

Market niches as dynamic, co-created resource domains

Dr Denis Odlin

Department of International Business, Strategy & Entrepreneurship
Auckland University of Technology

Dr Maureen Benson-Rea

Department of Management and International Business
University of Auckland

Abstract

Competing in niches is a fundamental marketing strategy for SMEs in business-to-business markets yet how internationalizing SMEs come to compete in the niches they do is unclear. Using multiple case studies of competing firms in a single B2B industry sector, this research found that niches evolved in response to resources supplied or withdrawn by early customers, sales channels, shareholders and competitors. We show that market niches are dynamic resource domains where market actors co-create new, specialized value. SMEs may target new niches when they internationalize because they cannot access the resources needed to co-create their domestic niche or because resources are valued differently.

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1 Introduction

To avoid competing directly with larger firms, small- and medium-sized enterprises (SMEs) operate in niches (Audretsch, Prince, & Thurik, 1999) – loosely understood in marketing as small gaps in the market representing a small number of customers with similar needs and free from competitors (Dalgic & Leeuw, 1994). Determining the niche in which to compete is central to SME marketing strategy (Toften & Hammervoll, 2009) and competitive strategy (Audretsch et al., 1999).

SMEs that expand internationally are typically found in business-to-business (B2B) markets (Fernhaber, McDougall, & Oviatt, 2007), yet determining the niches in which to compete in international markets is more complex than in domestic contexts.

Internationalizing SMEs are often assumed to make *ex-ante* choices about which niches to enter, based on firm resources and capabilities (Audretsch, Lehmann, & Schenkenhofer, 2018; Zucchella & Palamara, 2006), and then to grow by targeting similar niches in multiple countries (Cannone & Ughetto, 2014). However, this assumption is inconsistent with empirical findings that internationalizing SMEs use emergent strategies in response to market and industry changes (Crick & Spence, 2005; Toften & Hammervoll, 2009).

Entrepreneurship researchers have also questioned the rational logic underlying *ex-ante* targeting; in situations of uncertainty such as selecting foreign markets, entrepreneurs apply an effectuation logic to evaluate what resources are available as a starting point and then work with partners to increase these resources through improvisation and experimentation (Chetty, Ojala, & Leppäaho, 2015; Galkina & Chetty, 2015; Sarasvathy, 2001).

Recent marketing literature explains such market identification as a socially constructed value-creation process, with multiple market actors co-creating markets over time (Brodie, Benson-Rea, & Medlin, 2017; Chandra & Wilkinson, 2017; Humphreys, 2010; Saarija,

2012). Co-creation is a process of mutual production of something valuable (Vargo, 2020), where the actors and elements involved are so interdependent (Storbacka & Nenonen, 2011b) that a single actor would be unable to achieve the same result alone. While customers and channel partners are often emphasized as co-creating value with firms (Saarija, 2012; Storbacka & Nenonen, 2011a), suppliers and competitors are also directly involved (Chandra & Wilkinson, 2017).

If markets are co-created, and entrepreneurial firms pursue adaptive decision-making logics in situations of uncertainty, many conventional techniques recommended for niche marketing are of questionable merit, because these are based on rational analysis of pre-existing markets. What is a niche in a market's earliest stages of creation, and when the market is constantly "becoming" (Kjellberg et al., 2012)? If a market is co-created, does it follow that the niches within it are similarly co-created and evolving? While we know that SMEs target niches, how do firms come to be in certain niches and not others as a market evolves? Given the competitive drivers for niche targeting, how do competitors, as market actors, influence the niches of individual SMEs over time?

These considerations suggest more research is needed at the intersection of market co-creation and marketing strategy for SMEs. As a starting point, our paper addresses the following two questions: (1) how do internationalizing SMEs come to compete in the niches they do? And; (2) how do these niches change over time? In addressing these questions, we must also reconsider what a niche is.

