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Resources, Efficiency and Globalization

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A Conceptualization of e-Risk Perceptions and the Offline-Online Risk Trade-Off for Small Firm Internationalization

Noemi Pezderka and Rudolf R. Sinkovics

Introduction

With growing competitive pressures, companies are increasingly deploying the Internet (Porter, 2001) as strategic option of performance enhancement. With the Internet representing a potentially fluid and boundary-less medium (Lim et al. 2004), this deployment takes place not only in domestic but also in international markets. The adoption of the Internet appears to be particularly important for smaller firms. They are naturally poorer in terms of resource-endowment than large MNEs (Welsh and White, 1981) and the Internet promises a fast-track and time-compressed option for international expansion (Sinkovics and Penz, 2005; Yamin and Sinkovics, 2006). However, as international business deals with a multitude of contingencies in its environment progressive expansion comes at a price and is increasingly risky (Shrader, Oviatt, and Phillips McDougall, 2000). Internet reliance and the deployment of information and communication technologies (ICT) may implicate 'ambiguous' effects (Jean, 2007). The virtual analogue to traditional physical exchange is not risk-free but exposes firms to an array of related risks (Scott, 2004; Viehland, 2001; Wat, Ngai, and Cheng, 2005). While some of these risks are only relevant in the online context, others have their origins in the traditional international business environment. Even though many risks belonging to the latter category are deemed less relevant for companies predominantly doing business in cyberspace, they need to be carefully examined as they might still affect these companies in a different and/or in a less visible way. Understanding international risk in both its traditional and virtual form is thus crucial. While the conscious and controlled handling of risks may represent an important

source of sustainable competitive advantage in terms of the resource based view (Barney, 1991), the lack of a thorough risk assessment and of the weighing of the offline-online risk trade-off can not only deprive a business of future profits but might also lead to complete business failure. However, the development of an international e-risk framework is not only relevant from a small firm survival and prosperity perspective, it also contributes to conceptual and theoretical development of international business and international entrepreneurship thinking, as the concept of risk occupies a pivotal theoretical position in both domains.

Thus, this chapter pursues two objectives. First, it aims at investigating how traditional international risks take effect in the online context based on Brouthers's (1995) empirically tested risk dimensions taking a first step towards the construction of an international e-risk framework. Second, it endeavours to explain the risk trade-off between offline and online internationalization for small firms that give preference to a more virtualized market entry solution rather than to traditional market entry. The structure of the chapter is as follows: The first section introduces the international e-risk framework. The second section discusses the role of risk perceptions in online market entry mode decisions by proposing a simple model based on the internalization constituent of Dunning's eclectic (OLI) framework. The section concludes by considering limitations and implications for future research.

An international e-business risk framework

The international business literature lacks a generally accepted definition of international risk (Ahmed et al. 2002; Miller, 1992). In this chapter, Ahmed et al.'s (2002) definition of international risk is adopted, pointing at '*dangers firms face in terms of limitations, restrictions, or even losses when engaging in international business*'. In the early international trade literature scholars generally concentrated only on a limited number of risks. Even though gradually attempts had been made to classify international risks, Miller (1992) was the first to develop a framework for categorizing uncertainties confronting firms in international operations. At this point, the difference between the notion of risk and uncertainty needs to be delineated despite their occasional interchangeable use throughout the literature. In his paper Garratt (2007) cites Knight's definitions of risk and uncertainty. According to Knight, '*risk is where the probabilities of different outcomes are known, but not the outcome itself*' and '*uncertainty is where the probabilities themselves are unknown*' (Garratt, 2007, p. 11). Risk is thus the probability of loss in outcome variables (Flowerday and von Solms, 2005; Miller, 1992). Brouthers (1995) extended Miller's framework, creating the most comprehensive and empirically tested framework of international risks to date (Figure 12.1). Before embarking on the discussion how these traditional risk dimensions may

Figure 12.1 Strategic international risk (adopted from Brouthers, 1995)

still take effect in the online context despite their expected full or partial elimination, a short reference to the factors leading to these discrepancies is deemed important. Essentially, the degree of online market entry is contingent on the nature of the goods. Physical products, by their very nature, expose businesses to offline international risks. Products with high online transferability such as software, on the other hand, introduce international risks on a less visible level.

