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On 'Considering' Internationalization: How Do Perceived Resource-Based Constraints Matter?

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Summary. Impelled by globalization, there is now intense policy focus on the internationalization of national firms. Yet firms' *initiation* into international activities has not received sufficiently acute attention. Active 'consideration' that precedes the decision on internationalization has largely been ignored in the literature. We ascertain the ways in which resource and capability constraints determine whether firms *consider* internationalization. Primary data from over one thousand firms suggest that resource and capability constraints, and their combinations, are more crucial in the consideration stage of internationalization. Interview evidence shed light on the interpretation of econometric estimates and highlight a policy blind-spot.

RUNNING TITLE

On 'Considering' Internationalization

KEY WORDS

Internationalization, Consideration, Resource-Based view, Capability, Constraints

1 Introduction

As markets turn global at an accelerating pace, national firms have found it ever more necessary to adopt the goal of international competitiveness. Firm level competitiveness translates into national employment and growth, particularly with smaller and younger firms, and recognizing this, there has been mounting policy focus on encouraging the internationalization of such firms. Concurrently, internationalization process models have come under criticism for specific theoretical and methodological shortcomings. The emergence of new venture internationalization has brought home the need to examine the initial reasoning behind entry into international markets (e.g. Oviatt and McDougall 1994). The initial stages of internationalization constitute a hitherto neglected and rather interesting phase for study (Andersen 1993). However, and surprisingly, empirical examination of the 'consideration' of internationalization has largely been neglected, though hinted at, in the literature (e.g. Cavusgil 1980, 1984, Johanson and Vahlne 1990). More specifically, resource and capability constraints that influence firms in their decision to actively consider internationalization have not been assessed in any detail, even though a deeper understanding of this process is likely to yield valuable insights into the fundamentals of sustainable international competitive advantage (Sapienza *et al.* 2006).

The purposes of this paper are threefold: First, we examine firms' initiation into international diversification, along the trail first launched by Penrose (1959) in her analysis of the value of indivisible resources: the firm has an incentive to expand to make more efficient use of its current resource base and utilize its most valuable resources exhaustively. An obvious corollary is that firms are likely to engage in careful resource audits before entering into international diversification activities. The stage of active 'consideration', which has largely been ignored by the international business and international entrepreneurship literatures will receive particular empirical emphasis in this paper.

Second, adopting a resource-based perspective (Wernerfeld 1984, Barney 1991) we seek to identify the ways in which resource constraints impact upon firms, paying particular attention to management expertise and commitment. Our aim is to characterize the ways in which resource and capability constraints and combinations affect different stages of internationalization. We account for the way in which the age of the firm may moderate the manner in which resource and capability constraints and their combinations influence internationalization.

Third, our sample responds to calls for larger sample studies (Carter *et al.* 1996) and robust empirical evidence on the relevance of resource-based constraints for internationalization. In terms of methodology we draw on qualitative evidence in order to clarify and interpret econometric estimates.

We begin with a brief literature review, specializing it to the 'consideration' phase of internationalization, emphasizing gaps and challenges. Drawing on this review, we develop a set of hypotheses on resource-based determinants - including firm characteristics as well as resource and capability constraints - as they relate to internationalization of firms. A discussion of the methodology - estimation of multinomial logit models in preference to nested binomial models, leads to our econometric estimates, the interpretation of which we augment using interview evidence. We conclude with suggestions on possible future directions for research.

2 Literature Review and Hypotheses

'Consideration' within the Internationalization Process Literature. Internationalization process models characterize different levels of engagement with the international market, (ranging from pure domestic orientation to high international engagement) in terms of phased development in distinct stages. Of the two branches of internationalization stage models, the one called the Uppsala Internationalization Model (Johanson and Wiedersheim-Paul 1975, Johanson and Vahlne 1977, 1990) takes into account strategic choices, organizational forms, learning and experience. The process of internationalization is described as "gradual acquisition, integration and use of knowledge about foreign

markets and operations and a successively increasing commitment to foreign markets" (Johanson and Vahlne 1977:36). The model however fails to explore why and how the process of internationalization starts and what constrains the transition between phases (Andersen 1993). The Innovation-Related Internationalization Models regard the decision to internationalize as an innovation to the firm (e.g. Cavusgil 1980, 1984), with different variants postulating different numbers of stages. A 'consideration' phase is consistent with this category, although the literature is rather fragmented, and limited on empirics of this phase.

Our reading of the literature suggests clear recognition that a preliminary resource and capability audit precedes the active 'consideration' of internationalization. This consideration phase that concludes with the decision on the pursuit of internationalization as shown in Figure 1 (see Figure 2 for a decision tree that follows from this view).

[Figure 1 about here]

The active consideration phase of internationalization is the empirical focus of this paper. In the rest of this section, we review the literature with specific focus on developing hypotheses relating to the manner in which firm characteristics, resources and capabilities affect active consideration, as against pursuit, in internationalization.

The Resource-Based View and Internationalization Strategy. In the quest for conceptually consistent internationalization models, the literatures on international business and entrepreneurship have begun to employ the resource-based view (RBV) as the underlying paradigm (e.g. Dhanaraj and Beamish 2003, Peng 2001). Sustained competitive advantage of a firm mainly derives from the tangible and intangible capabilities and resources the firm is able to develop and control (Wernerfeld 1984 and Barney 1991). Research drawing on the RBV was rejuvenated when Grant (1991) introduced a practical framework that mapped resources, capabilities and competitive advantage onto the formulation of strategy and the identification of resource gaps, with a 'strategic' and 'not strategic' classification. Barney (1991) was among the first to specify the criteria used in this classification, emphasizing that resource value depends on the extent to which it is

valuable, rare and difficult to imitate or substitute. Managers pursue the objective of renewal and reconfiguration of resources as competition and the business environment change and diminish their value (Rumelt 1984, de Rond 2003).

Internationalization activities - through a strategy that conjoins international business planning, skillful resource management, international networking and market intelligence - can provide the impetus and a mechanism to develop sustainable competitive advantage (Peng 2001). This can result in the faster development of intangible assets, such as brands, as well as faster innovation cycles and product development. Absorbing these competencies requires learning commitment by the firm and high receptivity (de Rond 2003). In their general model for assessing export performance, Aaby and Slater (1989) categorize firm characteristics as well as competence factors that include technology, market knowledge, planning, internationalization policy and communications. However, they criticize the lack of empirical flesh on the skeleton of theory. Responding to this criticism, we use a resource-based focus to our analysis.

In the remainder of this section, we develop hypotheses drawing from the literature. For each factor conjectured to be relevant to internationalization, we first state the proposition as it relates to the pursuit of internationalization, and then specialize it to the consideration of internationalization.

