Overcoming Resource-Constraints through Internationalization?
An Empirical Analysis of European SMEs

Jolanda Hessels

Zoetermeer, June 2008
This report is published under the SCALES-initiative (SCientific AnaLysis of Entrepreneurship and SMEs), as part of the 'SMEs and Entrepreneurship programme' financed by the Netherlands Ministry of Economic Affairs.

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Overcoming Resource-Constraints through Internationalization?
An Empirical Analysis of European SMEs

Jolanda Hessels
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Abstract:
Previous research has indicated that firms can use internationalization as a strategy to access or build up resources. Such a strategy may be of particular interest or even necessary (for example to survive or grow) for firms that lack specific resources. Based on resource dependency theory and the model for entrepreneurial internationalization this paper investigates whether resource scarcities in terms of labor, finance and technology increase the likelihood for small and medium-sized enterprises (SMEs) to aim to access or accumulate these specific resources through internationalization. A number of hypotheses are tested using firm-level data from the ENSR Enterprise Survey 2003 for 7,673 SMEs located in 18 European countries. The results indicate that perceived resource constraints in terms of labor and finance spur SMEs to undertake international activities with the aim to access or accumulate labor, respectively finance. It is also found that among internationally active SMEs perceived constraints in terms of labor, finance and new technology increase the probability of SMEs using their international activities as a means for accessing or acquiring these scarce resources.

Version: June 2008
Keywords: internationalization, SMEs, scarce resources, resource dependency theory
JEL-classification: D21, F14, F23, L21, O52
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Acknowledgement: The paper has been written in the framework of the research program SCALES carried out by EIM Business and Policy Research and financed by the Dutch Ministry of Economic Affairs. The paper was presented at the Babson College Entrepreneurship Research Conference 2008.
Introduction

Firms can have various motives for engaging in foreign markets, such as market-seeking, efficiency-seeking, asset-seeking and resource-seeking motives (Dunning, 1993). This paper tries to explain what drives SMEs to pursue resource-seeking internationalization. Internationalization can be a means for firms to gain access to or to build up resources. Firms may, for example, use internationalization as a means for generating financial resources e.g. through export sales (Edmunds and Ghauri, 1986; Daniels and Bracker, 1989) and as a means for accessing knowledge and technology (Zahra, Neubaum and Huse, 1997; Zahra, Ireland and Hitt, 2000).

This paper investigates whether a firm’s aspiration to access or acquire specific resources through internationalization is driven by a firm’s internal resource scarcities, since internationalization as a strategy for accessing resources is likely to be of special interest or even necessity for firms that lack specific resources to survive or grow.

As compared to larger firms small and medium sized enterprises (SMEs) are typically regarded as resource-constrained (Fujita, 1995; Coviello and McAuley, 1999; Knight, 2000; Hollenstein, 2005) and the main rationale for studying SME internationalization separately from the internationalization of large firms is that SMEs are more likely to face resource scarcities, e.g. in terms of financial and human resources (Coviello and McAuley, 1999). The general belief is that such resource scarcities limit SMEs’ possibilities to act upon identified opportunities abroad (e.g. because internationalization requires costly information and a need for planning) and also make SMEs more susceptible to risks or to the potential negative effects of internationalization (Alvarez, 2004; Bijmolt and Zwart, 1994; Jarillo, 1988; Lu and Beamish, 2001; Moen, 1999; Oviatt and McDougall, 1994; Westhead, Wright, Ucbasaran and Martin, 2001). Empirical findings indicate that resource scarcities may indeed in some instances prevent small firms from internationalizing (Westhead, Wright and Ucbasaran, 2002). However, research has also demonstrated that even small, resource-constrained firms can succeed in international markets (Knight and Cavusgil, 2004; Oviatt and McDougall, 1994) and are able to access valuable resources through cross-border activities (Kuemmerle, 2002). In the past decades, because of developments such as the liberalization of trade and investment and advancements in transport and information technology, the barriers to internationalize have been reduced for small resource-constrained firms (Acs, Dana and Jones, 2003). Also, such developments have meant that developed economies have undergone a shift away from a managed economy towards an entrepreneurial economy, which has resulted in a more important role for small and new firms in developed economies (Audretsch and Thurik, 2000; 2004). While small firms used to be followers in the managed economy, in which large-scaled production industries were dominant, in the entrepreneurial economy they are engines of growth. In the managed economy small firms had to accept the resource constraints that followed i.e. the lack of availability of or access to skilled labor or technology in the home market that could not easily be overcome while in the entrepreneurial economy it has become viable for SMEs to overcome such resource constraints through internationalization. In the current economy resources have become more mobile and more easily transferable between countries and information flows between countries have been enhanced (Autio, 2005; Sapienza, Autio, George and Zahra, 2006). Thus, because traditional barriers to internationalization have been reduced for SMEs and because resources have become more mobile across countries it has become feasible for resource-constrained firms to seek to overcome these constraints through internationalization. The current study investigates whether SMEs are acting accordingly by investigating whether resource-constrained SMEs are likely to pursue and use internationalization as a means for accessing or building up resources.