To understand how SMEs compete in specific niches in response to market conditions, the influence of the other firms in their business ecosystems needs to be considered within the research scope rather than investigating SMEs in isolation (Chandra & Wilkinson, 2017). The B2B Fleet Management Systems (FMS) industry segment from New Zealand (NZ) provides

rich data to understand the niches in which nine internationalizing SMEs competed. This study investigated firm start-up, internationalization, and maturity over 15 years among a group of interrelated market actors as their industry evolved from the formation of the pioneering firms in the NZ sector in 2000 to industry consolidation in 2014. These internationalizing SMEs provide extreme marketing strategy examples to contribute to theory relevant in other international and domestic B2B contexts (Akaka, Vargo, & Lusch, 2013; Cuervo-Cazurra, Andersson, Brannen, Nielsen, & Reuber, 2016).

Our paper answers the two research questions by explaining how early customers, sales channels and shareholders co-create niches with SMEs, showing that SMEs come to compete in the niches they do as a consequence of the resources contributed by these market actors to create new value in shared arrangements. Niches evolve as market actors enable or restrict access to resources, or as the value of these resources changes. By withholding resources required for value creation, competitors can direct SMEs into new niches. The SMEs in the study often changed niches when they internationalized, rather than replicating domestic niches, because competitors already controlled the resources they needed in the new country, or because the resources SMEs controlled had different values. The paper shows that niches are an evolving resource domain recognized *post hoc* through competing.

The paper contributes firstly by challenging traditional concepts of *ex-ante* niche targeting still prevalent in the B2B marketing strategy and SME internationalization literatures, and extends the literature on market co-creation and adaptive decision-making. We argue that the marketing conception of niches needs to return to the original, ecological conception of niches as resource spaces (Hannan, Carroll, & Polos, 2003). We use the term “domains” rather than spaces to highlight that resources often remain bounded. Secondly, as resource domains, niches are dynamic and path dependent because market actors change the available resources and their value over time. Niches are not fixed slots in an existing and

stable market. We apply market co-creation concepts to show that, third, B2B SMEs co-create new niches as they internationalize in response to new values in new contexts (Wieland, Hartmann, & Vargo, 2017).

The paper first revisits traditional marketing explanations of niche targeting and introduces market co-creation concepts. We then describe the method and case context of the NZ FMS industry and, of the nine firms, investigate in detail the niche strategies of three firms showing the widest variation (Cuervo-Cazurra et al., 2016). A cross-case analysis summarizes the influences on these niche strategies and the discussion expands on how market actors co-create niches with internationalizing SMEs.

2 Literature review

In marketing, the term “niche” is often used as a synonym for “narrow”, with niche marketing broadly understood as a strategy to focus firm resources on narrow targets thereby limiting both the number and size of competitors a firm might face (Audretsch et al., 1999; Dalgic & Leeuw, 1994; Toften & Hammervoll, 2013). Despite its common use in the strategy, marketing and SME literatures, niche marketing lacks a well-defined theoretical framework, to the extent that it is unclear whether niche targeting is a generic competitive strategy, a marketing technique, or an extreme case of segmentation (Toften & Hammervoll, 2013). Various conceptions of niches are evident in the literature as discussed next.

2.1 Organizational ecology

The niche concept comes from ecology, where niches represent spaces in the environment where organisms live and compete for survival, with niche boundaries defined by the resources in the environment, such as oxygen, food, and shelter, available to sustain the organisms. Ecologists recognize niches as dynamic spaces because, as various organisms adapt to their environment to better capture resources, the niches for other organisms change (Colwell & Rangel, 2009).

Ecological theory has been applied to organizations, with a realized niche defined as the region of externally-given resource space in which an organizational form can persist in the presence of competitors (Hannan et al., 2003). Thus, a niche is a population-level concept representing multiple organizations competing for position in a resource space (Podolny, Toby, & Hannan, 1996). A resource space represents the dimensions of the environmental resources available to sustain various organizations as they compete (Carroll, 1985). For example, resources could be end-user customers and the dimensions may be their social characteristics or particular tastes or needs (Péli, 2009) or resources of technological knowledge with the dimensions of competitive crowding and firm reputation (Podolny et al., 1996).

2.2 Traditional niche marketing

Unlike the ecological conception, marketing represents a niche as a firm-level concept but still treats niches as resource spaces, implicitly defined as customers (Noy, 2010). Dalgic and Leeuw (1994, p.273) defined niche marketing as “positioning into small profitable homogeneous market segments that have been ignored by others”, suggesting a conscious process that only occurs once a market is sufficiently developed to contain empty segments in

strategic white space (McGee & Segal-Horn, 1990). Toften and Hammervoll (2013, p.280) defined niche marketing as: “the process of carving out, protecting and offering a valued product to a narrow part of a market that displays differentiated needs”. Accordingly, marketing has traditionally treated niches as pre-existing firm-level opportunities awaiting discovery and assumes marketers can analyze their attractiveness prior to entry.

