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Terence P. C. FAN

Singapore Management University, terencefan@smu.edu.sg

Phillip PHAN

Rensselaer Polytechnic Institute

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International new ventures: Revisiting the influences behind the ‘born-global’ firm

Fan, Terence

Lee Kong Chian School of Business, Singapore Management University, Singapore, Singapore

Phan, Philip

Lally School of Management and Technology, Rensselaer Polytechnic Institute, Troy, United States

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Abstract

There is a small but theoretically important literature on born-globals or international new venture firms that positions itself in contrast to the more established sequential international entry literature. In this paper we examine the pattern of entry into international markets for a set of international new ventures and show that they need not be a distinct breed of firms, as previous research has portrayed. Absent a specific technological advantage, the decision for a new venture to internationalize at inception is influenced by the size of its home market and by its production capacity, as well as by cultural and economic forces that also influence other more traditional firms that stage their entry into international markets. Most importantly, we demonstrate that the decision to internationalize or not should be considered jointly with the capacity allocation decision to specific international markets, as analysing these separately may lead to biased results.

Keywords

international new ventures, entrepreneurship, strategy, born-globals

Introduction

Improvements in global telecommunications and transport networks, combined with increasingly liberalized global trading regimes, have enabled the rise of a new class of start-ups that span international borders at birth. However, in spite of the research attention on this phenomenon, the *raison d'être* and effects of economic and socio-cultural factors on these international new ventures are still not well understood (e.g., Kandaswami, 1998; Zahra, 2005). A similar general observation can be made on our understanding of new venture survival and evolution in general, despite several decades of research (Phan, 2004).

Oviatt and McDougall (1994), in their seminal article, define an international new venture as a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources from and the sale of outputs to multiple countries. The growing literature on these so-called 'born-international' (or 'born-global') firms (e.g., Hedlund and Kverneland, 1985; Rialp et al., 2005) positions itself in contrast to the more established, staged-internationalization literature of Hymer (1960, 1968), Johanson and Vahlne (1977, 1990) and others (e.g., Dunning, 1988; Melin, 1992).

Many scholars have concentrated on portraying these international new ventures as an entirely different breed of firms, which defy cultural and socio-institutional constraints faced by the more traditional, staged-internationalizing companies (e.g., Hedlund and Kverneland, 1985; Ganitsky, 1989; McKinsey and Co., 1993). In the former view, firms start up internationally or focus on international markets shortly after inception, bypassing the maturing process that accompanies domestic development. In the latter view, firms adopt an international strategy as a result of a sequential process (also known as the Uppsala model of staged internationalization) that begins with building markets and capabilities at home before venturing abroad (Johanson and Vahlne, 1977; Chang, 1995).

Instead of treating international new ventures as a distinct breed of firm, we investigate in this paper whether they are influenced by the same economic factors in their early internationalization decisions as the staged-internationalizing firms, and the extent to which these international new ventures are still subject to the influence of cultural distance when their specific business decisions involve the mass market.¹ Based on suggestions by Oviatt and McDougall (1994), we conducted a census of firms in a technologically homogenized industry over a wide geographical area, and model their internationalization decision at inception. Most importantly, we include both the early-internationalizing firms and their counterparts in the same industry and country who chose not to internationalize early.

Our contribution to this literature is threefold. First, we demonstrate that economic factors play a significant role in influencing firms to internationalize early (or not): early internationalization may in fact represent *the* profit-maximizing strategic path for some firms. This point has only been suggested and not empirically supported in the 'born-global' literature. While our data do not go so far as to confirm that many 'born-global' firms may in fact have been forced to go global owing to the relative lack of more profitable opportunities elsewhere, such anecdotal comments would certainly be consistent with the findings in this paper. Second, our empirical analyses suggest that even early-internationalizing firms may be subject to the same socio-cultural influences in allocating their production capacities to international markets when their products are designed to cater for the mass markets. In other words, the cultural-distance-defying character of born-globals may be more limited in reality than previously portrayed in the literature. Third, our analysis demonstrates that the decision by firms to internationalize early or not should be considered jointly with the capacity allocation decision (for international markets). In other

¹ An implicit assumption we make is that the products of the new venture under investigation exhibit non-increasing marginal cost of production.

words, analysing these separately, or including only the early-internationalizing firms in the sample, may lead to biased interpretations of the motivation behind these decisions.

In spite of the explicit allowance for different forms of internationalization (e.g., those with an international component as part of the value chain as opposed to mere exports) in Oviatt and McDougall (1994), a vast majority of the literature on international new ventures still focusses on export sales. In this paper, an explicit allocation of capacity for international sales can be clearly measured, whereas the inclusion of an internationalized value chain is less obvious. We therefore restrict our view of 'international' new ventures to those that allocate an observable production capacity for potential international sales.

We next develop our hypotheses with regard to new ventures that internationalize at their inaugural production. We define new ventures as independently operated and marketed corporate entities that have no prior corporate history in the industry, and hence no prior market presence. In other words, a restructured company with a brand new corporate identity, a merged entity of several companies or a divested subsidiary is not considered a new venture. Also, a new company that relies on another company for its marketing and/or other key corporate functions (e.g., a subcontractor, private-label manufacturer, etc.) is not included here. We focus primarily on *de novo* ventures where the parent company (if any) has no experience in the same industry as the ventures themselves, but do include a handful of diversifying ventures where the parent company is starting a new, independently operated and marketed entity in the same industry.

In particular, we discuss separately the drivers of the internationalization decision at inception and the determinants of the production capacity allocated to international sales. We discuss the implementation issues after explaining our hypotheses.

International new ventures

In contrast to those firms described in the Uppsala internationalization model (e.g., Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977), where the internationalization process is incremental, the literature on international new ventures focusses on firms whose internationalization process occurs early in their history and represents a significant part of their operational capacity (e.g., Rennie, 1993; Oviatt and McDougall, 1994; Knight and Cavusgil, 1996). The early and significant internationalization process of these new ventures is at odds with the notion of 'cultural distance' in the international business literature – which generally translates into higher entry barriers or uncertainties for entering culturally distant societies relative to the home country of the focal firm (e.g., Hofstede, 1980; Kogut and Singh, 1988).

The cultural-distance-defying character of the international new venture has attracted the attention of scholars such as Hedlund and Kverneland (1985), Ganitsky (1989) and McKinsey and Co. (1993), who focussed largely on confirming the existence and characteristics of such firms. In particular, many scholars have been keen to delineate the differences between this type of firm and the staged-internationalizing firm. One perspective concentrates on the founding management and learning capacity of the organization. Some suggest that the experience and exposure of the managers prior to the start of a new venture play a part in its early internationalization decision (e.g., Busenitz and Barney, 1997; Madsen and Servais, 1997; Harveston et al., 2000; Shrader et al., 2000), whereas others suggest that the fast-paced learning of these resource-constrained, technology-oriented firms allows them the early internationalization opportunity (e.g., Zahra and George, 2002; Knight and Cavusgil, 2004). In other

words, the prior exposure of the founding managers or the inherent learning capacity of these firms reduces the uncertainty and/or cost of pursuing specific business opportunities abroad. It is this uncertainty, or the cost reduction potential, of these international business opportunities that makes them more promising to a new venture than the domestic home market. Hence the fast-internationalizing strategy can be survival-enhancing or even represent *the* profit-maximizing path for some firms. This perspective, we emphasize, is entirely consistent with the rational and profit-maximizing nature of the firm, a point that has not been emphasized in the international new ventures literature. Meanwhile, as the world becomes increasingly integrated, an increasing proportion of individuals will be aware of international business opportunities – but this will still likely not make all companies in the distant future born-globals.