Traditional internationalization theories such as the theory of monopolistic advantage (Caves, 1971; Hymer, 1976) and the stage theory of internationalization (Johanson and Vahlne, 1977;
emphasize that competitive advantage, stemming from firm advantages and resources, drives internationalization. The resource-based view (Barney, 1991; Wernerfelt, 1984) also argues that firm resources are of key importance to the firm’s acquisition and maintenance of competitive advantage and this view is applied in previous studies to investigate how a firm’s internal resource base enables SMEs to internationalize (Bloodgood, Sapienza and Almeida, 1996; Westhead, Wright and Ucbasaran, 2001; Zahra, Matherne and Carleton, 2003). The resource-based view recognizes that internationalization may provide a means for firms to build up internal resources (Barringer and Harrison, 2000), but it does not acknowledge that resource deficiencies may drive resource-seeking internationalization.

One of the central tenets of economics is that scarcity in terms of the limited availability of goods, services or factors of production (such as labor or capital) drives the economic behavior of individual economic agents. Resource dependency theory (Scottt, 1987; Pfeffer and Salancik, 1978) builds upon this economic rationale and holds that resource scarcities provide a need for firms to acquire or gain access to resources from external sources (Barringer and Harrison, 2000). The model of entrepreneurial internationalization as proposed by Oviatt and McDougall (1994) acknowledges that for resource-constrained ventures internationalization may be a necessary strategy to access value-creating resources (Oviatt and McDougall, 1994; Kuemmerle, 2002). In today’s global economy in which it has become easier to transfer resources between different countries (Autio, 2005; Sapienza, Autio, George and Zahra, 2006) it may be a (more) common or even necessary strategy for organizations, including resource-constrained SMEs, to use internationalization as a means to obtain resources from external sources. Based on resource dependency theory and the model of entrepreneurial internationalization it is argued in this paper that SMEs that face particular resource scarcities may enter international markets or exploit their international activities to overcome a perceived resource scarcity.

The focus in this study is on three types of resource constraints: (perceived) lack of skilled labor, (perceived) lack of access to finance and (perceived) lack of new technology. The study considers three options for SMEs: the option not to internationalize, the option to internationalize with the motive to access a specific resource (labor, finance or know how/technology) and the option to internationalize with (an)other motive(s). Two main predictions are made regarding the behavior of resource-constrained SMEs. First, it is predicted that SMEs that are resource-constrained in terms of labor, finance and new technology are more likely to opt for internationalization as a means of accessing or acquiring lacking resources than not to internationalize. Second, it is also predicted that resource-constrained SMEs that are internationally active are likely to use their international activities as a strategy to access or acquire lacking resources. The empirical part is based on a large dataset of European SMEs (ENSR Enterprise Survey). The data have been collected as part of the Observatory of European SMEs that was conducted for the European Commission in 2003. Comparative studies that draw on multiple-country samples are still limited in internationalization research (Dhanaraj and Beamish, 2004). Exceptions are Dichtl, Koeglmayr and Mueller, 1990 and Adams and Hall, 1993.