2.1 Firm characteristics

Over the past three decades, a number of firm-specific characteristics have been investigated within the international management and entrepreneurship literatures that can, *a posteriori*, be categorized as resource-based. The most frequently studied firm attribute is firm size, usually treated as a variable directly related to success in internationalization. Size is regarded a proxy for resources available within a firm, and for the overhang of specific resources that raise opportunity for expansion (Dhanaraj and Beamish 2003, Penrose 1959). Empirical studies paying attention to size have suffered from relatively small sample sizes and have yielded contradictory results (Aaby and Slater 1989, Bonaccorsi 1992). Whilst some find a positive relationship between firm size and

internationalization (Aaby and Slater 1989) others have found none (e.g. Moini 1995),[3] and indeed a few obtain an inverse relationship (Cavusgil 1984, Cooper and Kleinschmidt 1985). Size related advantages are plausible in actual internationalization; the relationship between size and 'consideration' of internationalization may be expected to be somewhat weaker. 'Consideration' is a pre-condition for internationalization, and smaller firms may intend to expand in size through internationalization:

Hypothesis 1: There is a significant and positive relationship between firm size and internationalization;
The relationship between size and 'consideration' of internationalization is weaker.

Apart from size, the age of the firm is often hypothesized to have an influence on internationalization propensity (Aaby and Slater 1989). From a resource-based perspective, age can be interpreted as a proxy for a firm's knowledge, particularly through experiential learning (Forsgren 2002). However, the international entrepreneurship field has questioned this interpretation (e.g. Oviatt and McDougall 1994 and McDougall *et al.* 1994). The evidence on the relationship between firm age and internationalization is mixed. Kaynak and Kuan (1993) report a positive relationship. Autio *et al*. (2000) argues conversely that the age of a firm hampers the ability to compete successfully in international environments, pointing out that early internationalization might reinforce an environment of constant experimentation and an urge to venture across borders (Cohen and Levinthal 1990). The literature is silent on the relationship of age and 'consideration' of internationalization. Forsgren (2002) argues that organizational learning is directly connected to the

[3] A corollary to the hypothesis about firm size and internationalization success is that a 'threshold' firm size may be a necessary condition for successful internationalization. If so, scarce governmental resources might be targeted to firms at or above such a threshold when seeking to promote smaller firms' internationalization. Mittelstaedt *et al.* (2003:72) address this and evaluate firm size as a barrier to internationalization within the United States and conclude that "20 employees is a necessary condition for internationalization success, regardless of industry". The more recent literature suggests however that internationalization is a more heterogeneous process (Bell, Crick and Young 2004).

internationalization behavior of a firm, with the risk-taking conduct and the speed of this process decreasing with age:

Hypothesis 2: *Controlling for industry, there is no significant relationship between firm age and internationalization;*
Age reduces the probability of 'considering' internationalization.

The literatures on strategic management and international business have long focused on the link between growth and performance in internationalization, arguing that an increasing degree of internationalization results in better firm performance (e.g. Grant 1987, Kim *et al.* 1993). However, two streams of empirical research question the causal link between internationalization and improved business performance. First, firm performance is likely to decline after a degree of high internationalization (Geringer *et al.* 1989). Second, the performance relation among younger and smaller firms seem to be non-linear and 'saucer shaped' (Lu and Beamish 2001), with performance and growth only improving after an initial stage of capability development and harnessing of market opportunity. Studies of the relationship between growth and consideration of internationalization have been sparse. Using the resource-based lens, fast intra-country growth might either be the initiator for the deployment of resources that eventually lead to the 'consideration' of internationalization, or, quite contrarily, result in further concentration on the national market. There is an evident issue relating to the direction of causality, which can only be properly resolved with longitudinal data: Does growth promote the consideration of internationalization, or, as Oviatt and McDougall (1994) argue, is especially early internationalization the catalyst for growth. We conjecture:

Hypothesis 3: *There is a significant positive relationship between growth of a firm and internationalization pursuit;*
Firms that are growing fast without internationalization have a lower probability of 'considering' internationalization.

2.2 Resource and capability constraints

In her categorization of resource issues, Penrose (1959) emphasizes the importance of organizational and entrepreneurial resources, alongside financial and physical constraints as well as capabilities associated with managerial expertise and commitment. These resource-based factors in internationalization are well researched as regards internationalization success, however, are also known to yield inconsistent results. Thus, scarcity of especially financial and managerial resources may render firms unable to explore opportunities for (international) expansion. Morgan *et al.* (2004) identify a theoretical model of export performance, which gives strong empirical support to both resource and capability factors. However, Calof and Beamish (1995) and Zahra *et al.* (2000) point out that limitations in their resource base may not necessarily hinder (especially younger) firms from internationalizing. We hypothesize that while some firms may indeed rise to the challenge of overcoming resource constraints to succeed internationally, for most firms the influence of resource limitation will be negative. With respect to consideration of internationalization, agreement exists that the perception of the barriers to internationalization varies respective to the degree of internationalization (e.g. Cavusgil 1984, Katsikeas and Morgan 1994). To the best of our knowledge, there is no empirical result as to how specific resource constraints determine consideration:

Hypothesis 4: There is a negative relationship between resource constraints faced by a firm and its internationalization pursuit;
Resource constraints have a negative effect on 'consideration'.

Sapienza *et al.* (2006) argue that the initiation of the internationalization process requires reconfiguration of activities as well as development and exploitation of capabilities. The importance of these capabilities, especially the attitude and commitment of executive management towards internationalization has been highlighted by Johanson and Vahlne (1990), suggesting a positive and incremental relationship between managerial commitment and internationalization. Cavusgil (1984) also points out support by executive management increases the likelihood of successful decision to internationalize. Aaby and

Slater (1989) note that the majority of studies in their review point to a positive relationship between internationalization propensity and management commitment. Commitment is seen as an enabling capability that works through setting ambitious, yet realistic expectations regarding international success. Whilst a considerable literature exists on the role of capabilities in internationalization (Chang 1995, Delios and Henisz 2003), the literature is rather silent on how 'consideration' is affected by capability constraints. Internationalization process studies tend to causally interlink capability development with speed and effectiveness of internationalization (Luo and Peng 1999, Zahra *et al.* 2000), corroborating Cavusgil (1984) who argues that a firm's commitment to gather expertise on foreign markets may play a major role in the early internationalization behavior of a firm. Hence commitment and accumulated experience in internationalization are hypothesized to gradually increase (Chang 1995):

Hypothesis 5: There is a negative relationship between capability constraints faced by a firm and its internationalization pursuit;
Capability constraints have a more negative effect on 'consideration'.

The empirical literature on the interaction of resource and capability factors is limited (Brush and Chaganti 1999). However, combinations of resource constraints as well as possible complementarities between resource and capability constraints would be particularly interesting to examine in relation to the 'consideration' of internationalization as well as possible effects on internationalization pursuit. The underlying reason is the necessity of firms to adapt and interrelate their resources in order to do well (Chandler and Hanks 1998). Lichtenstein and Brush (2001) highlight the importance of developing resource bundles and combinations over time. The implication is that resource shortages may interact in their impact on internationalization. Therefore:

Hypothesis 6: The combined effect of resource constraints and capability constraints is greater than the sum of their individual effects;
'Complementarity' between constraints has a more severe negative effect on 'consideration' of internationalization.

