Commercialization strategy and internationalization outcomes in technology-based new ventures☆

Noni Symeonidou a,⁎, Johan Bruneel b, Erkko Autio c

a Warwick Business School, United Kingdom
b KU Leuven, Belgium
c Imperial College London, United Kingdom

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A B S T R A C T

Advances in business process outsourcing and open innovation practices have made the choice of technology commercialization strategy increasingly relevant for technology-based new ventures. We investigate effects of intellectual property (IP)-based, product-based, and hybrid (both product and IP) commercialization strategies on internationalization propensity and intensity in technology-based new ventures. We find that new ventures adopting a product-based commercialization strategy are less likely to internationalize than those with hybrid or IP-based strategies. In addition, new ventures using IP-based commercialization strategies exhibit higher international intensity after foreign market entry than those with hybrid and product-based strategies. These findings provide novel insights into the dependence on external resources associated with different types of commercialization strategy.

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1. Executive summary

Many new ventures seek growth by expanding to foreign markets. However, internationalization can also increase risks to survival, as the internationalizing new venture gets exposed to liabilities of foreignness and outsidership (Johanson and Vahlne, 2009; Sapienza et al., 2006; Zaheer, 1995). While the new venture internationalization literature has widely recognized such liabilities, there has been little research to explore how new ventures might mitigate such liabilities by adopting alternative commercialization strategies such as product-based or IP-based strategies (Laufs and Schwens, 2014). This is an important gap because different commercialization strategies imply different costs, different external resource dependencies, and different value chain positions, all of which may significantly affect internationalization outcomes (Coviello and Cox, 2006; Gans and Stern, 2003; Schweizer, 2013).

Network relationship building is a central aspect of new venture internationalization: the liabilities new ventures face when internationalizing ultimately derive from the need to build and leverage network relationships so as to access and mobilize external resources in foreign markets (e.g., Coviello, 2006; Coviello and Cox, 2006; Fernhaber and Li, 2013). However, there have been few explorations of whether choices among product-based or IP-based commercialization strategies could affect the need to build...
external relationships abroad, and whether this choice might indirectly regulate the venture's exposure to internationalization-related liabilities. Specifically, most studies have explored internationalizing new ventures that have adopted product-based business models, and there have been few explorations of ventures that have adopted IP-based business models or hybrid business models that mix both product-based and IP-based elements. Our study addresses this gap.

Since the early 2000s, business process outsourcing has become increasingly available for newer and smaller firms, according them ever greater flexibility in configuring their business models (Brouthers and Hennart, 2007; Fiedler and Welpe, 2010; Kasch and Dowling, 2008). These trends increase the flexibility new ventures enjoy when setting organizational boundaries and deciding which technology commercialization strategy to pursue. The choice between commercializing technology via products, IPRs or both is important, as the two strategies carry substantially different implications for the organization of the venture’s upstream and downstream activities, and thus, the configuration of its business model (Arora et al., 2001). Given that the adopted commercialization strategy and associated business model may significantly affect performance (Zott and Amit, 2007), and since internationalization tends to exacerbate both positive and negative performance outcomes in new ventures (Sapienza et al., 2006), empirical research is urgently needed that explores the implications of commercialization strategy choice for internationalization performance. Our objective, therefore, is to explore the effect on internationalization propensity and intensity of one increasingly common commercialization strategy choice: the choice between a product-based, intellectual property (IP)-based, or hybrid (both product and IP) commercialization strategy (Arora and Fosfuri, 2003).

We theorize that the firm’s technology commercialization strategy regulates its dependence on foreign market knowledge during internationalization; and consequently, the new venture’s exposure to resource dependencies during internationalization. We find that ventures that adopted a product-based commercialization strategy were less likely to enter foreign markets than were ventures that adopted an IP-based or a hybrid commercialization strategy. Ventures that adopted an IP-based commercialization strategy also exhibited greater intensity of international sales than did hybrid- or product-based ventures. These findings suggest that new ventures contemplating internationalization must also give due attention to how their technology commercialization strategy might regulate their ability to enter foreign markets and exploit international opportunities.

2. Introduction

New ventures seeking to internationalize face many well-studied choices, such as at which age to internationalize, which country markets to enter and in what order, and which entry modes to employ (Autio et al., 2000; Brouthers and Nakos, 2004; Zahra et al., 2000). However, because internationalization has typically been defined as the expansion of a firm’s current or at least preconceived business operations abroad, one consequential choice has been hitherto overlooked, namely the effect of alternative commercialization strategies on internationalization outcomes (Laufs and Schwens, 2014). This is an important gap because different commercialization strategies imply different costs, different external resource dependencies, and different value chain positions, all of which may significantly influence internationalization outcomes (Coviello and Cox, 2006; Gans and Stern, 2003; Schweizer, 2013). The objective of this paper is to explore the effect on internationalization propensity and intensity of one increasingly common commercialization strategy choice: the choice between a product-based, intellectual property (IP)-based, or hybrid (both product and IP) commercialization strategy (Arora and Fosfuri, 2003).

Advances in business process outsourcing and open innovation practices have made the choice of technology commercialization strategy increasingly real for technology-based new ventures (Di Gregorio et al., 2008; Marx and Hsu, 2015; Roza et al., 2011). They may choose to integrate their technologies into their products and services or to sell or license their IP for integration into the products and services of others. Those adopting a hybrid commercialization strategy may sell their knowledge through products as well as IP. Whether chosen consciously or not, these commercialization strategies require very different business models, or “system[s] of interconnected and interdependent activities that determine the way the company does business” (Amit and Zott, 2012: 42), emphasizing the importance of resource configurations in use (Demil et al., 2015).

Firms choosing to compete in product markets operate in the context of a manufacturing chain: they need to acquire or access raw materials and components, manufacturing capacity, and distribution channels to operationalize their business model. In contrast, firms selling licenses, copyrights, and other forms of IP typically rely on strong internal R&D capacity and technology insourcing and sell their IP to manufacturers and service providers for integration into the purchasers’ products and services. Thus, firms adopting an IP-based commercialization strategy are usually removed from direct product market competition and have less need to access and build value chain resources abroad when internationalizing. Such differences mean that different commercialization strategies may have important implications for the fixed and variable costs of international entry and performance, for external resource dependencies in foreign markets, and consequently for the venture’s exposure to liabilities of foreignness (Denk et al., 2012) and liabilities of outsidership (Johanson and Vahlne, 2009). We argue that these differences will impact on the propensity for and intensity of internationalization in internationalizing new ventures.

As companies become increasingly adept at technology outsourcing, the choice of commercialization strategy is becoming accessible to ever smaller and newer firms (Brouthers and Hennart, 2007; Fiedler and Welpe, 2010; Kasch and Dowling, 2008). There has been a rapid growth in exchanges in technology markets, including sales of patents, licenses, and other forms of IP, particularly in technology-based sectors such as chemicals, electronics, and software (Arora et al., 2013; Kasch and Dowling, 2008). The choice between a product-based, IP-based, or hybrid commercialization strategy is particularly relevant for technology-based new ventures, whose business is based on creating and exploiting intellectual property (Onetti et al., 2012). Given that the adopted commercialization strategy and associated business model may significantly affect performance (Zott and Amit, 2007), and since internationalization tends to exacerbate both positive and negative performance outcomes in new ventures (Sapienza et al., 2006), empirical research is urgently needed that explores the implications of commercialization strategy choice for internationalization performance. Our objective, therefore, is to explore the effect on internationalization propensity and intensity of one increasingly

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