The paper is organized as follows. First, the theoretical background is discussed and hypotheses are developed. The subsequent sections elaborate on the data and methodology that are used and present the empirical results. Finally, the findings are discussed and interpreted and some implications for research and policy are formulated.
Theoretical background and hypotheses

Firm resources are tangible and intangible factors (such as assets, capabilities and knowledge) that are owned and controlled by a firm (Barney, 1991; Ruzzier, Hisrich and Antonicic, 2006). Traditional internationalization theories, such as monopolistic advantage theory and the stage theory of internationalization emphasize the role of firm resources in enabling internationalization. Monopolistic advantage theory holds that firms can use their unique resources or the superior knowledge that they have developed in the home market at no or little additional cost abroad (Hymer, 1976; Caves, 1971). The stage or process theory of internationalization (Johanson and Vahlne, 1977; 1990) implicitly assumes that a firm’s resource base enables firms to create goods and services that they can export (Autio, 2005). The belief that firm resources build competitive advantage is also central to the resource-based view of the firm (Barney, 1991; Penrose, 1959; Wernerfelt, 1984). The resource-based view seeks to explain how a firm’s internal resources and capabilities help them to develop and maintain competitive advantage (Wernerfelt, 1984). According to the resource-based view competitive advantage is generated by a firm’s valuable, unique resources, that tend to be intangible and knowledge-based. Firms are viewed as being heterogeneous in terms of their resource endowments and such resource heterogeneity explains the differential performance of firms. The resource-based view has been used to explore how a firm’s internal resource base enables SMEs to internationalize (Bloodgood, Sapienza and Almeida, 1996; Westhead, Wright and Ucbasaran, 2001; Zahra, Matherne and Carleton, 2003).

According to the views presented above internationalization is a consequence of competitive advantage. However, firms may also use internationalization as a strategy for building up resources and thus create competitive advantage through internationalization. Internationalization may, for example, enable firms to generate financial resources (e.g. through export sales) and to access know how and advanced technology (Edmunds and Khoury, 1986; Daniels and Bracker, 1989; Zahra, Neubaum and Huse, 1997; Zahra, Ireland and Hitt, 2000). The resource-based view acknowledges that a firm is able to access or develop resources and capabilities through interaction in business relationships (Barringer and Harrison, 2000). The focus in this view is on adapting the environment to the firm through resource accumulation and capability development as a means to sustain competitive advantage (Eng, 2005). From a resource-based perspective it could be argued that small firms seek international expansion to strengthen the firm’s existing internal resource base. This view does not explicitly take into account the potential role of resource scarcities in stimulating resource-seeking firm behavior.

The idea that scarcity provides an incentive for resource-seeking organizational behavior is found in resource dependency theory. Resource dependency theory proposes that organizational survival depends on the firm’s ability to attain and acquire resources from other actors in the environment. The central tenet of resource dependency theory is resource scarcity. Resource dependency theory assumes that firms are not able to build all resources internally and therefore depend on exchanges with other organizations in their environment to obtain access to scarce resources (Scottt, 1987; Pfeffer and Salancik, 1978). For organizations to survive or prosper, resources must be obtained from external sources (Barringer and Harrison, 2000). Resource dependency theory represents an economic explanation or rationale for why internationalization may be used as a means to access or build up resources. Firms facing scarcities of specific resources are likely to have a particular need or incentive to obtain resources from other actors. Based on this theory it could be argued that a firm may enter international markets to satisfy a need for resources since internationalization increases opportunities to acquire or access resources.
In the past decades developed economies have undergone a shift from a managed towards an entrepreneurial economy (Audretsch and Thurik, 2000; 2004). Because of developments such as globalization and advancements in information technology much of Europe has shifted away from traditional industries (such as automobile production, textile and machine tools) towards knowledge-based economic activity. Consumers increasingly demand tailor-made and personalized products instead of mass-produced goods, thus providing many opportunities for small firms to target specific niche markets. This has resulted in a more important role for small and new firms in developed economies. Small and new firms are no longer followers as was the case in the managed economy. In the managed economy, small firms usually had to accept resource constraints, the consequence of, for instance, a lack of availability of or access to skilled labor or technology in the home market, that could not be easily overcome. However, in the entrepreneurial economy, due to for instance globalization and advancements in information technology, it has become viable for SMEs to overcome such resource constraints through internationalization. Based on case study findings etc that indicated that resource needs may drive international entrepreneurial behavior (McDougall and Oviatt, 1991), the model for entrepreneurial internationalization as developed by Oviatt and McDougall (1994) recognizes that in the current global economy internationalization may be a necessary strategy to ensure opportunities for firm growth or to access value-creating resources for resource-constrained ventures (Oviatt and McDougall, 1994; Kuemmerle, 2002). Thus, according to this model even resource-constrained firms are able to internationalize as a means to build up resources (Autio, 2005; Kuemmerle, 2002) and it has been suggested that many resource-constrained entrepreneurial ventures do indeed internationalize to gain access to value-creating resources across national borders (Oviatt and McDougall, 1994; Kuemmerle, 2002). In the current economy traditional barriers to internationalization have been reduced for SMEs and resources have become more mobile and more easily transferable between countries (Autio, 2005; Sapienza, Autio, George and Zahra, 2006). Therefore, it has become feasible for resource-constrained firms to seek to overcome their resource constraints through internationalization. Following this rationale it is argued in this study that SMEs that face resource constraints are likely to use internationalization as a strategy for accessing or acquiring the lacking resources.