To better understand the collective effects of resource and capability constraints, an topic that remains for us to examine is the impact of the age of a firm on the way constraints and their combinations influence internationalization. It is possible that constraints have dissimilar effects on firms in different age groups: thus, young firms may be affected more by self-reported resource constraints, whereas older firms may have the organizational capabilities to overcome resource and capability constraints (Forsgren 2002). Thus:

Hypothesis 7: Individual resource and capability constraints bind young firms more severely;

'Complementarity' between constraints has a more negative effect on young potential internationalizers in the 'consideration' phase.

3 Methodology

3.1 Conceptual Framework

Internationalization requires an array of investments of different kinds in successive stages, with uncertain outcomes. A minimal requirement for rational decision making in a project as complex as internationalization is the careful consideration of the time profiles of cost and benefit streams with due attention to uncertainties. Deliberate advance through the sequence of stages is a useful framework for the analysis of choice behavior in uncertain projects with sunk investments.

Figure 2 presents a plausible scheme of the stages involved in internationalization. There is no basis for assuming that all firms have, *a-priori*, the objective of internationalization. Even a firm inclined to contemplate internationalization as a goal may, on the basis of a preliminary resource audit, decide to concede without entering into active consideration at all. The research component of active consideration will require inventories to be made of the complementary resources and careful judgment of

uncertainties, and will be non-trivial in terms of commitment of time and managerial resources. Only those who judge themselves, *ab-initio*, likely to have or to be able to muster the pre-requisites can be expected to enter into active consideration of internationalization. Among those who do enter active consideration, some may, on the basis of estimates of costs and benefits, drop internationalization as a goal. If the consideration process has been carried out diligently, those who commit investment will expect to succeed.

[Figure 2 about here]

A longitudinal study of data over a number of years would allow identification of distinct subsets of firms that follow the different paths in Figure 2, and enable deeper understanding of the features that drive firms from one stage to the next in their path. It would be instructive to be able to delineate the drivers that make a firm more likely to consider internationalization, relative to those who do not consider it at all. Following the former group, it would be of use to know what makes some firms pursue the project. And finally, among those who pursue internationalization, it would be useful to know the reasons for success. The last question has been a focus in extant research.

However, the data that was available for analysis was cross sectional in nature (as described in section 4.1). The survey asked firms whether they had actively considered internationalization. Those who answered in the affirmative were asked if they had pursued internationalization. And those firms who declared that they had actively engaged in international activities were asked about their pursuit: whether they were successfully engaging any or all of exporting, importing, foreign direct investment.

3.2 Method

Our primary objective is to determine how resource and capability constraints affect firms in their progress into active consideration of internationalization. The data classifies firms as discussed below. This reflects self-selection by firms based on their constraints

and their objectives. The cross-sectional nature of our data does not permit estimation of a model that is entirely faithful to Figure 2. It is not possible to trace and measure the evolution of resources and capabilities of the firms over time in the context of their internationalization experience.

Nested binary choice is a natural candidate for the question we seek to answer, but proves unsuitable for the following reason: The first nest in such a model would seek to identify drivers that make a firm more likely to 'consider' internationalization, relative to firms that do not consider internationalization. The latter category is a mixture, and may contain firms that do not wish to internationalize though they are not resource limited, along with from firms whose limited resources prevent them from active consideration of internationalization though they aspire to it. Trying to distinguish this mixed category from another mixed category - firms that actively consider internationalization (some of whom go on to pursue it successfully, some unsuccessfully, and some not pursue it at all) is not helpful in elucidating the role played by resource and capability constraints on consideration. Further, the second nest, which would pit firms that pursued internationalization against those that considered internationalization but did not pursue it, may also throw only limited light on the role of resource constraints. At least in some cases, pursuers may come to the conclusion post-facto, in the light of increased demands placed on them by the internationalization process, that they are resource constrained in specific respects. Further, our dataset contained very few firms that pursued internationalization without success; their small numbers will preclude the final third nest that should distinguish successful from unsuccessful internationalizers.

We proceed to estimate a set of multinomial models to determine the impact of firm characteristics and self-reported resource constraints on the likelihood of a firm falling into three slightly more homogeneous classes in the internationalization process, as below:

1. **The set of smaller firms that do not consider internationalization at all**. As indicated above, a firm may belong to this set for two reasons. It may have recognized, upon even cursory inspection, that it lacks the resources and capabilities for successful internationalization. However, this set may also contain a subset of firms that are neither resource nor capability constrained from an

internationalization point of view, but do *not* have internationalization as a corporate objective. Hence from a resource point of view this may be a mixed group of firms. This needs to be allowed for in the interpretation of results.

The complement to this set is the set of firms that *did* consider internationalization; we distinguish between two sub-categories in this set:[4]

2. **The set of firms that considered internationalization, but did not pursue it actively**. The fundamental reason why a firm that is interested in internationalization and is not, prima-facie, resource constrained, may fall into this subset is that on detailed examination of its resource/capability portfolio during the active consideration process, the costs (including risks) of proceeding are found to exceed the benefits. In a cross-section at any given date, a firm in this category could be there because it entered into active consideration of internationalization based on encouraging results of a preliminary audit, suggesting that active consideration would be worthwhile. Other firms could be there because on active consideration the expected benefits fell short of costs. Of course, factors that lead firms to consider internationalization will be different from the factors that lead firms to not pursue it. We need to be sensitive to the mixture of firms in the interpretation of results from the cross section. Again, only a longitudinal dataset would enable distinguishing between these different sub classes of firms and their drivers.

3. **Firms that pursued internationalization.** The first sub-category in subset 2 above will be firms that succeed. Firms fall into this subset by being 'successful' in exporting, importing and/or international production. Active consideration will have revealed these firms to be capable of overcoming their resource constraints. Success is defined here only in the sense of engaging in internationalization

[4] There will also be a set of companies that considered internationalization, but ultimately did not succeed in their internationalization endeavour. However, this sub-category has not been included within our analysis, due to the negligible number of companies falling into this subset and a differing constraint classification in the original questionnaire.

activities. This group is also heterogeneous. Those who ventured into international activities recently may still be working through and overcoming some constraints. Firms that have been internationally active over longer periods of time, are more likely to have overcome their initial constraints.

As mentioned earlier, our dataset contained few firms that pursued internationalization but failed to succeed. This is consistent with the argument that when the consideration process is carried out in a detailed way, those who commit investment should in general be expected to succeed. The small numbers precluded us from including unsuccessful internationalizers in our analysis.