Another stream of work arguing for the uniqueness of international new ventures is related to their business models. Many international new ventures are found to be involved in advanced, niche technologies or knowledge-intensive industries (e.g., Young, 1987; Jolly et al., 1992; Bell, 1995; Autio et al., 2000). Implicit in this perspective is that dispersed customers and suppliers specializing in a niche technology in different countries can more easily understand (and trade with) each other than customers and suppliers in non-specialized, mass markets – the result of the latter being the traditional fragmentation of markets based on culture and geography. In other words, the cultural distance that impedes the conduct of business involving the general populace is overcome by the ‘domain-specific familiarity’ among specialists. It is then easier for those individuals with such knowledge to transact across geographic boundaries with their specialized counterparts elsewhere. Thus, depending on the specific nature of the business, new ventures are likely subject to the influences of some combination of domain-specific familiarity and cultural distance when it comes to the internationalization decision.²

By combining these two perspectives, we can avoid having to make an *a priori* characterization of the international new venture as a distinct breed of firm. The possibility that international new ventures can in fact be quite similar to staged-internationalizing firms has been raised by Madsen and Servais (1997), who commented on the fact that, while the definition of fast-internationalizing firms relies on the official date of inception, the founding managers of international new ventures could have been exposed to international opportunities long before this date. In other words, the distinction between *early/fast* internationalizing and *staged* internationalizing can be blurred when this point is taken into account.

The similarities between international new ventures and traditional, staged-internationalizing firms were highlighted in a comparative study of over 100 companies in Australia by Kandasaami and Huang (2000). This study found little difference in product uniqueness, technological sophistication, degree of customization or pricing advantages between these two groups (relative to their respective competitors). Madsen et al. (2000) reported broadly consistent results.

These similarities between the supposedly distinct breeds of firm raise an interesting question: Why do some firms choose to stay domestic when they could easily have gone international at birth? In an attempt to answer at least part of this question, we include in our analysis both born-global firms and those that could have but chose not to.

As discussed later in the paper, constraints in our data from the intra-European airline industry lead us to define born-global firms based on the production capacity allocated for potential international sales. In this paper, we define a born-global firm as one that allocates at least 20% of its inaugural production

² The increasing prevalence of domain-specific knowledge in the international business arena would therefore make the traditional notion of cultural distance appear less relevant (e.g., Bell, 1995).

capacity to international markets at inception. This definition, as we will demonstrate later in the paper, is broadly in line with others in the literature.

Economic drivers of the ‘born-global’ firm

In Kandasaami's (1998) review of the literature, two streams of economic drivers for internationalization can be traced to (1) environmental factors and (2) firm characteristics. With respect to environmental factors, the primary drivers relate to the size of the domestic market of the focal firm *vis-à-vis* the potential of the international market (as suggested by others, including: Hedlund and Kverneland, 1985; Ganitsky, 1989; Knight and Cavusgil, 1996), and the relative ease of access to the latter markets. This leads us to Hypothesis 1:

Hypothesis 1: Everything else equal, the larger the size of the home country market, the less likely it is that a new venture will choose to go international at inception.

Hypothesis 1 says that a new venture needs to trade off the cost of entering foreign markets against that of accessing its home country market. If the home country market is sufficiently large (and accessible) compared with the foreign markets, chances are that new ventures will be more likely to stay within the home market at inception.

From the perspective of access to markets, large urban centres³ are likely to have better access to the rest of the home country's market through better transport (e.g., highways, railroads) and communication links than small provincial towns, and those new ventures operating out of the large urban centres can benefit from such infrastructure. Such firms can quickly acquire efficient economic scale in their home urban centres and go after the rest of the home country, and then the international, market. The large urban centres are also more likely to be cosmopolitan than their provincial counterparts. All these factors increase the likelihood that those new ventures operating out of large urban centres will internationalize early compared with those operating out of small provincial towns. We therefore include two control variables in our model: the population of the city where a new venture is based, and the population share of this city relative to the population of the entire home market (to control for the ‘centrality’ of such urban centres in its country).

Another important economic driver concerns the production capacity of the new venture. If a venture is severely constrained in terms of its initial resources relative to its home country market, then the new venture can serve the market only in its immediate vicinity.⁴ This is more likely for firms located in the smaller provincial towns of its home country, because the cost of capital in such areas has been shown to be higher (Coval and Moskowitz, 2001; Grinblatt and Keloharju, 2001). If this inaugural capacity is significantly larger than the profit-maximizing demand in the home country market (i.e., minimum efficient scale translated into excess capacity), it makes sense for the firm to venture internationally at inception (McKinsey and Co., 1993; Rennie, 1993). Therefore our second hypothesis states that:

³ This assumes that large population centres translate into large potential markets.

⁴ This assumes that the unit revenue derived from selling the product elsewhere within the country and/or neighbouring countries is similar, suggesting a fairly homogeneous product.

Hypothesis 2: Everything else equal, the larger the inaugural capacity of a new venture, the more likely it will be to choose to go international at inception.

Economic determinants of capacity allocation

Once a new venture decides to internationalize – more specifically, to export – it needs to allocate production capacity to a set of international targets. Since we are not able to explicitly survey entrepreneurs' *perceived* opportunities, we rely on the observed outcome of the entry decision to indicate the relative attractiveness of the various international markets. It is implicit in this assumption that entrepreneurs, as profit-maximizers, would not accept an opportunity if a more attractive alternative presented itself.

Businesses are generally attracted to markets with historically high demand, largely because in these markets even those customers diverted from incumbent competitors could represent a considerable business volume. In the context of international business, given the relatively fixed cost associated with adapting a product to the local taste of a foreign country, the venture in a country with a larger demand market can spread this cost over a greater volume. Given a sufficiently large inaugural production capacity, a new venture would understandably be attracted to markets with demonstrated large demand if it chose to go international at inception:

Hypothesis 3: Everything else equal, the larger the size of an established market, the greater the inaugural production capacity an international new venture will allocate to it.

The *ceteris paribus* assumption behind Hypothesis 3 is particularly important from the perspective of a profit-maximizer, since any two markets with identical historical demand may involve starkly different levels of competition – with immediate impact on the profitability of entering these markets and hence on the production capacity allocated to them. Classical economic theory suggests that the number of competitors and the degree of rivalry in a particular market impact on the prices offered to customers (and hence profits to the firms). The effect of inter-firm competition is also acknowledged in technology-intensive business environments (e.g., Zahra, 1996). While the number of competitors is easily observed, the degree of rivalry is more difficult. For simplicity, we rely on the former with respect to a new venture considering internationalizing at inception:

Hypothesis 4a: Everything else equal, the larger the number of incumbent competitors in a market, the lower the inaugural production capacity an international new venture will allocate to it.

Cultural and socio-institutional determinants of capacity allocation

Earlier, we reasoned that, while 'domain-specific familiarity' dominates when business transactions involve specialized knowledge and revolve around those individuals with such knowledge, the traditional socio-institutional determinants of a market entry decision should still dominate when business activities involve individuals with non-specialized knowledge. Here, we draw our insights from the organizational and international business literature.

According to Stinchcombe (1965), a *liability of newness* attends young organizations because they have not yet established the social acceptance (legitimacy) required for stakeholders to support their survival by conferring resources. Originating from both customers and suppliers, there is enormous pressure for

new ventures to quickly establish legitimacy through their market entry decisions, or face sanctions from actors in the organizational field (e.g., Meyer and Rowan, 1977).

The liability of newness is particularly salient where the norms and cognitive structures for the shared interpretation of meaning have been institutionalized. In other words, when new ventures enter a market that has already been institutionalized, they face greater pressures to engage in *isomorphic* behaviours on market entry (e.g., Haveman, 1993; Greve, 1998) – that is, copying the market entry behaviour of incumbents. In the eyes of potential customers (and suppliers) in the general populace, the isomorphic market entries *vis-à-vis* established incumbents help new ventures gain legitimacy and increase acceptance.

