of Outsidership. *Journal of International Business Studies*, 40(9), 1411–1431.
- Katsikeas, C. S., Skarmas, D., & Bello, D. C. (2009). Developing successful trust-based international exchange relationships. *Journal of International Business Studies*, 40(1), 132–155.
- Kearney, C., & Poti, V. (2008). Have European stocks become more volatile? An empirical investigation of idiosyncratic and market risk in the Euro area. *European Financial Management*, 14(3), 419–444.
- Koc, O. T. (2016). *Longevity of multinational retail enterprises in foreign markets: An empirical examination (Ph.D.)*. Georgia State University, Robinson School of Business / Department of Marketing.
- Kogut, B., & Singh, H. (1988). The effect of national culture on the choice of entry mode. *Journal of International Business Studies*, 19(3), 411–432.
- Kwok, C. C. Y., & Reeb, D. M. (2000). Internationalization and firm risk: An upstream-downstream hypothesis. *Journal of International Business Studies*, 31(4), 611–629.
- Lee, K. C., & Kwok, C. C. Y. (1988). Multinational corporations vs. domestic corporations: International environmental factors and determinants of capital structure. *Journal of International Business Studies*, 19(2), 195–217. <https://doi.org/10.1057/palgrave.jibs.8490381>.
- Leonidou, L. C., Barnes, B. R., & Talias, M. A. (2006). Exporter–Importer relationship quality: The inhibiting role of uncertainty, distance, and conflict. *Industrial Marketing Management*, 35(5), 576–588.
- Lessard, D. R. (1996). Incorporating country risk in the valuation of offshore projects. *Journal of Applied Corporate Finance*, 9(3), 52–63.
- Levy, H. (1978). Equilibrium in an imperfect market: A constraint on the number of securities in the portfolio. *The American Economic Review*, 68(4), 643–658.
- Lohtia, R., Bello, D. C., & Porter, C. E. (2009). Building trust in US–Japanese business relationships: Mediating role of cultural sensitivity. *Industrial Marketing Management*, 38(3), 239–252.
- Lohtia, R., Bello, D. C., Yamada, T., & Gilliland, D. I. (2005). The role of commitment in foreign–Japanese relationships: Mediating performance for foreign sellers in Japan. *Journal of Business Research*, 58(8), 1009–1018.
- Luo, X., & Bhattacharya, C. B. (2009). The debate over doing good: Corporate social performance, strategic marketing levers, and firm-idiosyncratic risk. *Journal of Marketing*, 73(6), 198–213.
- Luo, Y., & Shenkar, O. (2011). Toward a perspective of cultural friction in international business. *Journal of International Management*, 17(1), 1–14.
- Makhija, M. V. (1993). Government intervention in the Venezuelan petroleum industry: An empirical investigation of political risk. *Journal of International Business Studies*, 24(3), 531–555.
- Malkiel, B. G., & Xu, Y. (2002). *Idiosyncratic risk and security returns*. University of Texas at Dallas.
- Mata, J., & Freitas, E. (2012). Foreignness and exit over the life cycle of firms. *Journal of International Business Studies*, 43(7), 615–630.
- McAlister, L., Srinivasan, R., & Kim, M. (2007). Advertising, research and development, and systematic risk of the firm. *Journal of Marketing*, 71(1), 35–48.
- Merton, R. C. (1987). A simple model of capital market equilibrium with incomplete information. *The Journal of Finance*, 42(3), 483–510. <https://doi.org/10.2307/2328367>.
- Mezias, J. M. (2002). Identifying liabilities of foreignness and strategies to minimize their effects: The case of labor lawsuit judgments in the United States. *Strategic Management Journal*, 23(3), 229–244.
- Morgan, N. A., Kaleka, A., & Katsikeas, C. S. (2004). Antecedents of export venture performance: A theoretical model and empirical assessment. *Journal of Marketing*, 68(1), 90–108.
- Nes, E. B., Solberg, C. A., & Silkoset, R. (2007). The impact of national culture and communication on exporter–distributor relations and on export performance. *International Business Review*, 16(4), 405–424.
- Obadia, C. (2013). Foreignness-induced cognitive disorientation. *MIR: Management International Review*, 53(3), 325–360.
- Perold, A. F. (2004). The capital asset pricing model. *The Journal of Economic Perspectives*, 18(3), 3–24.
- Prime, N., Obadia, C., & Vida, I. (2009). Psychic distance in exporter–Importer relationships: A grounded theory approach. *International Business Review*, 18(2), 184–198.
- Qian, G., Li, L., & Rugman, A. M. (2013). Liability of country foreignness and liability of regional foreignness: Their effects on geographic diversification and firm performance. *Journal of International Business Studies*, 44(6), 635–647.
