Journal of World Business 46 (2011) 143–153

Contents lists available at ScienceDirect

Journal of World Business

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

Risk management in the internationalization process of the firm: A note on the Uppsala model

Francisco Figueira-de-Lemos [a,b,*], Jan Johanson [b,1], Jan-Erik Vahlne [c,2]

[a] Faculty of Economics and Management, Catholic University of Portugal (Porto), Rua Diogo Botelho 1327, 4169 - 005 Porto, Portugal
[b] Department of Business Studies, Uppsala University, Box 513, SE-751 20 Uppsala, Sweden
[c] Dept of Business Administration, School of Business, Economics and Law, University of Gothenburg, Box 610, Vasagatan 1, House J, Floor 5, 405 30 Göteborg, Sweden

ARTICLE INFO

Article history:
Available online 17 June 2010

Keywords:
Internationalization
Internationalization process
Uppsala model
Risk
Risk management
Contingency
Uncertainty
Contingent uncertainty
Commitment
Knowledge

ABSTRACT

This paper analytically and graphically examines the Uppsala model's risk formula (Johanson & Vahlne, 1977) in its two variables: commitment and uncertainty. The graphical treatment of the variables demonstrates the internationalization mechanism's consistency with the risk formula. In particular, commitment manipulation develops a risk management perspective to the model, wherein contingent uncertainty is a central concept. The main contribution consists in the composition of a set of hypotheses on the effects of risk contingencies on a firm's commitment behavior in different internationalization phases. A pertinent remark that emerges from this analytical exercise is the Uppsala model's contingent nature, which explains the differences in the pattern and pace of the internationalization process, as well as potential leapfrogging and market-exit moves.

1. Introduction

Among the difficulties that a firm faces in its internationalization process, the lack of market knowledge stands for the most critical constraint (Johanson & Vahlne, 1977, 2009). In fact, according to the findings of the EU Observatory of European SMEs 2006/2007 survey, the lack of knowledge of foreign markets is the main obstacle to international expansion.[3] However, and in spite of this lack of knowledge contingency, international business (IB) research has placed most of its attention on knowledge rather than on the lack thereof.

This paper deals with an increasing challenge to international managers. More than a problem of knowledge acquisition (Johanson & Vahlne, 1977) and transfer between subsidiaries and headquarters (Doz & Prahalad, 1984), international managers are facing a paradox that has been ancestrally recognized among epistemology philosophers, such as Socrates and Plato. The more knowledge firms acquire, the greater their perception of the lack of knowledge. The knowledge perception gap has become wider, and continues to widen further with the advancement of global information platforms. In this lack of knowledge perception context, managers must make decisions based on consciously incomplete information sets. The amount of available information is such that logical, intuitive, and de-structured decision processes take place. In a fast-changing world, the time it takes to learn narrows to a fraction, forcing commitment decisions to be made based on the achievable knowledge within a massive lack of knowledge. In a globalized world, more important than to decide on the allocation of resources it is to decide on their contingent reallocation. Moreover, managers have to make those decisions attending a range of tangible and intangible commitments.

This balance between knowledge and resource commitment in an incomplete, yet cognizant, knowledge context is now of central concern to international managers. Nonetheless, internationalization cannot be seen as the result of an optimization exercise between resource allocation and foreign market exploitation. Rather, it must be comprehended as the process outcome of adjustment to changes within a firm and the firm's environment. This contingency process view on a firm's international path

* Corresponding author at: Faculty of Economics and Management, Catholic University of Portugal (Porto), Rua Diogo Botelho 1327, 4169 - 005 Porto, Portugal. Tel.: +351 226 196 294; fax: +351 226 196 291.
E-mail addresses: flemos@porto.ucp.pt, francisco.lemos@fek.uu.se (F. Figueira-de-Lemos), Jan.Johanson@fek.uu.se (J. Johanson), jan-erik.vahlne@handels.gu.se (J.-E. Vahlne).
[1] Tel.: +46 18 471 0000; fax: +46 18 471 6810.
[2] Tel.: +46 31 786 5615; fax: +46 31 711 7088.

[3] The survey inquiry was made to 16,339 Small and Medium Enterprises (SMEs) (17,283 firms in total). The main findings concluded that the lack of knowledge of foreign markets is the main export obstacle for SMEs (13% of exporting SMEs mentioned this as their prime obstacle), followed by import tariffs in destination countries and the lack of capital (both showing 9%).

1090-9516/$ – see front matter
doi:10.1016/j.jwb.2010.05.008

introduces a risk management conceptualization that is embedded in the Uppsala model (Johanson & Vahlne, 1977, 1990). In fact, this model's nuclear assumption – the internationalization mechanism – is analytically supported by a formula that relates risk, commitment, and uncertainty. Interestingly, although the Uppsala model is widely cited and used, the risk formula does not seem to have been noted by researchers. It has neither been criticized nor used in internationalization analyses. Therefore, we assert that there is a need to explicate the risk conception in the Uppsala model and its implications. We discuss the frequent characterization of the Uppsala model as a risk reduction model contrasting this with the role of opportunity-seeking, which is stressed by its authors (Johanson & Vahlne, 1977, 2006). We also discuss the alleged deterministic nature of the model according to some researchers (Andersen, 1993; Leonidou & Katsikeas, 1996), which contradicts the risk formula's contingency nature. Overall, the objective of this paper is to develop the risk management perspective that is implied and this risk perspective's implications for internationalization analysis.