In the literature of isomorphism, the rate of market entry was demonstrated to be increasing at a decreasing rate as a function of the number of incumbents⁵ (i.e., the ‘inverted-U’ shape described in Haveman, 1993⁶). In our paper, we are concerned not so much with entry *rates*, but rather with the proportion of inaugural production capacity allocated to international markets. Since we do not find another hypothesis in the literature with closer relevance to ours than this, we hypothesize that a similar relationship on capacity allocation can be expected from the new industry entrants:

Hypothesis 4b: Everything else constant, an international new venture will allocate more capacity to a market with more incumbents than to one with fewer incumbents, but this increase in capacity allocation will decrease as the number of established incumbents increases (i.e., an inverted-U shape).

Hypotheses 4a and 4b act in opposite directions with regard to the number of incumbent competitors in a market.

Once a new venture decides to go international, and appeals to the general market for its products, it will be exposed to traditional international business pressures. The literature is replete with studies on how cross-border business transactions can incur different sets of costs compared with those taking place domestically (e.g., Zaheer and Mosakowski, 1997; Eden and Miller, 2004). While some of these costs and opportunities may stem from the different political and economic structure of the foreign countries involved, many of them can be traced to the efforts expended to understand and adapt the business to the cultural norms and value systems that prevail in a particular country (Hofstede, 1980; Erez and Earley, 1993). For example, variations in educational qualifications, religious observances and languages may increase the costs of human resource management for firms that enter a foreign country (Schwartz, 1999).

The perceived costs associated with entering a market with different cultural and/or socio-institutional settings could result in a new venture being more cautious in entering international markets, leading us to Hypotheses 5a and 5b:

Hypothesis 5a: Given the same size of an established market, the amount of production capacity allocated to culturally distant countries will be less than the amount of production capacity allocated to culturally similar countries.

⁵ The mimetic effect will be greater for firms that are similar in size. However, for de novo new ventures, this size-relatedness is less relevant as their incumbents are often many times larger their size.

⁶ Haveman (1993) estimated the inverted-U shape relationship based on entry rates. Our study deals with the pattern of market entry, and is hence subtly different from her hypothesis.

Hypothesis 5b: Given the same number of incumbents in an established market, the amount of production capacity allocated to culturally distant countries will be less than the amount of production capacity allocated to culturally similar countries.

We loosely use the term ‘cultural distance’ here to describe *whether the cultural and socio-institutional norms in different regions or countries are similar*. This concept has been widely used among researchers in studies in the international business area (e.g., Kogut and Singh, 1988). We discuss the implementation issues for cultural similarity later.

Methodology

Data

An important component of this study concerns the decision of new ventures to stay at home or go international at birth. We therefore need data from an industry with examples of firms that have done both at launch, in addition to the associated market entry information. In order to control for endogeneity, we also need an industry in which technological change is held relatively constant across the firms because product innovators are likely to face a different set of competitors and constellation of complementary products.⁷ As a result of these concerns, we draw our data from the intra-European scheduled passenger airline industry – one in which new ventures can be international or domestic at inception, and with a product that appeals to the general populace.

In this industry, a series of deregulatory moves have turned the European Union (EU) into a single air transport market and so have reduced systematic bias from country-level differences in air travel regulations. The fact that airlines rely on the general populace for their business bears resemblance to other products such as hand-portable telephones, hearing implants and desktop computer aids that have produced ‘born-global’ firms reported in the literature (Jolly et al., 1992; McKinsey and Co., 1993).

Prior to the latest wave of liberalization, the entry and exit, capacity, frequency and pricing decisions on each route (or city-pair market) in the industry were highly regulated by the governments of the European Common Market. On international routes within Europe, revenue pooling and sharing agreements between designated flag-carriers were common, which effectively limited price competition while encouraging non-price competition in services. Within each country, similar regulation meant that traditional flag-carriers enjoyed market dominance in a protected environment.

In 1993 the final package of liberalization measures was introduced, in which full pricing freedom throughout all intra-European markets was granted. The same package allowed airlines of an EU member country to fly any route between any two EU countries and, starting in 1997, any intra-EU country route, without requiring the airline to start or end the route in its home country. As a result of this liberalization, from about 1996 an increasing number of new entrants began offering air service in the single market. This sea change in the regulatory framework provided us with an opportunity to examine the inaugural market entry decisions of new ventures that were set up to take advantage of the liberalized industry environment.

Our choice of the intra-European airline industry has several advantages. First, the historical lack of pure connecting hubs (with little local originating and destination traffic) *within* the European continent and

⁷ Or, at least, similar technologies should be available to all firms – incumbents and new entrants alike.

the higher prevalence of non-stop inter-city air service in Europe mean that passengers in general are less likely to have to make a connection or even a same-plane *en route* stop when travelling between moderately sized cities.⁸ The increasing prevalence of scheduled non-stop services operated by European carriers further increases the likelihood of passengers travelling directly between any two cities (Fan, 2006).

Second, the traditionally national roots of many incumbent European carriers mean that intra-European route networks are slow to change. It is less likely that incumbents will drastically change their route structure just to compete with a small start-up (the additions or removals of a connecting hub by a US carrier, in contrast, may impact on many city-pair markets in a relatively short period of time). Indeed, our survey of the authoritative industry publication *Official Airline Guide (OAG)* reveals very few route changes by incumbents that can be traced to the emergence of a new carrier.

Third, there is reasonable variation in socio-institutional and cultural norms within Europe, which from a statistical standpoint improves the robustness of the measurement model. So even though English is the operational language in the aviation industry, airlines need to adapt their marketing and service offerings to customers with different cultural mores. For example, the forms and language of advertising are likely to be specific to the host country region; the degree of reliance through different sales intermediaries (e.g., travel agencies, packaged tour agencies) is also different across Europe. In fact, the fare levels and conditions, distribution practices (e.g., direct or via third parties) and marketing campaigns for the same airline often exhibit marked differences from one country to another (Fan and Leung, 2005).

To isolate the impact of established business ties and the associated information advantage enjoyed by incumbents, we choose to focus on air carriers that began scheduled passenger service as independent marketing *and* operating firms during the deregulated era.⁹ This eliminates former and existing regional affiliates of major carriers from our study. The *OAG*, or formerly the *ABC Airline Guide* in parts of the world, contains a detailed account of passenger flight schedules. We take a week's worth of schedule every quarter (February, May, August and November) from 1996 to mid-2004 from the *OAG*, and obtain a list of new carriers (those with no operations in the previous quarter) formed within this period. This period captured two peaks in terms of new airline entry activities: one in early 1997 (up to eight new entries in Quarter 1), coinciding with the last package of liberalization, and in mid-2002 (up to 10 new entries in Quarter 2), after the new entrants had waited for the post-9/11 economic outlook to clear.

For both incumbent and new airlines, the liberalization permitted instant freedom to expand broadly within the EU, subject to the operational constraints of local airports. While the primary airports serving major cities such as London and Frankfurt generally have few time slots available for new flights,¹⁰ secondary airports serving these cities tend to have plenty of capacity. More importantly, the naming of these secondary airports (e.g., London Stansted, Frankfurt Hahn) reveals the competitive intent of the operating carriers and/or the aspirations of these airports to serve parts of the larger metropolitan area.

⁸ There are international gateway cities such as London and Frankfurt am Main, but passengers flying between, say, Lisbon and Copenhagen can probably enjoy non-stop service instead of having to connect via London or Frankfurt.

⁹ A class of regional carrier exists in the EU with close operational and often financial ties to traditional flag-carriers (e.g., Crossair Europe/Europe Continental Airways was intended to be an EU arm of Crossair). We exclude these from our definition of independent, new entrants. We include, however, those carriers that operated as entities independent from their parent corporations, such as Go (initiated by British Airways) and Germanwings (by Eurowings-Lufthansa). Taking out the few independent offshoots of established carriers (such as Go and Germanwings) from the sample does not significantly change the result of the analysis.

¹⁰ Since all the new carriers in our study face the same operational constraints at busy airports, the presence of this constraint does not place undue pressure for one carrier to internationalize at inception compared with another.