2.3 SME strategy

Underpinned by its roots in economics, the strategy literature suggests that targeting niches is the fundamental business strategy of SMEs to avoid cost-based competition with large firms (Audretsch et al., 1999). SMEs target international niches because their domestic niches are too small to achieve the minimum economic scale to survive (Zucchella, Palamara, & Denicolai, 2007) or because they lack resources for targeting a broader range of customers (Luostarinen & Gabrielsson, 2006). SMEs are advised to either target the same niche in new countries, so as to gain economies of scale and knowledge (Cannone & Ughetto, 2014; Chetty & Campbell-Hunt, 2004) or target global niches (Hezar, Dalgic, Phelan, & Knight, 2006). “Global niche” is an oxymoron (is it a “narrow broadness” or a “broad narrowness”?) depicted as a small number of similar customers with similar requirements in multiple countries (Hezar et al., 2006). Accordingly, niche targeting by internationalizing SMEs is depicted as a two-stage *ex-ante* decision: first selecting which narrow group of customers to target and then selecting the countries in which to compete (Toften & Hammervoll, 2011).

Traditional marketing and strategy theories of niche targeting are problematic because most SMEs lack data to rationally analyze foreign markets (Gabrielsson & Gabrielsson, 2013) and have limited international experience to make sense of the data (Nordman & Melén, 2008). Furthermore, SMEs are often prevalent in emerging and growth markets

where the necessary data for analysis do not exist because agreed market and product definitions are not yet fixed (Aldrich & Fiol, 1994; Grodal, Gotsopoulos, & Suarez, 2015), and customer needs are still evolving (Suarez & Utterback, 1995). In practice, SMEs appear to apply adaptive approaches to niche selection, as discussed in the next section.

2.4 Adaptative niche targeting

Rapidly internationalizing SMEs typically learn about foreign market opportunities through networking (Hånell & Ghauri, 2016) and mimicking other firms (Sui, Baum, & Malhotra, 2018), while gradual internationalizers learn through experience (Schwens & Kabst, 2009). In other words, SMEs learn about foreign markets *after* they have entered them. In one of the few studies of how internationalizing SMEs implemented niche marketing, firms eschewed *ex-ante* techniques, and instead targeted niches by tradition (in the case of long-established firms), by chance (when international customers made unsolicited purchases) or left decisions to channel partners (Toften & Hammervoll, 2009).

Many of the strategies employed by internationalizing SMEs, including niche targeting, are unplanned or emergent, relying on what appears to be serendipity (Crick & Spence, 2005). While this does not mean managers are either passive or reacting purely to chance, they may pursue particular opportunities as a consequence of “who I know”, within an effectuation logic of adapting strategy according to the means available to the firm at that time (Sarasvathy, 2001). The influence of other actors within their network may be so interlinked with their own firm development that managers cannot determine exactly when a decision to target a particular international opportunity was made (Galkina & Chetty, 2015). This reflects a market co-creation perspective.

2.5 Co-creation perspective

In recent years, markets have come to be understood as socially constructed by market actors (Storbacka & Nenonen, 2011a, 2011b; Vargo & Lusch, 2016; Whalen & Akaka, 2016; Wieland et al., 2017). Actors include suppliers, buyers, intermediaries, and authorities reliant on each other for creating value from resources (Storbacka & Nenonen, 2011a) and are both resource providers as well as value beneficiaries (Nenonen, Storbacka, & Windahl, 2019; Vargo & Lusch, 2016). Value creation involves linking resources in new ways, so markets are co-created to access, deploy, combine, and exchange existing resources and create new resources (Nenonen et al., 2019). Linking resources in new ways means that a resource, and its pre-integration value, is dynamic; “resources *are not*, but rather *become*, i.e. what is a resource (and its value) is determined when linked and integrated with other resources” (Ibid, p.619). Firms may purposefully shape their markets and segments for their own benefit (Harrison & Kjellberg, 2010; Kindström, Ottosson, & Carlborg, 2018; Nenonen, Storbacka, Sklyar, Frow, & Payne, 2020) by influencing these fundamental market creation mechanisms of creating new resource linkages between actors and changing the value of resources (Nenonen et al., 2019).