An emerging literature focuses on the enabling features of resource constraints (Katila and Shane, 2005). In this literature it is argued that firms that have fewer resources are likely to be more efficient in leveraging their resources (Baker and Nelson, 2005; Starr and MacMillan, 1990) and that resource constraints may enhance firm performance (George, 2005). The current study extends resource-constraint literature by arguing that resource constraints may induce resource-seeking internationalization.

SMEs are typically resource-constrained, both in terms of the quantity and the quality of their resource endowments (Fujita, 1995; Covello and McAuley, 1999; Knight, 2000; Hollenstein, 2005). Previous research dealing with aspects of resource constraints and internationalization has tended to highlight the assumption that resource constraints may put off internationalization. For example, an article studying small firms (firms with less than 50 employees) located in Great Britain indicates that resource constraints are among the reasons cited for why these firms are not exporting (Westhead, Wright and Ucbasaran, 2002). To give another example, Smallbone and Wyer (1995) state that the lack of availability of finance can be an important constraint for small firms in trying to develop an international orientation. They argue that lack of financial resources may impede the ability of small firms to identify international opportunities and to exploit the international opportunities that they do identify. However, such studies have not explicitly considered the possibility for resource-constrained firms to access or build up lacking resources through internationalization.
The focus in this paper is on three types of constraints: (perceived) lack of skilled labor, (perceived) lack of access to finance and (perceived) lack of new technology. Through internationalization firms may be able to overcome labor constraints, e.g. by importing foreign labor, or by setting up subsidiaries abroad that employ local staff from the host country. Internationalization may also be used as a strategy to generate financial resources. Selling products or services abroad, for example, may be an important way to access capital. Furthermore, internationalization may provide access to knowledge and technology (Zahra, Ireland and Hitt, 2000). Based on the arguments provided above, it is expected that the type of resource a firm seeks through internationalization is directly related to the type of resource limitation a firm has to deal with. Two main predictions are made in this study. First, it is predicted that SMEs that are resource-constrained in terms of labor, finance and new technology are more likely to opt for internationalization as a strategy to access or acquire the lacking resource than not to internationalize. Second, it is also hypothesized that resource-constrained SMEs that are internationally active are more likely to aim to use their international activity for accessing or acquiring the lacking resource than to be internationally active pursuing other motives. This leads to the following hypotheses:

**Hypothesis 1A:** Perceived lack of skilled labor increases the likelihood of an SME to internationalize with the motive to access labor.

**Hypothesis 1B:** Perceived lack of skilled labor increases the likelihood of an internationally active SME to aim to access labor through its international activity.

**Hypothesis 2A:** Perceived lack of access to finance increases the likelihood of an SME to internationalize with the motive to access finance.

**Hypothesis 2B:** Perceived lack of access to finance increases the likelihood of an internationally active SME to aim to access finance through its international activity.

**Hypothesis 3A:** Perceived lack of new technology increases the likelihood of an SME to internationalize with the motive to access knowledge and technology.

**Hypothesis 3B:** Perceived lack of new technology increases the likelihood of an internationally active SME to aim to access knowledge and technology through its international activity.