Using this fact, we define a pair of cities (with each city consisting of all of its constituent airports) connected with scheduled non-stop passenger service as a unit of ‘market’.

Many of the new airlines compete with incumbents through a combination of lower prices (with minimal frills) and more convenient schedules, regardless of whether or not they identify themselves as ‘low cost’ or discount carriers. Whereas some new carriers experimented with providing levels of in-flight service¹¹ and distribution channels (e.g., more reliance on direct sales via the Internet) that were different from those of the incumbents, these features were quickly incorporated by some of the latter.¹² In any case, the intra-European passenger air travel market consists of flights no longer than 4 or 5 h in duration, with schedule convenience and price likely to be strong determinants of passenger choice rather in-flight amenities.

Among the entrants in the study, 15 labelled themselves as ‘low-cost carriers’, but did not exhibit substantially different international market entry patterns than others. Among these 15 low-cost carriers, five were set up using funds from their incumbent parent, but were operated as entirely independent entities. Removing these from the sample did not qualitatively change the results, and therefore they are included in the ensuing analysis.

We eliminated ventures that focussed on helicopter operations, and also those that had previously started operations but for some reason were not listed in the February 1996 issue of the OAG. We also eliminated those ventures that experienced a corporate change, such as a re-branding or re-launch under a new service concept (but retained the same airline code with the authoritative International Air Transport Association), and hence were not truly new ventures.

In our sample, several carriers operated intra-European flights primarily as a continuation of intercontinental itineraries, and the low weekly frequencies indicated that their focus was on intercontinental rather than intra-European traffic: these were also dropped from the sample. Two carriers that were set up as national or territorial carriers (and thus were not necessarily profit-maximizing) were also dropped. This procedure resulted in 135 new entrants for further analysis. For these 135 new entrants, we collected all their market entry and capacity decisions between 1996 and 2004. Table 1 shows some of the descriptive statistics for these carriers.

¹¹ Some new entrants positioned themselves to offer better service than the traditional flag-carriers.

¹² For instance, full-service carriers Swiss and Austrian Airlines at one point eliminated complimentary meal service in their intra-European operations and offered refreshments for sale in flight, resembling the offering of some of the budget carriers

Table 1 Descriptive statistics of new carriers

| <i>Attributes</i> | <i>Statistics</i> |
|---|-------------------|
| <i>Total number of new ventures</i> | 135 |
| Started international service at birth | 67 |
| Started international service to same-language countries | 12 |
| <i>Capacity of new venture at birth (average seats per week)</i> | 2162 |
| Average weekly frequency | 29 |
| Average flight distance (km) | 607 |
| <i>Capacity of incumbents faced by each venture (average seats per week)</i> | 11,090 |
| Average weekly frequency | 95 |
| Number of <i>effective</i> incumbents for each entrant (average, route-weighted, excluding entrants exclusively serving new routes) | 3.5 |
| <i>Number of new ventures based in different countries</i> | |
| Italy | 25 |
| Germany | 21 |
| United Kingdom | 18 |
| Sweden | 12 |
| France | 11 |
| Spain | 9 |
| Greece | 7 |
| Netherlands | 5 |
| Austria | 4 |
| Finland | 3 |
| Others | 20 |

Operationalization of international new ventures

The seminal articles of Oviatt and McDougall (1994) and McDougall et al. (1994) provided a typology to understand international new ventures according to their different degrees of international involvement: from mere market entries as exporters to having international operations as part of a firm's value chain. However, it is generally difficult to gauge the international involvement of a new venture other than export (e.g., sourcing from foreign suppliers). In fact, one of the earliest references to the term 'born-global' describes one such firm as one that '[views] the world as [its] marketplace from the outset and [sees] domestic market as a support for [its] international business' (McKinsey and Co., 1993). Many scholars have since based their definitions of born-globals around export activities. Therefore the focus on export, or rather some measure of export intensity (e.g., export sales as a proportion of total sales), alongside the speed of internationalization, has been used to define international new ventures.

In the McKinsey study on Australian exporters (1993), the so-called 'born-globals' on average exported 75% of their total sales within 2 years of operation. Knight (1997) and Madsen et al. (2000) define 'born-globals' as firms with at least 25% of their sales to foreign countries within 3 years after their inception (after 1976). Kandasami and Huang (2000) define 'born-globals' as firms that derive at least 10% of their total sales from international activities within the first 3 years of start-up.

In addition, some finer definitions have been suggested. Kandasaami (1998) suggests that a born-global firm should have business activities in at least five countries and 40% of export sales within the first 2 years of commercial sales, while a born-international firm can have business activities in fewer than five countries. Lummaa (2002) suggests that the number of countries is not a sufficient definition for born-globals. Instead, a born-global firm should have business activities in at least two cultural clusters, as defined by Hofstede (1980), and geographical regions.

In our survey of new ventures of the European airline industry, it is difficult to ascertain the ratio of foreign to total sales, since virtually all of these firms are privately held at inception. It is also difficult to retrace their exact date of business registration, since a significant portion of them have ceased operations. However, we can calculate the production capacity (in terms of seat capacity per week) allocated by these new ventures to international markets as a proxy and record when their operations commenced (i.e., commercial ‘production’). Among the 135 new carriers starting operation between 1997 and 2004, 67 – or just under half – operated international itineraries at inception. While all of these carriers are legally permitted to serve domestic routes in a foreign country, or international routes between two foreign countries (within the EU), only two carriers did so within our period of study, and these were probably the continuation of the same flight itineraries from their home countries. On the surface, this finding lends credence to the staged-internationalization conjecture, in which new ventures try to build a critical mass of operation around their home cities and countries first before expanding abroad.

Among our 135 new industry entrants, 67 of them launched international service at their inauguration (of commercial production). All of these 67 carriers allocated at least 20% of their inaugural capacity to international markets, and 53 (or about 80%) of them allocated more than half their capacity to international markets at inception. Assuming that these 67 carriers derived only half of their business in their international operations from ‘foreign’ customers, all of these carriers can be considered ‘born-globals’ (or at least ‘born-intationals’) by the definition of Kandasaami and Huang (2000), based on their proportion of foreign sales. In terms of their length of time to establish such a scale of international operation, our ‘born-globals’ in fact meet an even stricter criterion, as their production for international sales is required right at their commercial launch instead of within several years of initial sales. This means that, in spite of the slightly different definition for a ‘born-global’ firm in this paper, the actual ‘born-global’ firms counted in our sample should be broadly similar to others in the literature based on different definitions. As such, we count all these 67 carriers as ‘born-globals’. While 67 constitutes a significant proportion of our total population of 135 industry entrants, the number itself is still relatively small in terms of robust statistical analysis. We keep this in mind when interpreting the results of the regression analysis.

The average city-pair market was served quite frequently by all the new carriers, with more than a daily flight even at the early stage of development, indicating a significant focus on business rather than leisure travellers. This pattern suggests that the passengers flying these carriers are less likely to be entirely of the vacationer type from the same home country, and these carriers needed to adapt their business practices to the potentially different socio-institutional settings and cultural mores of the individual countries or regions served. A careful examination of these new ventures confirmed the absence of charter-like operators, which specialize in transporting mass tourists to ‘sun-and-sea’ destinations.

Moreover, the pattern of initial market entry turns out to be relatively persistent over successive quarters. For instance, among the 135 carriers, only 25 (less than 20%) withdrew service in their second quarter of operation from any of the routes started in the first quarter, with the median number of routes withdrawn being exactly one. Similarly, only 21 carriers in their third quarter of operations withdrew service from any routes operated in the preceding quarter. Overall, these market withdrawals represent marginal fine-tuning of the route networks of these new ventures rather than large-scale strategy reversals. In other

words, the born-international carriers did not revert to becoming purely domestic carriers, or domestic ones to substantially international carriers, within the first few years from inception.