- Reeb, D. M., Kwok, C. C. Y., & Baek, H. Y. (1998). Systematic risk of the multinational corporation. *Journal of International Business Studies*, 29(2), 263–279.
- Rego, L. L., Billett, M. T., & Morgan, N. A. (2009). Consumer-based brand equity and firm risk. *Journal of Marketing*, 73(6), 47–60.
- Rugman, A. M. (1976). Risk reduction by international diversification. *Journal of International Business Studies*, 7(2), 75–80.
- Servaes, H. (1996). The value of diversification during the conglomerate merger wave. *The Journal of Finance*, 51(4), 1201–1225.
- Shenkar, O. (2001). Cultural distance revisited: Towards a more rigorous conceptualization and measurement of cultural differences. *Journal of International Business Studies*, 32(3), 519–535.
- Shenkar, O. (2012). Beyond cultural distance: Switching to a friction lens in the study of cultural differences. *Journal of International Business Studies*, 43(1), 12–17.
- Shenkar, O., Luo, Y., & Yehekel, O. (2008). From "Distance" to "Friction": Substituting metaphors and redirecting intercultural research. *The Academy of Management Review*, 33(4), 905–923. <https://doi.org/10.2307/20159452>.
- Skarmas, D., Katsikeas, C. S., Spyropoulou, S., & Salehi-Sangari, E. (2008). Market and supplier characteristics driving distributor relationship quality in international marketing channels of industrial products. *Industrial Marketing Management*, 37(1), 23–36.
- Solberg, C. A. (2008). Product complexity and cultural distance effects on managing international distributor relationships: A contingency approach. *Journal of International Marketing*, 16(3), 57–83.
- Sousa, C. M. P., & Bradley, F. (2005). Global markets: Does psychic distance matter? *Journal of Strategic Marketing*, 13(1), 43–59.
- Sousa, C. M. P., & Bradley, F. (2006). Cultural distance and psychic distance: Two peas in a pod? *Journal of International Marketing*, 14(1), 49–70.
- Sousa, C. M. P., & Bradley, F. (2008). Cultural distance and psychic distance: Refinements in conceptualisation and measurement. *Journal of Marketing Management*, 24(5-6), 467–488.
- Uhlenbruck, K., Rodriguez, P., Doh, J., & Eden, L. (2006). The impact of corruption on entry strategy: Evidence from telecommunication projects in emerging economies. *Organization Science*, 17(3), 402–414.
- United Nations (2018). *2018 world investment report: Investment and new industrial policies*. New York / Geneva.
- Verbeke, A., Puck, J., & van Tulder, R. (2017). *Distance in international business: Concept, cost and value*. Emerald Publishing Limited.
- Villalonga, B. (2004). Diversification discount or premium? New evidence from the business information tracking series. *The Journal of Finance*, 59(2), 479–506. Retrieved from http://people.stern.nyu.edu/bvillalonga/DivPremium_JF2004.pdf.
- Wang, Q., Kayande, U., & Jap, S. (2010). The seeds of dissolution: Discrepancy and incoherence in buyer–Supplier exchange. *Marketing Science*, 29(6), 1109–1124.
- Weisbach, D. A. (1999). Implications of implicit taxes. *SMU Law Review*, 52, 373–382. Retrieved from https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=3026&context=journal_articles.
- Yamin, M., & Sinkovics, R. R. (2006). Online internationalisation, psychic distance reduction and the virtuality trap. *International Business Review*, 15(4), 339–360.
- Yaziji, M. (2004). Toward a theory of social risk: Antecedents of normative delegitimation. *International Studies of Management and Organization*, 34(4), 87–107.
- Zaheer, S. (1995). Overcoming the liability of foreignness. *The Academy of Management Journal*, 38(2), 341–363. <https://doi.org/10.2307/256683>.
- Zaheer, S., & Mosakowski, E. (1997). The dynamics of the liability of foreignness: A global study of survival in financial services. *Strategic Management Journal*, 18(6), 439–463.
- Zaheer, S., Schomaker, M. S., & Nachum, L. (2012). Distance without direction: Restoring credibility to a much-loved construct. *Journal of International Business Studies*, 43(1), 18–27.
- Zhang, C., Cavusgil, S. T., & Roath, A. S. (2003). Manufacturer governance of foreign distributor relationships: Do relational norms enhance competitiveness in the export market? *Journal of International Business Studies*, 34(6), 550–566.
- Zhao, H., Luo, Y., & Suh, T. (2004). Transaction cost determinants and ownership-based entry mode choice: A meta-analytical review. *Journal of International Business Studies*, 35(6), 524–544.