**Methodology and data**
The hypotheses are tested by means of binomial logistic regression analysis. The analysis is based on a sample of 7,673 SMEs from the following 18 European countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom. Information was obtained from the SME business owners through a large-scale telephone survey (ENSR

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1 The survey used a disproportionate stratified sample by country, sector and size class and therefore does not (directly) reflect the structure of the European SME sector. However, when using regression analysis it is possible to correct for these characteristics, by including control variables for the home country, sectors and firm size. This means that the regression estimates are not biased due to the representativeness of the sample.
Enterprise Survey) held in 2003 as part of the Observatory of European SMEs for the European Commission.

**Dependent variables**
Dependent variables are constructed for internationalization for the following motives:
- access to labor
- access to finance
- access to knowledge and technology

In the survey the business owners were asked to indicate how important each of these motives was for the internationalization of their business. When the business owner indicated that a motive was ‘very important’ or ‘important’ his firm was classified into the category “internationalization with the motive to access the specific resource”. Note that the business owners were able to indicate for more than one motive whether this motive was important/not important for the internationalization of their business.

Each dependent variable contains three categories: no internationalization; internationalization with the motive to access the specific resource abroad (i.e. labor, capital or knowledge/technology); internationalization without the motive to access the specific resource (i.e. internationalization with other motives). Internationalization is defined as being involved in exports, imports and/or foreign direct investments (including joint ventures abroad). For each of the three internationalization motives two dummy variables are constructed, one with ‘no internationalization’ as the reference category, and one with ‘internationalization without the motive to access the specific resource’ as the reference category (see Table 1).

**Independent variables**
The following dummy variables are constructed as proxies for perceived business constraints:

*Perceived lack of skilled labor*
Coded 1 when a business owner indicates that lack of skilled labor has been a main constraint on the firm’s performance over the past two years and otherwise coded 0.

*Perceived lack of access to finance*
Coded 1 when a business owner indicates that lack of access to finance has been a main constraint on the firm’s performance over the past two years and otherwise coded 0.

*Perceived lack of new technology*
Coded 1 when a business owner indicates that lack of new technology has been a main constraint on the firm’s performance over the past two years and otherwise coded 0.

Table 1 provides some descriptive statistics for the dependent and independent variables.

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2 The business owners could also opt for other internationalization motives, these are: ‘high production costs on the domestic market’, ‘access to new and larger markets for products/services’, ‘strict laws and regulations on the domestic market’ and ‘additional production capacity’.
Table 1: Number of observations, mean and standard deviation for dependent and independent variables

<table>
<thead>
<tr>
<th></th>
<th>Number of observations</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internationalization with motive ‘access to labor’ (dummy variable, no internationalization is reference category)</td>
<td>5,071</td>
<td>0.20</td>
<td>0.40</td>
</tr>
<tr>
<td>Internationalization with motive ‘access to labor’ (dummy variable, internationalization without motive access to labor is reference category)</td>
<td>3,618</td>
<td>0.28</td>
<td>0.45</td>
</tr>
<tr>
<td>Internationalization with motive ‘access to finance’ (dummy variable, no internationalization is reference category)</td>
<td>5,119</td>
<td>0.20</td>
<td>0.40</td>
</tr>
<tr>
<td>Internationalization with motive ‘access to finance’ (dummy variable, internationalization without motive access to finance is reference category)</td>
<td>3,594</td>
<td>0.29</td>
<td>0.45</td>
</tr>
<tr>
<td>Internationalization with motive ‘access to know how and technology’ (dummy variable, no internationalization is reference category)</td>
<td>5,998</td>
<td>0.32</td>
<td>0.47</td>
</tr>
<tr>
<td>Internationalization with motive ‘access to know how and technology’ (dummy variable, internationalization without motive access to know how and technology is reference category)</td>
<td>3,608</td>
<td>0.54</td>
<td>0.50</td>
</tr>
<tr>
<td>Perceived lack of skilled labor (dummy variable, 0=no, 1=yes)</td>
<td>7,610</td>
<td>0.15</td>
<td>0.36</td>
</tr>
<tr>
<td>Perceived lack of access to finance (dummy variable, 0=no, 1=yes)</td>
<td>7,610</td>
<td>0.09</td>
<td>0.28</td>
</tr>
<tr>
<td>Perceived lack of new technology (dummy variable, 0=no, 1=yes)</td>
<td>7,610</td>
<td>0.03</td>
<td>0.17</td>
</tr>
</tbody>
</table>

**Controls**

The following control variables are included in the analysis:

*Log firm size*
This variable is expressed in terms of (natural log of) number of employees.