Model

We model the international market entry decision-making of a *de novo* carrier in a two-step process: first we allow the carrier to decide whether or not to go international at birth, and then, conditional upon that decision, to choose the amount of capacity to allocate to the international market. The econometric model is run such that the estimation for the two stages is conducted simultaneously. With this model, we are able to *infer* the decision-making process of new ventures from the observed results of those that choose not to go international at birth and those that choose to do so.

This model follows the procedure proposed by Heckman (1979). In the first stage, a discrete, probit model examines the factors that influence the decision for new ventures to go international at inception. For those choosing to do so, the extent of international entry at birth is examined with a linear regression in the second stage.

In the first stage of this model, we model the ‘go international’ decision by letting $CrossBorder_j$ be a dummy variable that takes on the value 1 if the new venture j enters an international market at birth, and 0 otherwise. Each new venture j then weighs the decision whether or not to go international at birth based on an unobserved index variable $CrossBorder^*_j$, which varies according to a vector of attributes \mathbf{w}_j and subject to stochastic error u_j :

$$CrossBorder^*_j = \mathbf{w}_j' \boldsymbol{\gamma} + u_j \quad (1)$$

$$CrossBorder_j = \begin{cases} 1 & \text{if } CrossBorder^*_j > 0 \\ 0 & \text{if } CrossBorder^*_j \leq 0 \end{cases} \quad (2)$$

where $\boldsymbol{\gamma}$ is a vector of coefficients, and u_j is the stochastic error.

For those firms going international at birth ($CrossBorder_j=1$), their average capacity (\bar{K}) allocated to international markets would depend on the observed demand and pre-existing market structure in the second stage of the model:

$$\bar{K} = \mathbf{x}_j' \boldsymbol{\beta} + \varepsilon_j \text{ if } CrossBorder_j = 1 \quad (3)$$

where \mathbf{x}_j is a matrix of observed market conditions and institutional factors, $\boldsymbol{\beta}$ is the corresponding vector of coefficients, and ε_j is the associated stochastic error.

Assuming that u_j and ε_j are jointly normally distributed with zero mean, standard deviations of 1 and σ respectively, and correlated by ρ , a maximum likelihood estimation (MLE) can be used to arrive at consistent estimates for $\boldsymbol{\beta}$ (and \mathbf{w}).

Measures

For the dependent variable \bar{K} , we take the natural logarithm of the average passenger capacity (in seats per week) allocated by each carrier to an international city-pair within the EU. We use the logarithmic form because it places more emphasis for an equal magnitude of change when the underlying variable is small than when the underlying variable is large (i.e., small changes in a large market are not as likely to affect a new entrant's decision as big changes in a small market).

Based on the hypotheses formulated earlier, we have three independent variables (\mathbf{w}_j) to explain the initial *CrossBorder* decision (corresponding to Hypotheses 1 and 2, respectively):

- *HOMECTRYSIZE* measures the geographic area of the home country market for air transport services facing the new venture. This is an approximate measure of *opportunity cost* in geographic terms of going international at inception. We observe that, in general, geographically expansive and sparsely populated countries have a more critical need for air transport than geographically concentrated and crowded countries (perhaps where established rail and road networks serve a similar purpose at lower cost). Hence we use the (logarithmic) land area of a new venture's home country. For products with sales that do not have geographic dispersion implications, the total population count should suffice.
- *CAPACITY* measures the natural logarithm of the total inaugural capacity (seats per week) of the new venture. We use this measure as a proxy for start-up capital because all the ventures are private entities at birth and so no public information on available financial capital is available. Based on the relatively low marginal cost of operation (Caves et al., 1984), new carriers tend to maximize the size of their inaugural networks, subject to the availability of financial resources. Hence the inaugural seats/week is a good proxy for the relative size of start-up financial capital and the production capacity at inception.
- *HOMEBASESHR* is the control variable that measures the size of the immediate home base of the new venture as a portion of its total domestic market. This helps standardize the different population densities that may occur in different countries: new ventures founded in two cities with the same population and same home country size may still exhibit different propensities to internationalize early owing to different levels of 'centrality' of the two cities and hence their international orientation. Here we use the ratio of the population of the city of the new venture's operational headquarters (defined as the city with the most weekly departure seat capacity operated by the new carrier) to that of its entire home country. A high *HOMEBASESHR* value also means the lack of comparable urban agglomerations elsewhere within the home country to spread any fixed cost of production – thus making other agglomerations beyond the home country attractive. We stress that population of a city is merely a *proxy* variable for the amount of economic activity represented by the city. We use the population statistics for the cities concerned, but recognize that airports serving a particular city also cater to larger catchment areas around it.

To investigate the average capacity allocated to each international city-pair market (\bar{K}), we use the following independent variables (\mathbf{x}_j):

- *PASTDEMAND* measures the effect of historically demonstrated demand of an existing market (city-pair). Here, we use a proxy variable consisting of the natural logarithm of the aggregate weekly seat capacity operated by all carriers in the quarter prior to the new venture's entry. For carriers operating in two or more markets, we use the sum of the competitors' aggregate supply in each market weighted by the proportion of the new venture's inaugural capacity serving that market. A previously unserved market is assumed to have zero *PASTDEMAND*.

- *NUMRIVAL* measures the number of *effective* existing incumbents already serving a market. Here, we use the inverse of the Hirschmann-Herfindahl Index (HHI) calculated on the weekly seat capacity supplied by each incumbent. The HHI accounts for the uneven size of incumbents, giving more weight to large incumbents with the power to retaliate unilaterally. In other words, in a market with three operators, each with the same market share, the HHI is $3 \times 1/3^2 = 1/3$, which means that the effective number of incumbents is 3. For carriers operating in two or more markets, we use the inverse HHI for each market weighted by the proportion of the new venture's inaugural capacity serving that market.
- *NUMRIVAL2* measures the potential non-linearity of *NUMRIVAL*, which is simply the quadratic (squared) term of *NUMRIVAL*. This treatment is consistent with Haveman (1993). We make the same adjustment for *NUMRIVAL2* as we do for *NUMRIVAL* for carriers operating in two or more markets.

While the concept of cultural distance is understood by the international business research community, the normative implications of formal measures of cultural distance on a firm's strategy, along with its proposed refinements (see Brett and Okumura, 1998; Brouthers and Brouthers, 2001) have been relatively mixed (Tihanyi et al., 2005). In particular, the lack of a consistent directional influence on entry mode choice (e.g., Barkema et al., 1996; Erramilli et al., 1997), survival and performance (e.g., Park and Ungson, 1997; Morosini et al., 1998; Luo and Peng, 1999) has been a source of concern for researchers.¹³

As a result of the ongoing ambiguity in implementing cultural distance as it applies to international new ventures, and because this is not the theoretical focus of this paper, we choose to implement this construct via a simple, intuitive measure – whether or not two countries share a common linguistic heritage. We make a distinction between the operational language (i.e., the *lingua franca* of business) of a particular industry, which is often English when individuals from different language groupings have to communicate, and the *linguistic heritage* of a particular region (where the customers are), which is often reflected in the official native language(s). In the latter, we refer to the language that individuals from the same region default to when they have to communicate with each other, and the common language used in government documents and official communication. Linguistic anthropologists have known for some time that regions with linguistic commonalities share the ways in which social organizations are constructed (e.g., Ochs and Schieffelin, 1984; Duranti, et al., 2003; Silverstein, 2004). For instance, the legal systems of English-speaking countries around the world are more similar to each another than to French-speaking ones; the academic system of university-preparatory ‘gymnasia’ is more likely to be found in German-speaking countries such as Austria and Switzerland. In other words, linguistic commonality often points to other similarities in the social organizations of the regions, and these in turn correlate with specific cultural mores and norms.