Control risk

Control risk is a function of management's (perceived) ability to reduce certain types of risks by directly managing foreign operations (Brouthers, 1995; Cyert and March, 1963). In particular, three factors are expected to have an effect on the perception of control risk. Management's control ambitions, their knowledge about the target market and the existence, awareness of, and access to alternative control mechanisms will influence risk perceptions at different cognitive levels (Brouthers, 1995). Generally, when total control risk, consisting of (1) management experience, (2) cultural differences, and (3) the industry structure is perceived as too high, management is expected to be more inclined to sacrifice certain aspects of their controlling power in order to share responsibility (Brouthers, 1995). The advancement of ICT, however, may offer a viable alternative to traditional ways of exerting control.

Management experience

Management's experience is built step by step in the course of conducting business operations internationally. Since this knowledge is mainly classified as tacit and implicit its externalization and communication to others is rather difficult. Consequently, mere virtual interaction with foreign markets does not result in the same learning experience given the externalized knowledge character of the information displayed on the Internet (Petersen, Welch, and Liesch, 2002). As low levels of experience not only affect managements' strategic decision making but also their level of risk perception, the lower the level of management's experience the higher the level of perceived international risk (Brouthers, 1995). A high perception and incorrect assessment of risks due to insufficient experience may result in taking unsuitable strategic decisions (Scott, 2004). At this point a discussion of the nature of managerial experience is required. While international business experience is important for strategic decisions regarding internationalization, it has been found to have no significant impact on the choice of using online media as a means of international expansion. For that latter purpose previous Internet experience has proved to be a key factor (Berry and Brock, 2004). Consequently, it seems that for making sound strategic decisions for online internationalization, both international business experience and Internet experience are needed. Nevertheless, management's experience and expertise has been often under-valued which repeatedly led to the collapse of many Internet firms (Vahlne and Johanson, 2002).

Cultural risk

A study conducted by (Bennett, 1997) among 358 exporting companies (148 Web users and 210 nonusers) showed that those using the Internet for internationalization purposes regard psychic distance as less relevant than nonusers. Psychic distance is defined by (O' Grady and Lane, 1996) as '[...] a firm's degree of uncertainty about a foreign market resulting from cultural differences and other business difficulties that present barriers to learning about the market and operating there'. The underestimation of differences across (Internet-)markets represents a major risk for e-companies, as cultural distance has a detrimental effect on Internet shopping rates (Lim et al. 2004). Yamin and Sinkovics (2006) also find that the possibility of 'virtuality trap' may emerge in online internationalization, when companies mistakenly assume that they understand the environmental basis of different consumer behaviour and inappropriately generalize business conditions as similar. Thus not adequately adapting the company's Web site and products to national preferences can lead to a negative impact on company performance (Reeves, 2000; Scott, 2004).

Industry structure risk

Industry structure risk can be defined as the risk of not correctly assessing the nature and intensity of competition in a market (Brouthers, 1995). Companies in highly concentrated industries have the ability to maintain high barriers to entry and to inflict greater damage on their competitors due to a better knowledge of one another's strengths and weaknesses than companies in more fragmented industries (Brouthers, 1995). The spread of the Internet, however, effectuates a reduction in entry and exit barriers entailing a '*flood of new entrants into many industries*' (Porter, 2001, p. 67). Due to the expansion of geographic markets companies increasingly face competition not only from within the global industry but also from firms offering substitute products (Porter, 2001). Thus, while the Internet mitigates the power of established companies of (formerly) concentrated markets, it also impedes the assessment and identification of actual competition (Porter, 2001; Quelch and Klein, 1996).

Market complexity risk

Market complexity risks include market-specific variables related to a firm's market entry, distribution and profitability. Similarly to control risks, market complexity risks are based on how management perceives similarities and differences between their home market and the foreign market. From a traditional market entry perspective, perception of similarities with the home market is expected to result in higher resource commitment (Brouthers, 1995). Online market entry, although bearing the potential to reduce resource commitment while maintaining tight control over foreign operations (Yamin and Sinkovics, 2007), not only presupposes certain conditions such as the existence of a compatible ICT infrastructure in the host country (Jean, Sinkovics, and Kim, 2008; Yamin and Sinkovics, 2006, 2007), it also re-introduces the market complexity risk in a different form.