The following section is a short literature review, whereas the subsequent section analytically demonstrates the Uppsala model's risk formula. In Section 4, the risk management perspective of the model is presented and discussed. Section 5 presents a framework of commitment and knowledge balance with hypothesis formulation from the Uppsala model's basic assumptions. The conclusions in Section 6 underline the new perspective given to the Uppsala model and advance that conceptualization's potential in the strategic management field.

2. IB literature: contribution and review

The Uppsala model captures an iterative process of internationalization based on the behavioral theory of firms (Aharoni, 1966; Cyert & March, 1963). The model distinguishes state and change aspects of internationalization. Change aspects concern internationalization behaviors in the form of commitment decisions and current activities that are assumed to be dependent on state aspects, which are in turn affected by the behavior of the firm. Decisions to commit resources to foreign operations are grounded on the firm's experiential knowledge and assumed to depend on "what alternatives are raised and how they are chosen" (Johanson & Vahlne, 1977, p. 29). Nevertheless, these assumptions do not sufficiently explain the model's contingent nature. The commitment decisions of the Uppsala model are framed under an analytical formula that regards risk as dependent on commitment and uncertainty realizing thereby the internationalization mechanism and the contingent nature of firm's growth and internationalization. The model's contingency derives from the alternatives raised and, consequently, the internationalization process pattern and pace reflect the changes in a firm and in its environment.

Despite of some exceptions, research on firm internationalization has not realized this contingent feature of the Uppsala model. Rather, it has widely evoked the establishment chain and the internationalization mechanism in order to address a deterministic growth pattern in the internationalization process. Therefore, this discussion about the Uppsala model's contingency nature is intended to be an essential contribution to internationalization process literature.

2.1. Risk management in the IB literature

Although risk appears to be widely present in internationalization discussions, few studies strictly focus on risk management in the internationalization process. Risk management can be found in the internationalization literature as a trade-off exercise between time and money (Reuer, Shenkar, & Ragozzino, 2004; Rivoli & Salorio, 1996) or between country risk and firms' exposure both to country revenues (Shrader, Oviatt, & McDougall, 2000) and to total debt use (Kwok & Reeb, 2000), or even among financial and strategic actions (Miller, 1992). In fact, Miller has contributed to this field not only with the framework of the integrated management of multiple international risks (1992), but also with the conception of the Perceived Environmental Uncertainty measure (1993), which was later developed by Werner, Brouthers, and Brouthers (1996). Before Miller's (1992, 1993) research, an outline of decision-making was proposed by Mascarenhas (1982), yet risk is not the central subject. The focus on his study comprehends five uncertainty types that must be coped with in a given set of control and flexibility strategies.

Even without straining the risk management subject, some other studies are still of interest. For instance, concerning the ambiguity that risk poses in the international business field, Rugman (1976) applies a study on portfolio theory in the international context and finds an inverse correlation between MNE internationalization and the variance of profits, revealing that the risk of the MNE is lower than that of non-internationalized firms. On the opposite side of the spectrum, Reeb, Kwok, and Baek (1998) demonstrate that the more international the MNE is, the greater the systematic risk. They provide evidence of higher discount rates observed in the evaluation of international projects.

On a large scope theory design, Forlani, Parthasarathy, and Keaveney (2008, p. 293) state that resource-based theory "appears to classify risk more as the income lost from improperly applying the firm's capabilities than the amount of dollars invested to pursue the international activity." They try to reconcile the aim of control from the perspective of transaction cost theory and firm's capabilities according to resource-based theory. In this normative stream, transaction cost theory has been considered in some studies on internationalization decision-making, namely, in the evaluation of the entry mode (Anderson & Gatignon, 1986; Buckley & Casson, 1998; Meyer, 2001; Pedersen & Petersen, 2004) or the control MNEs have on their foreign subsidiaries throughout the degree of equity structure (Gatignon & Anderson, 1988) and vertical integration (Dunning, 1988; Williamson, 1975, 1985).

2.2. The risk formula

In the Uppsala model, risk is translated by a mathematical expression, $R_i = C_i \times U_i$. As originally stated, the formula assumes that R_i, the existing market risk situation, is the product function of the existing market commitment, C_i, and the existing market uncertainty, U_i. The index i denotes a certain market.

This concept of risk closely corresponds to findings in studies of managerial behavior, suggesting that uncertainty and the magnitudes of possible negative consequences are critical in managers' risk perceptions (March & Shapira, 1987). The possible negative consequences in the model are assumed to be captured on the commitment side. This risk conceptualization is also consistent with the perceived risk model used in marketing research (Cox, 1967; Taylor, 1974) and with Sarasvathy's (2001) criterion of affordable loss in her conception of the effectuation process.

In what specifically concerns the Uppsala model's risk formula, besides Hadjikhani's (1997) implicit framework of knowledge, commitment and risk, there is, as far as we know, only one scientific publication that explicitly refers the mathematical expression. In the international financial study of Trappey, Shih, and Trappey (2007), the risk analysis is consistent with some fundamental assumptions of the Uppsala model. It denotes an incremental logic of risk mitigation and resistance to environment and other changes within the firm, underlying, as well, the bounded rationality assumed in the firm's internationalization mechanism. Nevertheless, the concepts of risk, uncertainty, and knowledge are used in different ways in different contexts; thereby