By focussing on linguistic heritage, we allow triangulated relationships not possible in the conventional measures of cultural distance. For instance, we consider the Flemish-speaking part of Belgium and the Netherlands to be in the same linguistic zone, in the same manner that the French-speaking part of Belgium and France are in the same zone. We treat Germany and Austria as one linguistic zone, as the two countries share the same written form of the German language. While we acknowledge that the use of linguistic heritage is a coarse proxy for the underlying cultural and social institutions of a region, it is arguably the single most appropriate measure given the limited degrees of freedom afforded by our relatively small sample. To this end, we use this variable to indicate whether two markets are culturally similar or not:

¹³ Some, including Hofstede et al. (1990) and Mezas et al. (2002), suggest that culture at the national and organizational levels are different constructs entirely.

- *LANGUAGE* measures the differences in linguistic heritage between the home country of a new venture and its international EU market. This measure minimizes computational complexity and hence potential measurement error (Mezias et al., 2002). We simply indicate whether an international market has the same linguistic heritage as the new venture's home country (*LANGUAGE*=1 if this statement is true, and 0 otherwise). By linguistic heritage we mean there is a commonality in the official native language(s) of the respective countries. For carriers operating in two or more markets, we use *LANGUAGE* on each market weighted by the proportion of the new venture's inaugural capacity serving that city-pair market, and then sum that number across all markets served by the carrier (*LANGUAGE*=1 if all its international city-pair markets straddle countries that speak the same official languages). We interact *LANGUAGE* with *PASTDEMAND*, *NUMRIVAL* and *NUMRIVAL2* to investigate the impact of culture on the international capacity allocation decisions of the new ventures.

As for the possible impact of fixed effects, we originally included dummy variables for year and country effects, but because these turned out to be statistically insignificant we dropped the variables from further analyses in order to preserve degrees of freedom for our model. With our relatively small sample size, these variables consumed valuable parameter space in the regression analysis, and hence are not included in the models discussed in this paper. We kept one control for \bar{K} : the natural logarithm of the city population (*CITYPOP*) of the operational headquarters of the new venture, since we anticipate that (given everything else constant) the larger a new carrier's immediate home market, the more internationally oriented the city may be and the more likely it will be to allocate capacity to the international market, given that it chooses to 'go international'. Table 2 shows the Pearson's correlation matrix for the independent variables.

Table 2 Pearson's correlation matrix for the independent variables

| | <i>Mean</i> | <i>SD</i> | <i>1</i> | <i>2</i> | <i>3</i> | <i>4</i> | <i>5</i> | <i>6</i> | <i>7</i> |
|-----------------------|----------------------|------------------------|----------|----------|----------|----------|----------|----------|----------|
| 1 <i>HOMECTRYSIZE</i> | 285 ^a | 154 ^a | 1.000 | | | | | | |
| 2 <i>CAPACITY</i> | 2163 ^a | 3843 ^a | 0.049 | 1.000 | | | | | |
| 3 <i>HOMEBASESHR</i> | 0.051 | 0.118 | -0.720 | 0.041 | 1.000 | | | | |
| 4 <i>CITYPOP</i> | 952,327 ^a | 1,441,455 ^a | 0.121 | 0.264 | 0.169 | 1.000 | | | |
| 5 <i>PASTDEMAND</i> | 11,090 ^a | 21,340 ^a | 0.112 | 0.628 | 0.063 | 0.330 | 1.000 | | |
| 6 <i>NUMRIVAL</i> | 1.76 | 2.31 | -0.025 | 0.240 | 0.076 | 0.129 | 0.338 | 1.000 | |
| 7 <i>LANGUAGE</i> | 0.054 | 0.211 | -0.168 | -0.086 | 0.029 | 0.011 | -0.086 | 0.297 | 1.000 |

SD, Standard deviation.

^aMean and standard deviation of the variable before taking its logarithmic value.

To check for multicollinearity, we rely on the variance inflation factor (VIF), which is the number of times the variance of the estimated coefficients would be increased compared with the hypothetical case where there was no correlation among the variables (Neter et al., 1985). The VIFs would be 1 if there was no correlation, and values of VIF exceeding 10 are often considered to be indicative of multicollinearity. For both the discrete and linear stages of our econometric model, the highest VIF in the probit stage is only 2.1, and in the linear stage it is only 1.3 in the absence of the interaction variables. The maximum

VIF for the entire model, excluding *NUMRIVAL2* and *LANGUAGE* × *NUMRIVAL2* is 7.8, showing that the effect of multicollinearity is not a serious concern (the source of the high VIF was between *PASTDEMAND* and *LANGUAGE* × *PASTDEMAND*). The *NUMRIVAL2* variable by construction correlates highly with *NUMRIVAL* (its square root). However, removing the *NUMRIVAL2* and *LANGUAGE* × *NUMRIVAL2* variables from the analysis does not significantly change the results of the analysis. We show the results for both including and excluding the *NUMRIVAL2* and *LANGUAGE* × *NUMRIVAL2* variables.

Results

Three two-stage regression models based on [Heckman \(1979\)](#) were used to test our hypotheses. In addition, we report two one-stage models, one modelling only the probit stage of the two-stage models, and the other modelling only the linear stage, for robustness testing. [Table 3](#) shows the coefficient estimates and standard errors of these models.

Table 3 Regression coefficient estimates

| Variables | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 | Model 8 | Model 9 |
|---------------------------------|----------------------|---------------------|----------------------|---------------------|----------------------|----------------------|----------------------|----------------------|------------------------|
| <i>Probit-stage</i> | | | | | | | | | |
| Intercept | 1.778* (1.032) | -0.447 (1.324) | 0.196 (0.964) | 0.457 (1.133) | 1.022** (0.441) | 0.363 (0.963) | 0.503 (0.660) | 0.793 (0.667) | — |
| <i>HOMECTRYSIZE</i> | -0.508*** (0.165) | — | -0.403*** (0.125) | -0.445** (0.145) | -0.472*** (0.055) | -0.438*** (0.129) | -0.438*** (0.058) | -0.462*** (0.046) | — |
| <i>CAPACITY</i> | 0.120 (0.074) | — | 0.296*** (0.068) | 0.292*** (0.073) | 0.249*** (0.083) | 0.298*** (0.074) | 0.291*** (0.067) | 0.271*** (0.084) | — |
| <i>HOMEBASESHR</i> | 4.964* (2.943) | 8.582*** (2.847) | -0.626 (1.865) | -0.440 (2.452) | -3.60*** (0.674) | -0.238 (2.714) | -3.390*** (0.562) | -3.473*** (0.685) | — |
| <i>Linear-stage</i> | | | | | | | | | |
| Intercept | — | -0.330** (0.145) | 3.184*** (0.950) | 3.649*** (1.040) | 3.795*** (0.388) | 3.451** (1.091) | 4.762*** (1.102) | 4.188** (0.935) | 1.691 (1.282) |
| <i>CITYPOP</i> | — | 0.391*** (0.009) | 0.258*** (0.072) | 0.205** (0.091) | 0.200*** (0.039) | 0.213** (0.091) | 0.122 (0.093) | 0.168 (0.082) | 0.266** (0.104) |
| <i>PASTDEMAND</i> | — | — | — | 0.047 (0.034) | 0.130*** (0.005) | 0.067 (0.050) | 0.156*** (0.032) | 0.135*** (0.017) | 0.0950 (0.063) |
| <i>NUMRIVAL</i> | — | — | — | -0.059* (0.035) | -0.390*** (0.112) | -0.110 (0.141) | -0.485*** (0.150) | -0.371*** (0.015) | -0.044 (0.332) |
| <i>NUMRIVAL2</i> | — | — | — | — | 0.014*** (0.005) | 0.003 (0.007) | 0.019 (0.028) | — | -0.005 (0.040) |
| <i>LANGUAGE</i> | — | — | — | — | — | -0.364 (0.399) | — | — | — |
| <i>LANGUAGE with PASTDEMAND</i> | | | | | | | | | |
| <i>NUMRIVAL</i> | — | — | — | — | — | — | -0.292*** (0.048) | -0.084*** (0.025) | 0.048 (0.111) |
| <i>NUMRIVAL2</i> | — | — | — | — | — | — | 1.169*** (0.328) | 0.315*** (0.019) | -0.216 (0.511) |
| | — | — | — | — | — | — | -0.050 (0.035) | — | 0.015 (0.043) |
| Log-likelihood (LL) | -80.361 | -176.483 | -162.373 | -160.535 | -156.827 | -159.967 | -155.011 | -155.945 | R ² = 0.300 |
| Change in LL from previous | — | *** | *** | — | * | * | * | — | — |
| Change in LL from Model 2 | — | — | *** | *** | *** | *** | *** | *** | — |
| Change in LL from Model 4 | — | — | — | — | * | — | — | — | — |
| Change in LL from Model 5 | — | — | — | — | — | * | — | — | — |

Standard errors in parentheses.

