G Model
IBR 1310 No. of Pages 12
ARTICLE IN PRESS
International Business Review xxx (2015) xxx–xxx
Contents lists available at ScienceDirect
International Business Review
journal homepage: www.elsevier.com/locate/ibusrev

Corporate risk and external sourcing: A study of Scandinavian multinational firms

Tom Aabo[a,*], Christos Pantzalis[b], Helle Sørensen[c], Malene Teilmann Toustrup[d]

[a] Aarhus University, Fuglesangs Allé 4, DK 8210 Aarhus V, Denmark
[b] University of South Florida, 4202 E. Fowler Ave., Tampa, FL 33620-5500, United States
[c] Nykredit Realkredit A/S, Kalvebod Brygge 1-3, DK 1780 Copenhagen V, Denmark
[d] Kids Retail of Denmark, Frederiksholms Kanal 4 st.th., DK 1220 Copenhagen K, Denmark

ARTICLE INFO

Article history:
Received 31 July 2014
Received in revised form 4 April 2016
Accepted 4 April 2016
Available online xxx

Keywords:
Corporate risk
Internationalization
External sourcing
Foreign suppliers
Real options

ABSTRACT

External sourcing from foreign suppliers is an important aspect of the firm's internationalization. However, data on such sourcing is available from neither databases nor annual reports. Thus, the corporate risk implications of such sourcing have not been studied previously. We obtain the necessary data by surveying Scandinavian non-financial firms. We find that highly international firms reduce corporate risk by externally sourcing from foreign suppliers both compared to sourcing from own production facilities abroad (due to superior flexibility) and compared to domestic sourcing (due to offsetting cash flows). Our results are statistically significant, are economically meaningful, and have important policy implications.

1. Introduction

Studies on the degree of the internationalization[1] of the firm typically rely on the use of a variety of measures such as foreign sales ratios, foreign assets ratios, and foreign subsidiaries.[2] However, this practice which is grounded on the practicality of readily available data for the aforementioned measures discounts an important internationalization aspect: External sourcing from foreign suppliers[3] – for which one can get information neither from databases nor from annual reports.[4] Vahlne and Ivarsson (2014) find global external sourcing to be an important aspect in the internationalization of a sample of large multinational manufacturing firms based in Sweden. Kogut and Kulatilaka (1994) argue that an important area not investigated is the potential ability – as seen in the apparel industry – of firms "to write short-term contracts that allow the buying firms to switch suppliers based upon changes in costs and exchange rates".

The purpose of this study is to investigate the corporate risk implications of external sourcing from foreign suppliers. This is

* Corresponding author.
E-mail addresses: taa@asb.dk (T. Aabo), cpantzal@coba.usf.edu (C. Pantzalis), hsrn@nykredit.dk (H. Sørensen), mtoustrup@hamleys.dk (M.T. Toustrup).

[1] The terms internationalization and multinationality are often used interchangeably. Dunning (1973) defines a multinational firm as a firm with production facilities in more than one country. We use the more broad term internationalization. Vahlne and Ivarsson (2014) distinguish between 1) firms that are in a state of internationalization with limited geographical spread and/or coordination and 2) firms that have passed this stage and have become "globalized" with wide geographical spread and coordination of activities. We use the term internationalization and encompass both "internationalized" and "globalized" firms.

[2] Aggarwal, Berril, Hutson, and Kearney (2011) examine 393 studies in which internationalization is conceptualized. They find that 264 studies employ single-attribute measures. Of these studies, 163 studies use measures based on the number of foreign subsidiaries, and 62 studies employ measures based on sales. Other measures utilized include characteristics such as foreign assets, foreign production, foreign joint ventures, foreign profits, international transactions, foreign investments, foreign M&A activity, foreign employees, foreign exchange listings, foreign equity, foreign R&D, international marketing and patents.

[3] Without obtaining primary data on foreign costs (e.g. from surveys) we have no possible way of distinguishing between two firms that both sell all their goods and services abroad, because it is possible that one firm is sourcing only domestically whereas the other prefers sourcing on an international scale. These two firms would clearly differ from each other both in terms of their degree of internationalization and their ability to mitigate corporate risk by offsetting positive cash flow exposures from foreign markets (output) with negative cash flow exposures from the same markets (input).

[4] IFRS 8 (Europe) and SFAS (US) require firms to disclose information on geographical segments. Such information is restricted to the geographical distribution of operating assets and revenues/sales. Thus, the geographical distribution of operating costs is absent. To the extent that firms only source internally from own production facilities, the foreign assets ratio may be used as a proxy for the foreign costs ratio. However, such an assumption ignores external sourcing from foreign suppliers.

http://dx.doi.org/10.1016/j.ibusrev.2016.04.002
0969-5931/

an important topic because it deals with one of the core issues in valuation, the ability to properly account for risk. This complicated task becomes even harder when the firm seizes to be purely domestic and by venturing overseas exposes itself to a brand new array of risks as well as opportunities. Specifically, international firms can manage part of their risk exposures by arranging their revenue and cost-structures in an offsetting manner, something domestic firms cannot do. Versions of this "natural hedge" can be devised using access to foreign debt financing or by sourcing from foreign suppliers. The latter, primarily due to the lack of measurable data, has largely eluded the scrutiny of academic researchers in the prior literature. Thus, although the theoretical aspects of corporate risk implications of external sourcing from foreign suppliers are pretty straight-forward, their verification through quantifiable methods in an empirical setting has not been achieved yet in the literature. This is the gap that our study aims to fill.