The analysis is driven by the view that firms in each class (firms that have not considered internationalization, firms that have actively considered internationalization but not pursued it; and firms that are internationalized) will have opted into their class based on their assessments of resources and capabilities and costs and benefits, vis-à-vis their objectives. At each decision node, resource and capability constraints (as reported by the firm) will tend to reduce the probability that the firm enters the more demanding branch. The cross-sectional nature of our data prevents the full disentanglement of this process, and requires us to be careful in interpretation of results. We complement our quantitative results with qualitative interpretation through small case studies (Eisenhardt 1989) to enhance our understanding of the resource and capability constraints in the active consideration stage.

4 Data

4.1 Survey

The data was collected from a survey commissioned by the East of England Development Agency (EEDA) in 2002-2003. The interviews were aimed at identifying resource and capability gaps related to internationalization of especially smaller firms. EEDA focused on six UK counties: Bedfordshire, Cambridgeshire, Essex, Hertfordshire, Norfolk and Suffolk; which together constitute a vibrant economic region in the South-East

of England. During the course of the study 8,009 firms were identified from various directories. These firms were contacted by telephone with requests for interviews. The interviews targeted CEOs and/or owners and generated 1,131 complete responses (14.12 percent). Internationalizers, active in either exporting, global sourcing or foreign direct investment, constituted 560 (49.51 percent) of these firms. This sample size answers the call for larger sample studies in both the internationalization and entrepreneurship literatures (e.g. Carter *et al.* 1996).

We used two methods to validate the interview data. We utilized secondary data - from databases as well as firm websites and publications. Secondly, we interviewed a sub-sample of CEOs and senior officers from the sample. The interviews provided insights into internationalization relevant resource and capability constraints. Overall, a total of 31 interviews were conducted. In order to provide for transparency as well as reliability, the majority of these interviews was protocolled and transcribed. Since our focus was on the internationalization capabilities of small and medium sized firms rather than large corporations, the use of qualitative research techniques was indispensable given the reluctance of CEOs of smaller firms to quantify aspects of their experiences, resources and success or failure. Generally, interviews lasted between 30 minutes and two hours with partners being either the owner or manager or the strategic decision maker for international activities. In some cases, the firms were revisited at a later stage, to observe further developments of resource and capability development on a more longitudinal basis.

4.2 Summary Statistics

The mean employment size of the firms in our sample was 36, and their men age, 34, highlighting our focus on smaller firms that have been in existence long enough to have been able to pursue and potentially succeed in internationalization (Table 1). Firms that did not consider internationalization were somewhat smaller (mean 31 employees) and slower growing (mean growth over 1997-2001, 5.1% per year) than successful internationalizers (mean of 39 employees and an average growth of 7.6% per year over the same period). Among resource constraints, time constraints were reported most by firms that considered internationalization, but did not pursue it (11.6%). Interestingly, information and finance constraints were reported by successful internationalizers (9.8% and 7.0% respectively).

Among capability constraints, firms that considered internationalization but did not pursue it reported constraints in management commitment towards internationalization (8.1 %) and managerial expertise (17.4%), whereas only about 1.2% successful internationalizers reported constraints in these areas.

[Table 1 about here]

4.3 Variables

We classified firms into the following internationalization types (INTERTYPE):

1 : if the firm is internationalized,

2 : if the firm considered internationalization but did not pursue it,

3 : if the firm has never considered internationalization (base category).

SIZE, AGE, GROWTH and SECTOR (four digit Standard Industrial Classification 2003) were the firm characteristics. To control for the influence of industry effects, a set of ten dummy variables marked out different industry categories. Of our five key resource-based variables, three related to key resources in the VRIN categorization (Barney 1991) and two related to capability constraints. These were coded as dummy variables with value 1 if the firm reported the constraint as being important for the firm, and 0 if not. In order to allow for differential effects when constraints bind together, we included two-way interactions of resource and capability constraints into the model.

Resource-Based Constraints are:

TIME = 1	if the firm considers the lack of time as a major barrier,
FINANCE = 1	if the firm considers the lack of finance as a major barrier,
INFORMATION = 1	if the firm considers the lack of information as a major barrier,

Capability Constraints are:

COMMITMENT = 1	if the firm regards lack of management commitment and motivation as major barriers,

EXPERTISE = 1 if the firm regards insufficient managerial expertise and the lack of appropriate managerial skills as key obstacles.

5 Results

Four models were estimated, ranging from a restricted model with only firm characteristics, to a general model, which includes resource and capability constraints as well as interactions between constraints (see Table 2). The discussion in the following section will be of the results from the general model with the comprehensive specification. The results are stable across models. Firms that have never considered internationalization are the base category.

In interpreting results it must be noted that the cross sectional nature of the data inevitably makes each of category a mixture of sub-categories. Thus "consider, but not pursue" is a compound event which comprises of the two "simple" events. In general resource constraints are likely to reduce consideration probability, and are also likely to reduce pursuit probability. If a constraint does reduces consideration probability, it can be expected to be identified as significant in placing the firm in the "do not consider" group vis-à-vis the "consider but not pursue" group. If the same constraint reduces "pursuit" probability, it can be expected to be identified as significant in placing the firm in the "consider but not pursue" group rather than "do not consider" group. There is obvious potential for these effects to cancel out and prove inconclusive; significant estimates will indicate drivers with overriding effects upon one of the simple events.

[Table 2 about here]

5.1 Firm characteristics.

Firm Characteristics and Internationalization. Larger size increases the probability of a firm being internationalized relative to the base category.[5] Firms that are internationalized are also, on average, younger than non-internationalizers, though there is a tailing off of the effect of age - the coefficient on the square of age is close to zero. A higher growth rate increases the probability of a firm being internationalized. This, of course, does not answer the question whether internationalization drives or is driven by growth, as pointed out earlier, we are unable to disentangle causal relations with our cross-section.

Firm Characteristics and 'Consideration' of Internationalization. Firm characteristics seem to be of lesser significance for consideration, with only the age of a firm decreasing the probability of consideration of internationalization. Again, the square of age, which is significant, has a coefficient close to zero. With the caveat that the representation of firms in terms of their characteristics is very crude when the variable set includes only a limited number of basic firm characteristics, we fail to reject Hypotheses 1 and 3, however Hypothesis 2 is rejected (Pages 7, 8).

5.2 Resource Constraints

In the rest of this section we illustrate the tendencies revealed by the model estimates with qualitative evidence gathered in interviews.

Resource-based Constraints and Internationalization Pursuit. No resource-based constraint is significant at the 5%-level in the model for successful internationalization. It would appear that actual internationalization is less affected by resource constraints than 'consideration' of internationalization (relative to firms that have never considered internationalization).

[5] No threshold size, whether at 20 people or adjacent, proved significant.