*Log firm age*
This variable pertains to the (natural log of) number of years that the firm has been in operation at the time of the survey.

*Turnover increase*
When the turnover of the enterprise increased in 2002 as compared to 2001 this variable is coded 1 and otherwise it is coded 0.

*Industry dummies*
Industry dummies are constructed for the following industries: manufacturing, construction, wholesale, retail, transport and communication, business services and personal services. In the regression estimations “personal services” is used as the reference category.

*Country dummies for country of origin*
Country dummies are constructed for the countries of origin of the SMEs in the sample: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg,
Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the UK. The UK is used as the reference category in the regressions.

**Host country dummies**

Host country dummies are constructed for the following countries: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States, and one for other countries than the ones mentioned above.

**Empirical analysis**

Various binomial logistic regressions are carried out to test the hypotheses. Multi-collinearity diagnostics using variance inflation factors (VIFs) indicate that multi-collinearity is not a problem in the various models (VIFs are well below 10). The regression results are reported in Tables 2-4. The tables present log odds ratios and odds ratios. When the coefficient of the odds ratio is above unity (which corresponds to a log odds ratio above zero) this implies that the corresponding variable increases the odds of belonging to the category in question relative to the reference category.

Table 2 displays results for internationalization with the motive “access to labor” as the dependent variable and perceived lack of labor as the explanatory variable. The results indicate that perceived lack of labor increases the odds for an SME to be internationally active with the motive to access labor (relative, both to not internationalizing and to internationalizing without the motive to access labor). Thus, Hypotheses 1A and 1B are supported.
Table 2: Binomial logistic regression estimates for internationalization with motive ‘access to labor’

<table>
<thead>
<tr>
<th>Dependent variable:</th>
<th>Log odds ratio</th>
<th>Odds ratio</th>
<th>Log odds ratio</th>
<th>Odds ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internationalization with motive ‘access to labor’ (Reference category: no internationalization)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived lack of skilled labor</td>
<td>0.235***</td>
<td>1.265</td>
<td>0.753***</td>
<td>2.123</td>
</tr>
<tr>
<td>Controls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log firm size</td>
<td>0.417***</td>
<td>1.517</td>
<td>0.138***</td>
<td>1.148</td>
</tr>
<tr>
<td>Log firm age</td>
<td>-0.014</td>
<td>0.986</td>
<td>-0.100**</td>
<td>0.905</td>
</tr>
<tr>
<td>Turnover increase</td>
<td>0.189**</td>
<td>1.209</td>
<td>0.037</td>
<td>1.038</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>1.700***</td>
<td>5.474</td>
<td>-0.459***</td>
<td>0.632</td>
</tr>
<tr>
<td>Construction</td>
<td>-0.055</td>
<td>0.947</td>
<td>-0.236</td>
<td>0.790</td>
</tr>
<tr>
<td>Wholesale</td>
<td>1.858***</td>
<td>6.411</td>
<td>-0.536***</td>
<td>0.585</td>
</tr>
<tr>
<td>Retail</td>
<td>0.777***</td>
<td>2.176</td>
<td>-0.649***</td>
<td>0.523</td>
</tr>
<tr>
<td>Transport and communication</td>
<td>0.571***</td>
<td>1.770</td>
<td>-0.040</td>
<td>0.961</td>
</tr>
<tr>
<td>Business services</td>
<td>0.202</td>
<td>1.224</td>
<td>-0.442**</td>
<td>0.642</td>
</tr>
<tr>
<td>Constant</td>
<td>-3.821***</td>
<td>0.022</td>
<td>-1.241***</td>
<td>0.289</td>
</tr>
</tbody>
</table>

* Home country dummies included: Yes
* Host country dummies included: Yes

Pseudo-R²: 0.319, 0.213
-2 Log Likelihood: 3,796.296, 3,604.951
Observations: 4,868, 3,521

* p<0.10; ** p<0.05; *** p<0.01. Home/host country dummies not reported.
The results for internationalization with the motive “access to finance” as the dependent variable and perceived lack of finance as the explanatory variable are given in Table 3. It is evident from the table that perceived lack of finance positively relates to the probability for an SME to display international involvement with the motive to access finance (relative to not internationalizing and to internationalizing without the motive to access finance). These results provide support for Hypotheses 2A and 2B.