We choose to conduct this study based on a sample of 147 Scandinavian non-financial firms which we survey to obtain information on their foreign cost structures. We choose the survey approach in order to balance between the benefits and disadvantages of large sample analyses and clinical studies (Graham and Harvey, 2001). Thus, we obtain and use information that would not be accessible in traditional, large sample analyses and, at the same time, we do not restrict ourselves to clinical studies that tend to produce unique results based on very small samples. Scandinavian firms are interesting objects for investigation because the Scandinavian economies, in spite of being relatively small, are "open", outward-oriented, and characterized by relative low levels of government interference with markets and an abundance of highly international firms.

We hypothesize and find that external sourcing from foreign suppliers reduces corporate risk[5] for firms with high levels of foreign sales. Our results show that using a network of foreign suppliers is superior in corporate risk terms to domestic sourcing and to sourcing from own production facilities abroad. There are two main reasons why the use of a network of foreign suppliers can reduce corporate risk. First, having a network of foreign suppliers is a sourcing method which enhances the firm's ability to implement "natural hedges", i.e. to offset positive cash flow exposures from abroad with similar negative cash flow exposures. Second, having a network of foreign suppliers is a more flexible sourcing method that entails no long-term/inflexible commitment to specific foreign markets in the form of production facilities. Our focus is on the corporate risk implications of internationalization. Thus, we do not make recommendations in a risk-return framework. To the best of our knowledge, the corporate risk implications of external sourcing from foreign suppliers have not been empirically investigated in the previous literature.

Prior to investigating the specific relationship between corporate risk and external sourcing from foreign suppliers, we relate our study to the existing literature by addressing the more general research question of the link between corporate risk and internationalization. The theoretical and empirical literature has not yet provided a straightforward answer to the latter. On the one hand, a firm that is international can reduce corporate risk through diversification.[6] Furthermore, a firm that has production facilities in several countries may reduce corporate risk through the ability to switch production in accordance with market developments.[7] On the other hand, as a firm expands its international sales or production it is bound to face a set of new risks.[8] Thus, from a theoretical point of view the relationship between corporate risk and internationalization is ambiguous. Some empirical studies[9] find a positive relationship between the firm's degree of internationalization and its corporate risk while other studies[10] find a negative relationship. In our study, we find a strong, positive relationship between foreign sales and corporate risk. Thus, in a Scandinavian setting the corporate risk increasing effect of dealing with multiple foreign environments more than outweighs the corporate risk reducing effects of geographic diversification and operating flexibility.

Our results are statistically significant, economically meaningful, and have important policy implications for corporate managers and investors. First, in a Scandinavian context with small open economies, an international firm is associated with more corporate risk than a similar domestic firm. A median firm with a median level of foreign sales is associated with a level of corporate risk as measured by stock return volatility one third higher than a median non-international firm. Second, and more importantly for the purpose of this study, the level of corporate risk of the median high foreign sales firm is lower by one third when it sources from foreign suppliers as opposed to having production facilities abroad or domestic sourcing. Our results suggest that firms that are very international in terms of foreign sales may benefit in corporate risk terms from the operational flexibility of sourcing from a network of foreign suppliers – in effect reducing the corporate risk to the level of a non-international firm.

We contribute to the literature on corporate risk and internationalization (e.g. Fatemi, 1984; Goldberg and Heflin, 1995; Hughes, Logue, and Sweeney, 1975; Kwok and Reeb, 2000; Michel and Shaked, 1986; Qian, 1996; Shapiro, 1978) including the integration of real options and internationalization (e.g. Allen and Pantzalis, 1996; Andersen, 2012; Capel, 1997; Kogut, 1985; Kogut and Kulatilaka, 1994; Li, 2007; Li and Rugman, 2007; Sahaym, Trevino, and Steensma, 2012) by focusing on an important aspect of internationalization – external sourcing from foreign suppliers – that due to lack of secondary data has received limited attention previously. With our focus on foreign costs and external sourcing from foreign suppliers our study is related to Aabo, Hoeg, and Kuhn (2010) who obtain data on the foreign cost structure of Danish medium-sized manufacturing firms and find that these firms use foreign costs to match the foreign exchange exposure created by foreign sales activities.[11] We expand the scope of our investigation and focus not only on foreign exchange exposures but on corporate risk in general, of which foreign exchange risk is only a minor part.

We organize the paper as follows. Section 2 reviews relevant literature and states our hypotheses/research question. Section 3 describes the methodology and the data. Section 4 shows

[5] We measure corporate risk by stock return volatility. In the subsequent literature review we argue for the superiority of this risk measure.

[6] Shapiro (1978) argues that operating in a number of countries whose economic cycles are not perfectly in phase generates foreign cash flows that are not perfectly correlated with domestic cash flows.

[7] See e.g. Allen and Pantzalis (1996) and Capel (1997).

[8] These risks involve significant exposure to foreign exchange rate volatility (e.g. Bartov, Bodnar and Kaul, 1996) as well as additional political, regulatory, and/or social or cultural risks (e.g. Shaked, 1986).

[9] See e.g. Goldberg and Heflin (1995) and Reeb et al. (1998).

[10] See e.g. Hughes, Logue, and Sweeney (1975),Fatemi (1984), and Michel and Shaked (1986).

[11] On the firm-specific level, foreign costs may either increase or decrease the need for financial hedging. If a firm has costs in the same currencies as it has revenues, the firm will experience a natural hedge by matching foreign costs with foreign revenues and a subsequent decrease in its need for financial hedging. However, if a firm has costs in currencies in which it has no revenues, the firm will experience an increase in its exposure and an increase in its need for financial hedging. Whether foreign costs increases or decreases the need for financial hedging on an aggregate level is an empirical question. Aabo et al., 2010 find that foreign costs do decrease the need for financial hedging on an aggregate level.