Resource-based Constraints and 'Consideration' of Internationalization. Time and information are the resources that constrain firms who considered internationalization but did not pursue it, compared to firms that have never considered internationalization. Recall from our discussion in section 3 that this is a mixed category of firms, and drivers that lead a firm to consider internationalization can be different from those that lead it to not pursue the process. With a cross sectional dataset that did not contain variables that permit delineation of firm behavior at finer level, we need to interpret the results intuitively, as we cannot distinguish between the differences in the working of the drivers purely from the coefficient estimates. Thus time constraints appear to make a firm more likely not to pursue internationalization even though they have considered it, compared with firms in the base category. The suggestion here is that for those firms that were, prima facie, time constrained, the binding nature of the constraint (revealed on more detailed examination) led them to reject internationalization.

We present below the case of a firm that stayed for a relatively long period in the 'consideration' phase of internationalization and only pursued it after more than five years. In this particular case, time constraints were 'resolved', leading the firm to successful internationalization, but in many other cases, such creative solutions to the time constraint problem may have turned up, leading firms not to pursue internationalization.

Firm S: Bio-electronic manufacturing sector, founded in 1972
Firm S was founded by two Cambridge postgraduate electronic engineers and is a Cambridge "spin-off". The firm, which now occupies a secure niche within its market, relied heavily on small consultancy projects in the beginning to overcome cash flow problems. This, combined with product development, with clear targets and commitment of internal resources, helped them in the first international release of their molecular-quantification product. The firm's CEO admits that time constraints were severe at this time in terms of their internationalization activities. To overcome these difficulties and move on, the founders identified, over a five year period, a number of routines and processes to tackle time constraints. Meetings, conferences and exhibitions were seen as strategic solutions:

"*you might see 50 UK people [during one conference] at the cost of GBP 200 … it would cost much, much more to see 50 people [individually]* " (CEO Firm S, 23.3.2004).

Another solution was the free offer of a "*loaner system*", a significant time saver for the firm.

Firms reporting information constraints were less likely to 'consider' internationalization than firms that have never considered internationalization at all. Early recognition of the nature of this constraint led firms to not enter into active consideration at all. As a CEO of a firm in the base category explained:

"We have nearly no information about the international market out there. It seems…risky and too complex and we [would] rather stick to our regional environment" (CEO Firm L, 28.2.2004).

In relation to Hypothesis 4, evidence suggests that resource-based constraints matter more for 'consideration', than for actual internationalization.

5.3 Capability Constraints

Capability Constraints and Internationalization. Perceived constraints in terms of management commitment significantly decrease the probability of internationalization of a firm, compared to firms that have never considered internationalization.

The reason could be the need to put internationalization into a strong strategic framework, if it is to have a chance of success. Management commitment is also required to weather the shocks that internationalization poses for smaller firms. Firm R provides a typical case highlighting the challenges to management commitment in internationalization.

Firm R: Recruitment sector, founded in 2002

At its inception, firm R consisted of the two founders, who spent one year making their business plan operational and a further year on extensive business development before any turnover materialized. The managing director explained:

"Now, really in the first year it was very much "research and development" for us, proof of concept, kind of a very small team, myself and Ian. I was actually doing other consultancy at the time. So the first year was very, very kind of small-scale stuff. In this second year, we've obviously been bringing on and ramping up as it becomes required, new members of staff, new consultants, new development managers. Now that we've got the infrastructure, the proof of concept and kind of taking it forward from there, so really we are in effectively our second year of trading and the kind of ground strategy for us on expanding internationally, kind of maybe 3 years/4 years down the line." (MD Firm R, 22.3.2004).

One year later, the firm was measuring up to its internationalization plans with its first international subsidiary. The international character of the recruitment market is apparent. The role of management commitment in overcoming constraints is evident. The MD believed that representation in an Arab country was necessary, as contracts for recruitment projects needed to be closed on-site and as the Arab culture values personal contact. Revenues from the region were expected to contribute up to 50% of the total. Capacity would however be under-utilized. Thus, led by the prospects in the region, the firm made a mistake by incurring excessive sunk costs in its chosen route of entry. As the problems became transparent to the management of the firm, it adapted its internationalization strategy for its next business opportunity in another region. Instead of trying to establish its own market stronghold, the firm sought a regional partner. By complementing the existing regional business relationships of the so-called strategic recruitment partner with global specialist fulfillment expertise, the increased firm revenues for both parties and overheads were kept to a minimum for the firm. Management

commitment was perceived as central to the effort of combining and developing different routines and processes.

Capability Constraints and 'Consideration' of Internationalization. There is a significant positive relationship between constraints in terms of managerial expertise and the consideration of internationalization, relative to the base category of firms. Management expertise is required in finding the right partners, including sales and marketing partners. As in the case of time constraints, the managerial gap in this area - recognized *a priori* - is likely to have been reinforced on active consideration, leading the firm not to pursue internationalization.

Firm P: Printing/publishing sector, founded in 1978
Experiencing a declining domestic market, firm P was developing an interest in export. Co-publishing and joint venture activities were also considered as modes of internationalization. However, the domestic base that serves other firms as a good foundation to launch exporting activities, applied only to a limited extent. Close connections abroad with distributors, universities, governmental institutions or competitors to develop subsequent collaborations do not flow readily from a successful domestic publishing business. Thus, the firm was not able to develop the essential managerial expertise to pool resources with potential external partners. A possible partnership with a Norwegian firm to print a joint furniture catalogue was not pursued. Joint publications and licensed publishing, initially considered as opportunities to move into mainland Europe or Scandinavia, were never exploited due to the perception of too many hurdles and pitfalls. The firm did not find a way to launch exports due to a lack of knowledge of international market opportunities. Having been pushed into export by a person who had little managerial expertise, the outcome was a ruinous ending of the export activities and destabilization of the entire company. The estimated costs of this 'exporting adventure' was reported to be 35% of the yearly turnover, a legacy the firm struggled to weather.

In relation to Hypothesis 5, the results of capability can be interpreted as: binding capability constraints reduce the probability of success and at the same time increase the probability of not pursuing internationalization, even when it is considered.

5.4 Interactions of Constraints

We turn to how constraints combine in determining outcomes. The expectation is that constraints in combination would have a more negative effect on the probability of consideration and pursuit of internationalization (time and finance, time and expertise, finance and expertise) than on the probability of pursuit of internationalization.

Interactions of Constraints and Internationalization Pursuit. The only exception to the general rule of lack of significant effect, is the interaction of finance and expertise constraints. Successful internationalizers are more likely to report this constraint combination, relative to our base category. Interestingly, management expertise on its own did not have any significant effect on successful internationalization and only in combination with financial constraints does it influence the internationalization behavior of firms. Notably the effect is positive. The interpretation might be that these constraints interact with each other over the course of internationalization. The following case illustrates this argument; with longitudinal data on the time evolution of the constraint position, more light could be shed on this aspect of internationalization pursuit.