Table 3: Binomial logistic regression estimates for internationalization with motive ‘access to finance’

<table>
<thead>
<tr>
<th>Dependent variable: Internationalization with motive ‘access to finance’ (Reference category: no internationalization)</th>
<th>Dependent variable: Internationalization with motive ‘access to finance’ (Reference category: internationalization without motive ‘access to finance’)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log odds ratio</td>
<td>Odds ratio</td>
</tr>
<tr>
<td>Perceived lack of access to finance</td>
<td>0.945***</td>
</tr>
</tbody>
</table>

Controls

<table>
<thead>
<tr>
<th></th>
<th>Log odds ratio</th>
<th>Odds ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log firm size</td>
<td>0.281***</td>
<td>1.324</td>
</tr>
<tr>
<td>Log firm age</td>
<td>-0.003</td>
<td>0.997</td>
</tr>
<tr>
<td>Turnover increase</td>
<td>0.148*</td>
<td>1.160</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>2.000***</td>
<td>7.386</td>
</tr>
<tr>
<td>Construction</td>
<td>0.118</td>
<td>1.125</td>
</tr>
<tr>
<td>Wholesale</td>
<td>2.117***</td>
<td>8.306</td>
</tr>
<tr>
<td>Retail</td>
<td>1.151***</td>
<td>3.163</td>
</tr>
<tr>
<td>Transport and communication</td>
<td>0.736***</td>
<td>2.087</td>
</tr>
<tr>
<td>Business services</td>
<td>0.494***</td>
<td>1.639</td>
</tr>
<tr>
<td>Constant</td>
<td>-3.650***</td>
<td>0.026</td>
</tr>
</tbody>
</table>

Home country dummies included Yes
Host country dummies included Yes

Pseudo-R² 0.297 0.210
-2 Log Likelihood 3,944.620 3,640.519
Observations 4,908 3,503

* p<0.10; ** p<0.05; *** p<0.01. Home/host country dummies not reported.
Finally, Table 4 reports the results for the binomial logistic regressions with internationalization with the motive to access knowledge and technology as the dependent variable and lack of new technology as the explanatory variable. It is found that perceived lack of new technology increases the likelihood of an SME being internationally active with the motive to access knowledge and/or technology relative to the reference category “internationalization without the motive to access knowledge and technology”. However, no significant relationship is found between perceived lack of new technology and internationalization with the motive to access knowledge and technology when “no internationalization” is the reference category. This means that the results do not uphold Hypotheses 3A, but do provide support for Hypothesis 3B.

Table 4: Binomial logistic regression estimates for internationalization with motive ‘access to know how and technology’

<table>
<thead>
<tr>
<th>Dependent variable: Internationalization with motive ‘access to know how and technology’ (Reference category: no internationalization)</th>
<th>Dependent variable: Internationalization with motive ‘access to know how and technology’ (Reference category: internationalization without motive ‘access to know how and technology’)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log odds ratio</td>
<td>Odds ratio</td>
</tr>
<tr>
<td>Perceived lack of new technology</td>
<td>0.280</td>
</tr>
<tr>
<td>Controls</td>
<td></td>
</tr>
<tr>
<td>Log firm size</td>
<td>0.325***</td>
</tr>
<tr>
<td>Log firm age</td>
<td>-0.023</td>
</tr>
<tr>
<td>Turnover increase</td>
<td>0.171**</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>1.880***</td>
</tr>
<tr>
<td>Construction</td>
<td>-0.071</td>
</tr>
<tr>
<td>Wholesale</td>
<td>2.090***</td>
</tr>
<tr>
<td>Retail</td>
<td>0.912***</td>
</tr>
<tr>
<td>Transport and communication</td>
<td>0.436***</td>
</tr>
<tr>
<td>Business services</td>
<td>0.541***</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.701</td>
</tr>
<tr>
<td>Home country dummies included</td>
<td>Yes</td>
</tr>
<tr>
<td>Host country dummies included</td>
<td>Yes</td>
</tr>
<tr>
<td>Pseudo-R²</td>
<td>0.297</td>
</tr>
<tr>
<td>-2 Log Likelihood</td>
<td>5,892.710</td>
</tr>
<tr>
<td>Observations</td>
<td>5,768</td>
</tr>
</tbody>
</table>