***Statistically significant at 0.01; **statistically significant at 0.05; *statistically significant at 0.10.

Model 1 in Table 3 includes only Eqs. (1) and (2), that is, the probit portion (first stage) of the two-stage model. The estimates need to be interpreted with caution because of its one-stage nature. Nevertheless, it can be observed that *HOMECTRYSIZE* bears the expected negative sign and is statistically significant ($P < 0.01$), meaning that the larger the size of the home market, the less likely it is that a new venture will be ‘born-global’. *CAPACITY* has the expected positive sign but is not statistically significant. *HOMEBASESHR* has a positive effect and is significant ($P < 0.10$) but, as discussed earlier, its ultimate directional effect depends on the geography around the home city of the new venture.

Model 2 in Table 3 shows the result of the two-stage model that includes only the control variables (*HOMEBASESHR* in the probit stage and *CITYPOP* in the linear stage). As expected, *CITYPOP* shows a positive sign (i.e., a larger home city market encourages a new venture to allocate more capacity to international markets once it is ‘born-global’) and is statistically significant ($P < 0.01$). The coefficient for *HOMEBASESHR* is still positive statistically significant ($P < 0.01$).

Model 3 in Table 3 includes back the variables *HOMECTRYSIZE* and *CAPACITY* in the probit (first) stage of the regression, and shows that both variables are now statistically significant ($P < 0.01$) while retaining the same signs as in Model 1. In other words, Hypothesis 1 (that new ventures are more likely to be ‘born-global’ from a small country than from a large one) and Hypothesis 2 (that larger initial production capacities increase the probability of a ‘born-global’) are confirmed. The log-likelihood of Model 3 is also significantly ($P < 0.01$) different from that of Model 2, which in turn is significantly different from that of Model 1 ($P < 0.01$). Interestingly, the coefficient for *HOMEBASESHR* at the probit stage is now negative and not significant.

In Model 4, two more variables – *PASTDEMAND* and *NUMRIVAL* – are included in the linear (second) stage of the regression, but the quadratic term *NUMRIVAL2* is omitted. The coefficient for *NUMRIVAL* is statistically significant ($P < 0.10$) and of the expected negative sign – confirming Hypothesis 4a – but the coefficient for *PASTDEMAND* is not. Based on the log-likelihoods, Model 4 is not significantly different from Model 3 ($P < 0.368$).

In Model 5, the result of the two-stage model with all the variables, including the quadratic term *NUMRIVAL2* but excluding the effect of *LANGUAGE*, is reported. The log-likelihood of this model is significantly different ($P < 0.01$) from that of Model 2 (with only the control variables) after taking into consideration the additional variables. However, it is just outside the criterion for weak significance from Model 3 ($P < 0.136$), possibly because of the low number of observations (only 67 out of the 135 carriers can be relied upon for the linear stage of the regression). Nevertheless, the estimated coefficients for all the new variables added since Model 3 (*PASTDEMAND*, *NUMRIVAL* and *NUMRIVAL2*) are statistically significant ($P < 0.01$), and the overall regression has a better fit than Model 4 (without the quadratic term *NUMRIVAL2*) based on the difference in log-likelihoods from Model 3. In other words, Model 5 confirms the quadratic effect of *NUMRIVAL2* – but the signs of *NUMRIVAL* and *NUMRIVAL2* are the opposite of those expected in Hypothesis 4b. Considering that *NUMRIVAL* is usually between 1 and 5 for the intra-European air transport market, the overall influence of the increasing number of incumbents on the capacity introduced to the market by the new venture is still negative. In other words, international new ventures cautiously reduce the capacity allocated to highly competitive markets when compared with less competitive ones. This shows that the impact of increased competition dominates that of isomorphic mimetic entry on capacity allocation, confirming Hypothesis 4a and not 4b. Moreover, the estimated coefficient of *PASTDEMAND* is positive and significant, confirming Hypothesis 3.

In Model 6, the primary effect of the *LANGUAGE* variable is added by itself. The *LANGUAGE* variable by itself is not significant, as its interactive effects with *PASTDEMAND* and *NUMRIVAL* are potentially offsetting each other (*PASTDEMAND* has a positive effect on international capacity allocation, whereas

NUMRIVAL has a negative one). Model 6 in fact has a worse fit ($P < 0.493$) than Model 5 ($P < 0.136$) when compared with Model 3 (or similarly with Model 2).

In Model 7, the primary effect of *LANGUAGE* is removed, and instead its interaction effects with *PASTDEMAND*, *NUMRIVAL* and *NUMRIVAL2* are included. The log-likelihood of Model 7 is not significantly different from Model 5 without the interaction terms (probably because of the even smaller sample size with the interaction effect), but is still statistically different from Model 2 with only the control variables ($P < 0.01$).

By implicitly separating those countries with low cultural/institutional similarities, the *LANGUAGE* interactions in Model 7 reveal some interesting decisions made by the new ventures. Compared with the general economic effect in Model 5, the coefficients of *PASTDEMAND* and *NUMRIVAL* still bear the expected signs and are statistically significant ($P < 0.01$). The coefficient of *NUMRIVAL2*, however, is no longer significant. The *LANGUAGE*-interacted terms, however, show a different pattern of market entry. First, the coefficient of *LANGUAGE* \times *NUMRIVAL* is strongly positive in magnitude and statistically significant ($P < 0.01$), whereas that of *LANGUAGE* \times *NUMRIVAL2* is negative but statistically insignificant (the same is true for the sum of the coefficients of *LANGUAGE* \times *NUMRIVAL* and *NUMRIVAL2*, etc.). This result bears only a passing resemblance to the quadratic relationship hypothesized by Haveman (1993), as the quadratic term has a small coefficient and is not statistically significant. Second, the coefficient of *LANGUAGE* \times *PASTDEMAND* is negative and statistically significant ($P < 0.01$), suggesting that these new ventures are disproportionately allocating less capacity to larger markets that are culturally similar to their home country. This may indicate that the new carriers simply want to be 'present' in large existing markets, perhaps in search of legitimacy.

In comparison, new ventures in their quest to boost their legitimacy behave differently in linguistically similar vs linguistically different markets. In culturally similar markets (i.e., interacted with the *LANGUAGE* variable), new ventures allocate more capacity (confirming Hypothesis 4b) as the number of established competitors increases (in a mimetic, isomorphic manner). In linguistically different markets (i.e., not interacted with *LANGUAGE*), the capacity allocated declines with each incremental competitor (confirming Hypothesis 4a). In other words, market entry behaviour appears to be more cautious as the number of competitors increases in markets with no linguistic similarity (consistent with Hypotheses 5a and 5b). This demonstrates the twin challenges of new ventures in dealing with economic and social legitimacy costs of entry.

The coefficients estimated in Model 7 can be illustrated in graphical terms. Figure 1 shows the probability of new ventures going international at inception for a small number of representative countries based on geographical area (corresponding to the *HOMECTRYSIZE* variable, using country-average parameters for the other variables). The gradually declining probability of firms being 'born-global' as the country size increases demonstrates the fundamental influence of economic geography. Figure 2 shows how much capacity will be allocated to an established international market by a 'born-global' firm as a function of the number of incumbents. Clearly, the new entrants behave differently in markets linking two countries sharing a linguistic heritage than in markets that do not.