Firm T: Software Development sector, founded in 1983
Firm T used software development consulting as an early money generator, with only a limited perception of financial constraints. The second phase of their development, however, included financially more complex decisions. Attracted by the international market, the CEO realized early that he could not drive his business with a purely resale focus and therefore tried to find a Venture Capitalist to aid the development of his firm's own international software tools. As he describes, due to increasing American competition:

"*we then tended to sort of shift sideways a bit into what we were quite good at, which was developing new products…. In terms of money we were always…kind of short, due to my lack of know-how on international partnering. Looking back, we lost a lot of money on international R&D work in the beginning.*"

To develop the off-the-shelf product and broaden the product to attract a bigger market, additional funding was essential.

"After some time […] we won Angel funding from the local community, because by this time I knew lots of people who had become millionaires and [were] looking to reinvest. So, I clearly had an argument which made the case for this money. I had to cash in a pension because, […] they don't want to put money in unless you put your own money in."

Financial constraints, have somehow gone "*hand in hand*" with increasing internationalization efforts and in a way driven the development of expertise. (CEO Firm T, 28.3.2004).

Interactions of Constraints and 'Consideration' of Internationalization. Combinations of resource and capability constraints significantly reduce the probability of firms 'considering' internationalization. Thus interactions between time and financial constraints, expertise and financial constraints as well as time and management expertise constraints reduce the probability of a firm considering internationalization without pursuing it. A firm may enter into active consideration of internationalization despite reporting individual constraints. However, combinations of constraints are more likely to stop a firm from considering internationalization at all.

Firm V: Operations sector, founded in 1980

This case exemplifies the combination of time and expertise, as experienced at firm V, which, due to a variety of resource-based constraints, has not considered internationalization. As the sales manager explains (21.11.2003):

"*We were so busy with ourselves, so we could not even consider to go abroad. So the company could quite happily tick over in the UK market without bothering to go international...not to speak of the lack of expertise we had in that field.*"

Complementary effects of different constraints play a more significant role than previously hypothesized in the literature. Hence, we fail to reject Hypothesis 6.

Constraint Combinations and Age of the Firm.

One important issue that remains to be examined is that the age of the firm may have a significant effect on the way constraints and their combinations influence internationalization. It is possible that constraints that are self-reported, have a more negative effect on younger firms. Older firms may have more organizational capabilities to overcome these constraints. On the other hand, if older firms continue to report constraints the implication may be that firms are irretrievably constraint bound. In order to explore this, we estimated two additional models where resource and capability constraints were interacted with age (Table 3).

The results are stable across models. Interestingly, individual resource and capability constraints interacted with age are not significant. However, combinations of resource and capability constraints interacted with age affect internationalization behavior. We highlight two general findings: Firms are in general less likely to consider internationalization if they report resource and capability constraint combinations with increasing age. This finding also holds for pursuit of internationalization, albeit to a somewhat lesser degree. Time and expertise constraints are worth special note. As regards time constraints, relative to the youngest firms, age mitigates the negative influence of this interactive constraint. If expertise remains a problem with growing age, it reduces the probability of both consideration of internationalization and pursuit relative to the base. Hence, we fail to reject Hypothesis 7.

[Table 3 about here]

6 Discussion and Conclusion

How much, and how, do perceived resource-based constraints matter? Based on empirical evidence we analyzed in this paper, it is apparent that resource-based constraints are particularly relevant to the consideration of internationalization by smaller firms.

With the exception of age, basic firm characteristics do not matter as much for consideration, though size and growth do matter for pursuit of internationalization.

We find that resource constraints matter rather more for 'consideration' of internationalization than for internationalization itself. To the extent that firms will not invest in internationalization activities without reflection, specific resources and capabilities will drive active consideration of internationalization. The resource-based view, including dynamic capabilities, are suitable anchors for the analysis of internationalization.

We also find that combinations of perceived constraints have a stronger and more negative influence on the consideration of internationalization than the individual constraints by themselves. Firms reporting multiple constraints are deterred from active consideration of internationalization. Consistent with this, firms that have not overcome combined resource constraints despite increasing age, are less likely to consider internationalization.

Our findings suggest that firms carefully weigh the decision on entry into each stage of the internationalization process. Empirical research into the evolution and formation of resource bundles as well as combinations and formation of capabilities and their impact on active consideration should move to the central focus for researchers.

6.1 Limitations

While our large cross-sectional dataset allows precise characterization of the effects of perceived constraints, the analysis is static due to the nature of the data. A longitudinal

approach would yield insight into the dynamics of consideration and the evolution of resource and capability constraints.

Our survey data was initially collected for a different and semi-administrative purpose than the issue we seek to explore here, and though the questionnaire was extensive and covered many of the major variables discussed in the literature, not all relevant resource and capability attributes were measured.

Only a fraction of counties within the United Kingdom were covered in the sample. When comparing different regions within the United Kingdom, smaller firms in the East and Southeast of England seem to perform better than smaller firms in other regions on various indicators. Future studies might include a wider selection of regions, and indeed countries to take account of environmental and structural specifics.

6.2 Implications for Management and Government Support Organizations

To the practicing manager this paper may provide some guidance on types of perceived resource constraints that underlie the internationalization behavior of firms. To the extent that perceptions reflect experience, resource programs adapted to industry, and paying attention to complementary resources, may enable management to actively engage in internationalization successfully. The importance of the commitment of the involved owner or manager, and expertise in international activities, are to be noted. Also, since resource constraints interact and change over time, the development of resources is essential in the attempt to internationalize and thus has to be consciously targeted within the strategic process. This perspective has important implications for managerial interventions, which would then be directed by greater emphasis towards the development of capabilities and the consideration phase that precedes the establishment of capabilities to support market entry and international knowledge creation.

We have sought to indicate the benefits of moving towards a more detailed analysis of the internal resource and capability constraints to better assess the underlying reasoning behind the consideration of internationalization. Such an approach has yielded insights into firm experience, as well as contributed to more effective and efficient policy. The empirical findings of our study raise doubts as to the efficacy of the current policy

framework, which emphasizes exports. We argue that the level and quality of assistance provided needs to be oriented towards filling gaps firms may find in their resource audits when they are at their consideration stage.

6.3 Future Research

The analysis of a longitudinal dataset will yield more detailed insights into the evolution of constraints, and especially their interactions. Also matched-pairs panel data of comparable firms that consider/not consider internationalization may overcome the survival bias attached to cross-sectional data. A more dynamic analysis of the 'consideration' phase will also be fruitful. Empirical research into the heterogeneities and combinations of resource constraints that affect firms at different stages of internationalization will be fruitful. We also call for a comparative exercise spanning developed and developing countries that provide insights into the working of resource constraints in different environments. Understanding these factors and forces may encourage theory development and support managers as well as policy institutions in their search for appropriate internationalization strategies.