Political risk

The risk of political changes in a host country, due to, for example, war or revolution, affecting a company's business is one of the most researched traditional risks in the international business literature (Bannister and Bawcutt, 1981; Brouthers, 1995; Miller, 1992; Root, 1987). Yet, it is underresearched and often ignored in the evolving e-commerce literature (Frynas, 2002; Lynne, 2000). Although it might be expected that political risk will have a less dramatic impact on virtual enterprises than on their physical counterparts, when it comes to destructive turmoils e-companies may be harmed more immediately than by a mere slump in sales. Since all networks have a physical infrastructure (Malecki, 2002) these may be severely damaged in the event of military encounters. Furthermore, large cities not only tend to dominate in network

connections (Malecki, 2002); they also happen to be the most likely targets for attacks. As soon as physical products are involved, political risks regain in importance in their traditional sense, as the delivery process takes place offline.

Transfer risk

The risk of not adequately adapting to institutional restrictions regarding product and/or information flows in a country belongs to the relatively well-researched dimensions of the international trade literature (Brouthers, 1995; Miller, 1992; Root, 1987). Root (1987) refers to it as future government action that might restrict foreign companies' payment and/or capital transfers out of the country. He also includes inconvertibility or depreciation of currency into his definition. However, these dimensions are mostly dealt with under the heading of exchange risk in the literature. Brouthers (1995) extended this definition to government policies restricting the free flow of goods and services. While the Internet is reducing certain traditional trade barriers (Hamill, 1997; Porter, 2001) and is regarded as an alternative/complement to physical market entry (e.g., Bennett, 1997; Berry and Brock, 2004; Stockdale and Standing, 2004) the intercountry regulatory competition *inter alia* to set ICT standards (Winn, 2007) may still lead to government measures affecting the undisturbed flow of products and/or information (Braga, 2005; Frynas, 2002; Kobrin, 2001). Furthermore, it appears that countries tend to regulate e-commerce in a similar fashion in which they regulate other domestic issues (Winn, 2007). Consequently, there is a probability that with growing online internationalization less democratic countries may take action of protectionist nature which might impair on foreign e-companies' business (Andonova, 2006; Braga, 2005).

Operation risk

This risk dimension has been used by several authors. While Root (1987) applied the term similar to the transfer risk dimension, Miller (1992) subsumed under operation risk firm-level risks occurring in the course of business conduct such as employee unrest, raw materials shortages, machine failure, and so on. Depending on the nature of the business, for example, manufacturing or service, different operation risks may be relevant. The nature of the goods produced, for example, tangible-dominant, intangible-dominant, is a further contingency factor for operation risk. In the online context, there is an array of risks which have only been rudimentarily investigated in the literature. With increasing product digitizability risks such as privacy, intellectual property, reliability, identification, security, and identity theft come to the fore (Scott 2004). While these risks are specific to the online context, others such as physical security, logistics, dependency, reputation, credit, and legal dimensions

can also be found in the offline context. Thus operation risk is, rather, an umbrella term subsuming two streams of risks. However, given the focus on international aspects, the elaborate analysis of operation risks is left to future investigation.

Ownership risk

Even though owing to their predominant virtuality e-companies are generally not expected to be affected by the risk of losing company assets due to expropriation, confiscation or domestication in a foreign country (Frynas, 2002), there are certain aspects to e-commerce to which ownership risk still applies. E-companies are highly dependent on Internet infrastructure which is manifested in the physical world through telecommunications companies, Internet service providers (ISP), backbone carriers, and so on (Malecki, 2002). Companies with the means to invest in private networks (Malecki, 2002) for higher security and speed may be by implication subject to expropriation. Furthermore, international e-commerce firms need servers to host their virtual assets such as Web sites and other applications (Ossi, 2001). Since these servers may be located in several countries, depending on whether the enterprise chooses to directly own and operate the servers or to outsource this task to third-party ISPs (Ossi, 2001), there may be a certain exposure to ownership risk.

Marketing infrastructure risk

In Brouthers's (1995, p. 17) international risk framework, marketing infrastructure risk refers to the lack of a '*structured and secure infrastructure*'. When it comes to physical distribution of goods the existence and state of a country's road, rail, air, and water networks maintain their traditional relevance. Furthermore, the distribution of intangible and digital products is affected by a country's poor infrastructure in its traditional sense when factors such as electricity are concerned (Brouthers, 1995). Pure online infrastructure risks, however, stem from differences across countries in bandwidth affecting the speed of information flows (Kannan, 2001), in telecommunications infrastructure, for example, phone lines, fibre trunks, and so on (Javalgi et al. 2005), in the Internet access method used by customers such as computers, mobile phones, TV sets, and so on. (Guillen, 2002), in the cost of Internet use (Guillen, 2002; Javalgi et al. 2005) and in the number of Internet hosts (Javalgi et al. 2005).