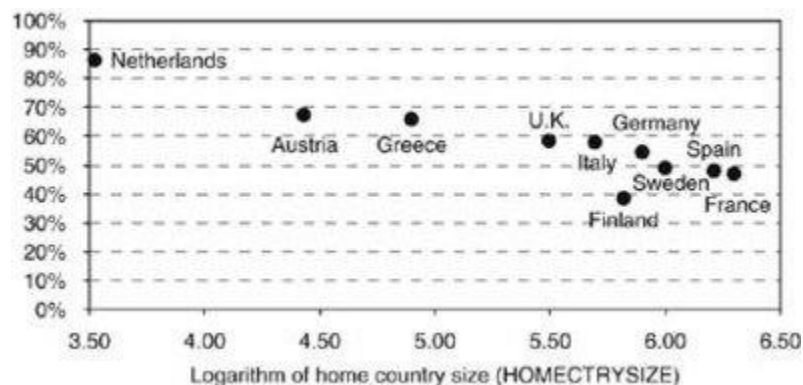


Figure 1 Probability of new ventures going international at birth (Model 7). Logarithm of home country size (*HOMECTRYSIZE*).

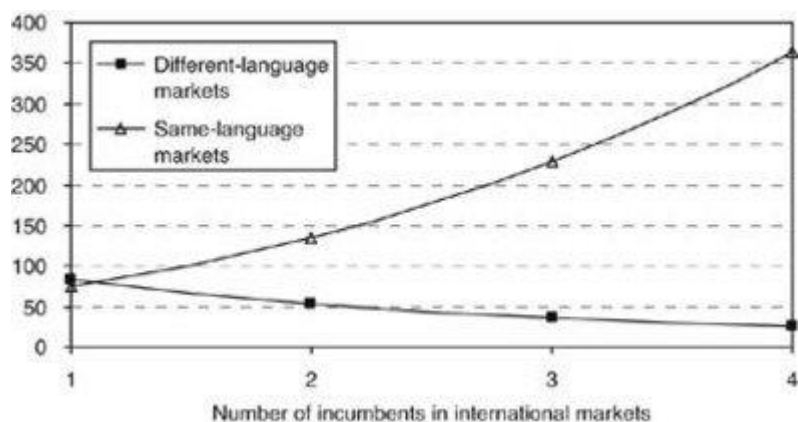


Figure 2 Capacity allocation to established markets by new ventures (Model 7). Number of incumbents in international markets.

Model 8 in Table 3 is the same as Model 7 except for the exclusion of *NUMRIVAL2* and *LANGUAGE* × *NUMRIVAL2* (these correlate highly with *NUMRIVAL* and *LANGUAGE* × *NUMRIVAL* by construction). The two models show qualitatively similar results.

Model 9 in Table 3 is a robustness check of the two-stage selection approach we used in the analysis. It shows how inconsistent the coefficient estimates of a simple ordinary least-square regression would be had we simply included in our sample only those new carriers that entered international markets at inception and excluded the rest of the carriers that chose to remain domestic (i.e., skewed results would be obtained if one started from a censored sample).

Discussion

In this paper we focus on the pattern of inaugural international market entry of new ventures, and show that these firms need not be a distinct breed as far as socio-economic and cultural influences are concerned. We demonstrate that the decision to be ‘born-global’ is influenced by the size of the home market of the new venture and by its inaugural production capacity, as well as by economic forces (e.g., level of competition) that also influence other firms that stage their international entry decisions. If an

international new venture relies on the general populace for its business, it too would be subject to the same cultural and socio-institutional influences as its more traditional counterparts. Further, we demonstrate that the decision to internationalize or not should be considered jointly with the decision on capacity allocation to international markets, as analysing these separately may lead to biased results.

The implication of our work for the theory and practice of born-global firms is threefold. First, the next generation of research on ‘born-globals’ should focus less on merely confirming the existence of such firms and more on the economic and non-economic context in which their early internationalization decisions are made. In addition, scholars should, if possible, include non-born-global firms that had similar characteristics as the born-globals at inception but chose not to internationalize early in their sample, or at least other alternative market expansion plans that were considered by the focal firms. The early internationalization decision is not necessarily the only choice for such firms, contrary to conjectures from the extant literature. Our study suggests that there may exist other potential ‘born-globals’ that ultimately choose to concentrate on their domestic markets first (and still become successful).

Second, the culture-defying characters of born-globals should be down-played. As demonstrated in this paper (and also in some previous papers), as long as the products (or services) of the born-global firms rely on the general populace for support, cultural distance will still have an appreciable difference in, say, the allocation of production capacities for different markets. In other words, the influence of cultural distance does not just vanish into thin air for born-globals. Instead of merely touting how the staged-internationalization model may be outdated, scholars can focus on how the influences described there can still apply in the world of international new ventures. For products that appeal to customers with specialized knowledge, we emphasize that the ‘domain-specific familiarity’ is at work simultaneously with, and does not entirely eliminate, the impact of cultural distance.

Third, early internationalization is not an elixir for all firms. We demonstrate how early internationalization could be a logical, profit-maximizing decision for some firms (e.g., the born-globals), and that even for these firms culture has an impact on their production decisions. In other words, the mere existence of born-globals does not mean that they are necessarily more successful than others. It would be equally interesting, if not less insightful, to focus on the extent to which such international new ventures survive or surpass their domestic counterparts over a prolonged period of time. If indeed the economic underpinnings of these international ventures lie in the geographical mis-pricing of resources, then moderate fluctuations in input prices, currency exchange and interest rates, as well as small shifts in demand, may be sufficient to unravel such opportunities. We surmise that a longer-term perspective as to how international new ventures adjust to environmental disruptions would be tremendously insightful in the next series of papers on born-globals.

So far, we have side-stepped the possibility that the very assemblage of resources for the production of goods or services can take place in more than one country: either the home country for domestically oriented new ventures, or a foreign country in the case of international new ventures. In the words of Oviatt and McDougall (1994), and McDougall et al. (1994) the value chain of activities of international new ventures can span over few or many countries. While we recognize that this perspective is somewhat difficult to generalize, it is reasonable to argue that every production process requires a different set of raw materials and human talent, and the variation in price of inputs from different geographical locations, combined with inexpensive and reliable transport and communication links across great distances, enables transnational value creation at inception to be viable. For instance, the British Broadcasting Corporation (BBC) has documented the viability of transporting semi-manufactured socks from the US to West Africa for processing and then back to the US for sale as finished products (Saky-Addo, 2003). While such opportunities exist, they require a high level of trust among value network partners as well as a high level

of inter-organizational coordination that may be beyond the reach of relatively resource-poor new ventures. Effectively, the need for specialized resources that may be agglomerated at spatially distinct geographic locations may indeed necessitate new ventures initiating such international value networks at birth, but once a production value chain is established (e.g., when a start-up airline is organized and certified for operations) the consideration as to which market to export such services should broadly follow the model outlined in this paper.

Conclusion

In this paper we examine the pattern of inaugural international market entry of new ventures, and show that such firms need not be as distinct as previous research has portrayed them. In particular, the decision for a new venture to internationalize at inception is influenced by the size of its home market and by its production capacity, as well as by the economic forces that influence other more traditional, staged-internationalizing firms. Additionally, we show that the cultural similarity of the home market relative (as implemented through linguistic similarity) to an international market has an impact on the inaugural capacity allocated to those international markets even as the number of competitors increases. Most importantly, we demonstrate that the decision to internationalize or not should be considered jointly with the capacity allocation decision to international markets, as analysing these separately may lead to biased results. Finally, because our analysis is based on a sample of firms that trade in a product sold to the general public, not products that embody specialized knowledge, we believe it represents a more robust test of the international new venture conjecture.

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