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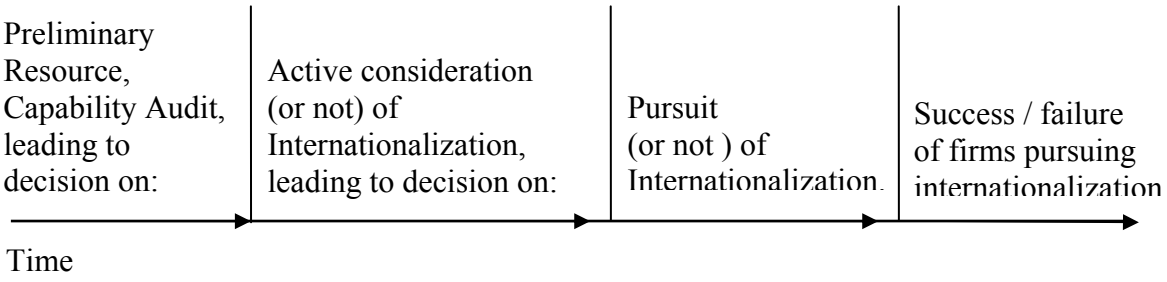

Figure 1: Stages in the Internationalization Process

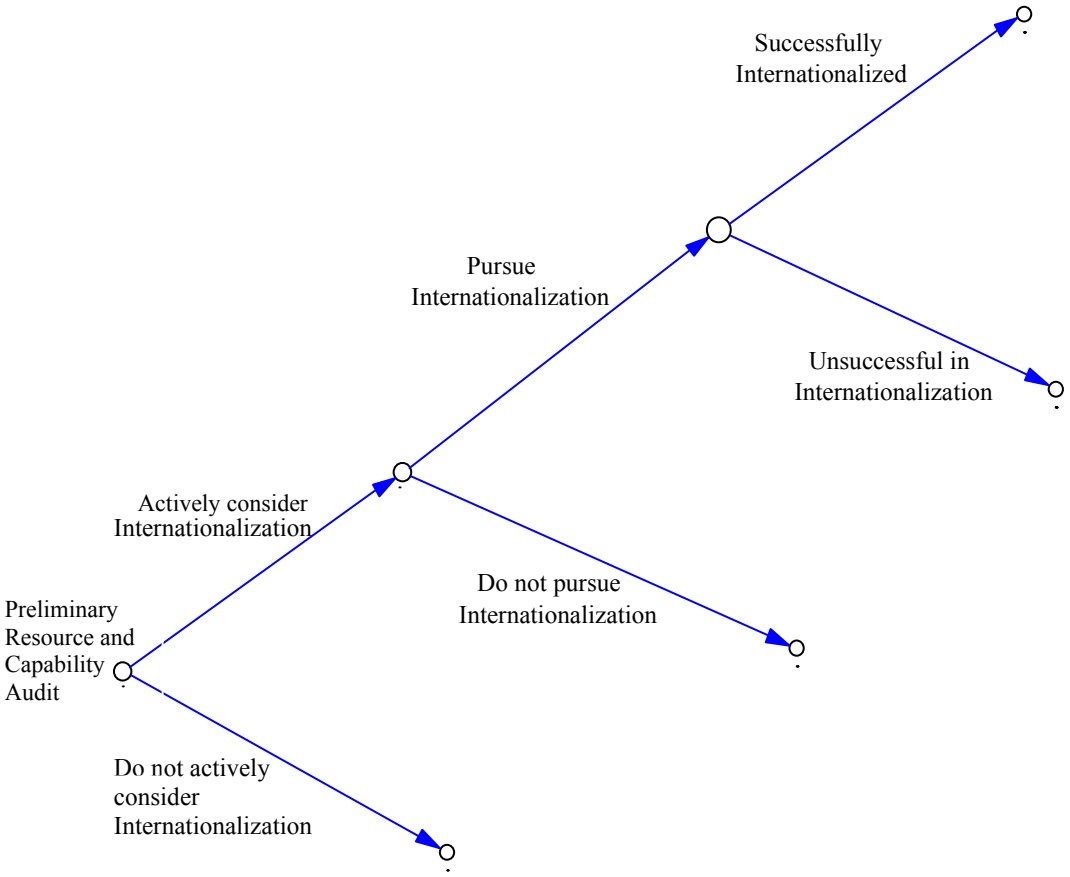

Figure 2: Decisions and Outcomes in the Internationalization Process

Summary Statistics										
Continuous Variables										
Firm Characteristics										
	All Companies					**Did not consider Internationalization**				
	Obs	**Mean**	**Std. Dev.**	**Min**	**Max**	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
Size	1,143	35.90	41.22	1	250	489	30.70	35.60	1	250
Age	1,142	34.40	31.16	1	279	487	34.28	24.76	1	152
Growth	971	25.97	75.65	-90	1060	389	20.35	67.49	-70	900
	Considered internationalization but did not pursue					**Pursued Internationalization**				
	Obs	**Mean**	**Std. Dev.**	**Min**	**Max**	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
Size	86	44.37	52.65	4	250	568	39.10	43.26	1	250
Age	86	37.23	37.74	2	279	569	34.07	34.80	1	274
Growth	75	25.81	67.25	-90	400	507	30.31	82.30	-89	1060

Categorical Variables					**Industries spanned by the data**			
	All Companies	**Did not Consider**	**ed Inter-nationali-zation but did not pursue**	**Pursued Inter-nationali-zation**	**Industry**	**Number of Firms**	**Percent**	**Cum.**
Percentage Reporting Resource and Capability Constraints								
Time	6.82	6.10	11.63	6.68	Agriculture	28	2.45	2.45
					Construction	3	0.26	2.71
Finance	7.60	5.50	4.65	9.84	Manufacturing(LT)	27	2.36	5.07
					Manufacturing (HT)	229	20.02	25.09
Information	4.72	2.86	0.00	7.03	Transportation	147	12.85	37.94
					Trade	107	9.35	47.29
Management Commitment	4.28	7.16	8.14	1.23	Finance/Real Estate	324	28.32	75.61
					High Tech Services	59	5.16	80.77
Management Expertise	2.36	1.02	17.44	1.23	General Services	172	15.03	95.80
					Unclassified	48	4.20	100.00

Table 1: Firm Characteristics and Resource and Capability Constraints: Summary Statistics