* p<0.10; ** p<0.05; *** p<0.01. Home/host country dummies not reported
Discussion and Conclusion

This paper seeks to explain resource-seeking internationalization among SMEs by investigating, based on resource dependency theory, whether resource-seeking internationalization can be linked to an SME’s resource deficiencies. First, this paper investigates whether perceived resource constraints in terms of labor, finance and new technology increase the likelihood of SMEs using internationalization as a means to access or acquire the lacking resources, relative to not internationalizing. The findings indicate that perceived lack of skilled labor drives SMEs to pursue internationalization as a means for accessing labor and that perceived constraints regarding access to finance are an important determinant for SMEs to pursue foreign markets as a means to access capital. However, perceived lack of new technology does not increase the likelihood of SMEs internationalizing with the motive to access know how and technology as compared to not internationalizing. These results suggest that perceived constraints in terms of skilled labor and finance are pushing firms to overcome internal resource deficiencies through internationalization.

Second, this paper also investigates whether perceived resource constraints increase the likelihood of internationally active SMEs using their international activity as a means to access or acquire the lacking resources. It is found that perceived constraints in terms of skilled labor, access to finance and new technology increase the probability of SMEs that are already internationally active using their international activity as a means to access or acquire these resources.

Overall, the findings of this study suggest that resource-constrained SMEs can be considered as entrepreneurial firms that pro-actively exploit internationalization as a strategy for addressing current resource needs. To understand internationalization behavior in more detail existing theories that focus on explaining firm internationalization should strive to incorporate a firm’s resource deficiencies and a firm’s resource-seeking internationalization goals.

The findings of this study have a number of policy implications. First, it is important for SME owner/managers to be aware of the possibility to use internationalization as a means for overcoming resource constraints. Policy makers could help to increase awareness among resource-constrained firms that internationalization as a means for accessing or acquiring resources has become a (more) feasible option, given that internationalization has become easier and resources have become more easily transferable across countries in the past decades (Autio, 2005; Sapienza, Autio, George and Zahra, 2006). Second, policy makers could play an important role in facilitating the use of international activities by SMEs as a means to overcome resource deficiencies, e.g. by facilitating the formation of alliances with foreign partners for the use of foreign resources (for instance through matchmaking) or by removing constraining regulation, such as restrictions on the free movement of labor.

This study is subject to a number of limitations. The focus in this study is on a firm’s intention to acquire or access resources only and it is not possible to assess whether resource-constrained SMEs that pursue internationalization as a means for accessing or building up resources are successful in their attempts. Future research could seek to provide more insight into the extent to which SMEs are able to access resources through internationalization and also into how they are able to access resources through internationalization. Furthermore, with the dataset used in this paper it was possible to control for a firm’s current resource base only by using a number of crude proxies (in particular firm size, firm age and a dummy variable for whether a firm has experienced an increase in turnover are used to control for a firm’s current resource base). Future research into the link between resource-seeking internationalization and a firm’s resource constraints should try to control more elaborately for a firm’s existing resource base. In addition,
the current study is not able to provide insight into the specific reasons why SME owner/managers are perceiving resource constraints. For example, perceived lack of resources could imply that a firm does not have enough means for achieving growth or that it will be difficult for a firm to survive. Also, future research could investigate how the stocks of resources available in home and host countries affect SME’s involvement in internationalization. Finally, this study does not look at differences within industries. Westhead, Wright, Ucbasaran and Martin (2001) find that resource constraints are significantly more relevant for manufacturing firms than for firms active in the construction and services sector. Future research could benefit from undertaking industry-specific analyses.
References


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