Consumers' taste and market demand risk

While consumers' taste refers to the risk of not adequately understanding how consumers use the firm's products, market demand risk is defined as the risk of not adequately gauging the market. As consumers may use the same product in different ways across countries or even not use them at all, identification, assessment of, and adaptation to those differences is crucial to a company's

profitability. The geographic separation between a firm and their international customers, will add to the problem by disengaging or disconnecting the firm from the business and institutional environment and expose them to the ‘virtuality trap’ (Yamin and Sinkovics 2006). Hence, assessing the current and/or future demand for a firm’s products is essential for effective strategy creation (Brouthers, 1995).

Competitive risk

Despite expectations for an increase in competitiveness (Nittana, Terrence Clifford, and Antonia, 2008), when substituting traditional channels with online media without sufficient strategic considerations, companies may be confronted with a decrease thereof stemming from (1) low switching costs negating the positive effects of network externalities (Porter, 2001); (2) the incorrect choice of online product offerings (de Figueiredo, 2000); (3) the existence of product comparison platforms (Scott, 2004; Porter, 2001); as well as (4) from ignoring the potential benefits of complementary offline presence (Amit and Zott, 2001; Porter, 2001).

The role of risk perceptions in SMEs’ entry mode decisions

As already accentuated in the introduction section, engaging in virtual internationalization makes it necessary to understand the risks it involves. Whereas some of these risks can be paralleled with traditional business risks, others stem from the uniqueness of Information and Communication Technologies. For that reason a classification in three main categories may be of practical importance, that is, traditional IB, operational, and online media risks. This differentiation is required as risks belonging to the respective categories may be perceived differently by managers. However, as the focus of this chapter was set on the traditional IB-risk stream, the two latter categories will not be considered in the following discussion. For the purpose of this paper online internationalization is defined as a form of foreign market entry which takes place ‘*in the virtual rather than the real or spatial domain*’ (Yamin and Sinkovics, 2006, p. 340). Even though depending on the nature of the goods, the special domain cannot be completely ignored, companies opting for this mode of entry do not have an equity based market presence in the host country. While there are studies speculating on the potential advantages and disadvantages of e-commerce adoption as well as on the Internet’s impact on the internationalization process and existing export marketing theories (e.g., Gregory, Karavdic, and Zou, 2007; Karavdic and Gregory, 2005) the literature lacks a conceptual framework that explicitly details the reasons for online market entry choice over more traditional entry modes. In this section, a simple model is proposed in an attempt to explain the role of risk perceptions, both traditional and electronic, in SMEs’ decision to engage in virtual market expansion (see Figure 12.2).

Figure 12.2 Conceptualization of risk trade-offs and impacts on export performance

Perception is a learned mental process used to reduce the complexity of information and/or misinformation about the environment. Generally, decisions are based on ‘perceptions of the environment, [and] not on environmental reality’ (Johnston and Wright, 2004, p. 235). Applying this definition to managerial risk perceptions, from the actual risk level predominantly differing perceptions of traditional international business risks and of their virtual counterparts are expected to affect decision making. The existence of international risk trade-offs among country risk, resource commitment, and market revenue exposure is already documented in the international business literature (Miller, 1992; Shrader et al. 2000). Previous research also showed that perceiving high traditional international risks in a target market may lead to less committed market entry modes in terms of resources and control (Brouthers 1995). Since ICT seem to offer a low-resource-commitment-high-control alternative, the following proposition can be derived:

P1: SMEs are more likely to prefer online market entry when perceived offline control risks in a target country are high than when perceived offline control risks are low.

P2: SMEs are more likely to prefer online market entry when perceived offline market complexity risks in a target country are high than when perceived offline market complexity risks are low.

Based on the above argumentation, it may appear that online market entry has the potential to counterbalance the risk-resource-commitment-control trade-off. Yet, as delineated in the second section, this entry form exhibits its own set of risks. Consequently, the perception of international e-risks entails a different kind of managerial trade-off decision. In this scenario traditional international business risks are traded off against international e-risks.