'Consideration' and Internationalization								
	Basic Model		RBV Model		Capability Model		Combined Model	
	Successfully Internation-alized	Considered Internation-alization but did not pursue	Successfully Internation-alized	Considered Internation-alization but did not pursue	Successfully Internation-alized	Considered Internation-alization but did not pursue	Successfully Internation-alized	Considered Internation-alization but did not pursue
Base Category: Companies that did not consider internationalization								
Firm Characteristics								
Size	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01
	(3.19)***	(1.33)	(3.26)***	(1.00)	(2.92)***	(0.70)	(2.89)***	(1.04)
Age	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03
	(3.72)***	(2.37)**	(3.67)***	(2.21)**	(3.49)***	(2.27)**	(3.38)***	(2.15)**
Growth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	(1.99)**	(0.97)	(2.13)**	(0.83)	(2.02)**	(1.08)	(2.03)**	(1.13)
Size²	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(1.87)*	(0.26)	(1.96)**	(0.03)	(1.45)	(0.18)	(1.35)	(0.02)
Age²	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(3.57)***	(3.00)***	(3.50)***	(2.94)***	(3.34)***	(3.06)***	(3.26)***	(2.95)***
Growth²	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(1.21)	(0.91)	(1.30)	(0.81)	(1.18)	(1.15)	(1.15)	(1.16)
Resource-Based Constraints								
Time			0.00	0.96	0.04	0.86	-0.09	1.30
			(0.01)	(2.30)**	(0.12)	(1.73)*	(0.26)	(2.74)***
Finance			0.66	-0.08	0.59	0.00	0.48	0.41
			(2.51)**	(0.14)	(2.23)**	(0.01)	(1.67)*	(0.73)
Information			0.85	-32.62	0.89	-33.66	0.61	-34.64
			(2.28)**	(85.63)***	(2.29)**	(83.89)***	(1.51)	(84.56)***
Capability Constraints								
Management					-1.86	0.38	-2.19	0.20
Commitment					(3.83)***	(0.81)	(3.68)***	(0.35)
Management					-0.04	2.87	-0.08	3.49
Expertise					(0.07)	(4.53)***	(0.09)	(4.61)***
Interactions between Constraints								
Time & Finance			0.00	0.96	0.04	0.86	0.30	-35.65
			(0.01)	(2.30)**	(0.12)	(1.73)*	(0.29)	(33.10)***
Time & Information			0.66	-0.08	0.59	0.00	1.24	0.44
			(2.51)**	(0.14)	(2.23)**	(0.01)	(0.66)	(0.24)
Time & Commitment			0.85	-32.62	0.89	-33.66	1.80	0.53
			(2.28)**	(85.63)***	(2.29)**	(83.89)***	(0.99)	(0.30)
Time & Expertise							-1.54	-4.49
							(0.87)	(2.98)***
Finance & Information							0.49	1.62
							(0.41)	(1.24)
Finance & Expertise							35.16	-4.85
							(25.56)***	(4.70)***
Information & Commitment							1.63	-0.30
							(1.22)	(0.22)
Information & Expertise							-0.72	34.43
							(0.39)	(24.24)***
Commitment & Expertise							-2.93	37.48
							(.)	(.)
Constant	0.33	-0.85	0.28	-0.92	0.36	-1.12	0.37	-1.32
	(0.64)	(1.12)	(0.54)	(1.25)	(0.71)	(1.53)	(0.72)	(1.78)*
Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	969	969	969	969	969	969	969	969
Pseudo R2	0.09		0.11		0.14		0.15	
Prediction	0.60		0.62		0.63		0.63	
Robust z statistics in parentheses								

Table 2: Multinomial Logit Regression Results: Models for Consideration and Internationalization

Constraint Combinations and Age of the Enterprise								
	Resource Constraints and Age				Constraint Combinations and Age			
	Successfully Internationalized		Considered Internationalization but did not pursue		Successfully Internationalized		Considered Internationalization but did not pursue	
Base Category: Companies that did not consider internationalization								
Firm Characteristics								
Size	0.016	(2.90)***	0.008	(0.85)	0.016	(2.83)***	0.010	(1.09)
Age	-0.028	(3.29)***	-0.020	(1.61)	-0.030	(3.35)***	-0.022	(1.71)*
Growth	0.003	(2.05)**	0.005	(1.14)	0.003	(2.07)**	0.005	(1.21)
Size²	-0.000	(1.43)	-0.000	(0.05)	-0.000	(1.23)	-0.000	(0.06)
Age²	0.000	(3.19)***	0.000	(2.55)**	0.000	(3.21)***	0.000	(2.61)***
Growth²	-0.000	(1.24)	-0.000	(1.05)	-0.000	(1.15)	-0.000	(1.01)
Resource-Based Constraints								
Time	-0.011	(0.02)	2.081	(2.46)**	0.124	(0.21)	2.278	(2.55)**
Finance	0.917	(1.61)	-0.047	(0.03)	0.912	(1.52)	0.296	(0.21)
Information	0.272	(0.37)	-42.197	(40.30)***	-0.082	(0.11)	-35.108	(45.94)***
Capability Constraints								
Commitment	-1.505	(1.80)*	-0.263	(0.25)	-2.272	(2.19)**	-0.768	(0.50)
Expertise	-0.490	(0.39)	3.625	(2.81)***	-0.992	(0.61)	3.490	(2.45)**
Resource-Based Constraints and Age								
Time & Age	0.001	(0.05)	-0.042	(1.61)	-0.008	(0.50)	-0.039	(1.30)
Finance & Age	-0.010	(0.64)	0.000	(0.01)	-0.013	(0.78)	-0.005	(0.18)
Information & Age	0.021	(0.95)	0.043	(1.79)*	0.023	(0.95)	0.013	(0.55)
Commitment & Age	-0.013	(0.55)	0.017	(0.68)	0.002	(0.08)	0.023	(0.74)
Expertise & Age	0.012	(0.55)	-0.015	(0.68)	0.030	(0.96)	-0.004	(0.12)
Interactions between Constraints								
Time & Finance					-5.520	(3.03)***	-40.838	(18.29)***
Time & Information					-5.174	(1.51)	-6.336	(1.86)*
Time & Commitment					-146.999	(61.45)***	-647.555	(59.28)***
Time & Expertise					-2.888	(1.16)	145.903	(38.40)***
Finance & Information					4.938	(1.26)	2.989	(0.67)
Information & Commitment					76.031	(36.66)***	56.615	(30.45)***
Commitment & Expertise					0.034	(.)	38.421	(.)
Interactions between Constraints And Age								
Time & Finance & Age					0.302	(3.18)***	0.297	(3.05)***
Time & Information & Age					0.240	(2.21)**	0.264	(2.55)**
Time & Commitment & Age					9.201	(92.13)***	32.412	(62.05)***
Time & Expertise & Age					0.018	(0.41)	-9.135	(44.36)***
Finance & Information & Age					-0.103	(1.49)	-0.036	(0.50)
Information & Commitment & Age					-1.737	(35.29)***	-0.933	(19.64)***
Commitment & Expertise & Age					-0.113	(1.82)*	-0.039	(.)
Constant	0.392	(0.75)	-1.297	(1.66)*	0.472	(0.88)	-1.316	(1.65)*
Industry Effects	Yes		Yes		Yes		Yes	
Observations	969		969		969		969	
Pseudo R2	0.15				0.17			
Prediction	0.63				0.64			
Robust z statistics in parentheses								
* significant at 10%; ** significant at 5%; *** significant at 1%								

Table 3: Multinomial Logit Regression Results for Constraint Combinations Interacted with Age