P3: High perceptions of total international e-risks have a moderating effect on SMEs' online market entry decision.

Informational, intangible-dominant and digitizable products are more suitable for online commerce than tangible-dominant goods because of their increased online transferability (Karavdic and Gregory, 2005). Gregory et al. (2007) found empirical evidence for product online transferability to have a positive, direct effect on export marketing strategy as it facilitates product adaptation to customers' needs leading to increased efficiency, enhanced distribution support, and under certain circumstances to a more competitive price. Since tangible products often require 'tactile feedback' and cannot be directly distributed through ICT the level of reliance on online media for dealing in these products is likely to be lower than that for intangible-dominant or digitizable goods (Peterson, Balasubramanian, and Bronnenberg, 1997; Varadarajan and Yadav, 2002). Even though many companies offer both physical and digital/digitizable products since supplementary services (e.g., after-sales services) increasingly tend to be provided online (Petersen and Welch, 2003), when opting for pure online market entry firms are expected to predominantly carry product offerings with high product online transferability. Thus, Proposition 4 suggests that:

P4: Product online transferability has a moderating effect on SMEs' online market entry decision.

The impact of risk perceptions on entry mode decisions have been empirically tested and confirmed using Dunning's eclectic paradigm (Brouthers, 1995; Nakos and Brouthers, 2002). Since the OLI framework builds on a number of economic and behavioural theories including transaction-cost economics theory (Dunning, 2001), Brouthers and Nakos (2004) investigated SME entry mode choice from a TCE perspective. They found support for small firms exhibiting a significantly better performance when selecting transaction-cost predicted entry modes as opposed to other modes of entry (Brouthers and Nakos, 2004). In this paper, we are only concerned with the 'internalization' component of the OLI framework, as the empirically supported risk concepts were subsumed under that dimension (Nakos and Brouthers, 2002). Nevertheless, in analogy

with previous findings on the framework's entry-mode-predicting-ability firms can be expected to demonstrate better export performance when choosing an 'internalization' predicted internationalization strategy than when opting for a different alternative.

P5: Given a compliance with the strategy prediction of the OLI framework's internalization component, there is a positive relationship between online market entry strategy and export performance.

In addition to their moderating function on online market entry selection, risk perceptions may also play an important role after an online market entry decision has been made. International e-risks are in many cases difficult to anticipate. Their existence is believed to have a negative effect on company profitability (Braga, 2005; Porter, 2001; Reeves, 2000). Even though Miller's (1992) suggestion of risk management applying a financial approach (e.g., by insurance) is also appealing in the online context, this presupposes the existence of such instruments in the host country. While in countries such as Germany a relatively advanced insurance infrastructure in the form of 'traditional' and 'special' e-insurance offers is already in place (Grzebiela, 2002), this may not be the case in other countries to the same extent. Consequently, when the occurrence probability of online risks is perceived as high after an online market entry strategy has already been implemented, it can be expected that SMEs' export sales and export performance as a whole will be affected (Acedo and Florin, 2007; Andrijcic and Horowitz, 2006; Bromiley, 1991). Therefore, it is proposed that:

P6: High perceptions of international e-risks after the implementation of an online market entry strategy has a negative impact on SMEs export performance.

Conclusions

This paper attempted to investigate how Brouthers's (1995) empirically tested international risk framework takes effect in the online context. It is suggested that despite its potential to offset certain aspects of the risk-resource-commitment-control trade-off, online market entry requires trade-off decisions of a different kind, that is, trading off traditional international risks against international e-risks. Since the risk dimensions under scrutiny tend to be considered under the internalization constituent of Dunning's OLI framework, a model is proposed how offline and online risk perceptions may influence SMEs' decision to select online market entry over more traditional entry forms.

The main limitation of the above model is its simplicity. Factors affecting risk perceptions such as culture, the current government's transaction governance

capability, the owner-manager's entrepreneurial orientation, and so on, have not been considered. Future research may not only wish to include supplementary variables, but may also consider to expand the risk framework by introducing additional risk dimensions which complement the operational and online media risk streams, and integrate them into a more elaborate contingency model explaining online entry mode decisions. Since this paper only considered the internalization dimension, an investigation of how the other two OLI components (ownership and location) impact on online internationalization strategy may be of future research interest. Furthermore, work is also required to operationalize the proposed international e-risk dimensions empirically and test their viability and relevance for international e-commerce.

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