Resources owned or controlled by firms are central to their ability to co-create value with other actors although not all resources are central to firm success (Peteraf & Barney, 2003). Critical resources owned or controlled by SMEs might be specialist knowledge, the experience of key personnel, formal intellectual property and general application knowledge, but they must also compete for additional (factor) resources required for co-creation (Markman, Gianiodis, & Buchholtz, 2009). Market actors such as customers might control resources such as industry knowledge and money. Channel partners might have industry knowledge, sales and service staff, access to prospective customers and local knowledge in the form of institutional understanding of rules, regulations, norms, and culture (including

language) (Vargo & Lusch, 2011). Shareholders might have resources of capital plus access to other key market actors and prospective customers. Further resources may exist uncontrolled in the environment, such as prospective customers for a yet uncreated product or service and raw materials where the value is not yet recognized.

Other factors influencing market co-creation processes include market practices, technologies (understood as useful knowledge rather than in the narrow sense of artefacts) and business models (Wieland et al., 2017). Business models contain sets of decision variables about strategy (Wieland et al., 2017), reflecting the design of the structure, content, and governance of transactions between firms and business partners (Zott & Amit, 2008). Thus, the managerial decision of targeting a particular niche represents a business model characteristic, even though the dimensions and dynamics of that niche are outside the complete control of the manager.

From a co-creation perspective, it follows that sub-divisions of markets, such as niches, are created by the actions of market actors, albeit more limited in number and integrating more specific resources. Consequently, this suggests that niches are never static, and that niches do not exist independently of the agency of the actors who bring them into being (Harrison & Kjellberg, 2010; Ottosson & Kindström, 2016). In summary, market co-creation offers a useful theoretical frame to investigate SME niche targeting. The next section outlines the research design and method used for this study.

3 Method

3.1 Research design

Our study used multiple case studies within a population of firms in the Fleet Management Systems (FMS) industry segment in New Zealand. Case studies are suitable for “how” and “why” questions (Eisenhardt & Graebner, 2007), while industry studies provide the means to understand the competitive relationships between firms within their environment while maintaining a perspective of all the competitors (McKendrick, 2001). Because our theoretical frame of market co-creation is a population level, evolutionary (process) theory, rather than a firm level theory, we needed a qualitative design to explore the interactions of multiple market actors over time and contextualize our findings (Welch, Piekkari, Plakoyiannaki, & Paavilainen, 2011).

3.2 Research context

The FMS industry provided a relevant and contemporary international industry for investigating SME niche strategies in a B2B research context. It first emerged in the mid-1990s (Gartner Group, 1997), which allowed time for individual firms to prosper or fail. Also known as telematics technology, FMS combines specialized hardware devices, data communications, GPS tracking and software to remotely manage the movements of vehicles. Real-time data about vehicle location and operating conditions (such as engine, weight, braking, acceleration, fuel consumption) are transmitted via mobile telecommunications networks to powerful centralized computers for analysis. Entire fleets can be tracked in real time, permitting analysis of driver behavior, detailed vehicle performance, and route optimization.

The FMS industry comprised various hardware, software and services firms selling components and integration to organizations with vehicle fleets, ranging in size from SMEs to multinationals. By using publicly available Internet, GPS and digital telecommunications infrastructure, FMS were relatively unconstrained by institutional and regulatory factors causing large variations in each country-market.

Relative to New Zealand's small domestic FMS market size, the country generated many firms in FMS. Several types of internationalizing firms, including SMEs and multinational enterprises (MNEs), could be identified at the start of the research, with several NZ-heritage SMEs successful at penetrating large international FMS markets (demonstrating that opportunities for NZ-based firms were available and achievable).

As part of a larger study investigating competitive strategy in SMEs, twenty-five firms were identified as active in the NZ FMS market within the research period of 2000-2014 (from the foundation of the first firm to a point when consolidation was clearly underway), but only 13 of these were international in scope (ten NZ-heritage firms and three foreign MNEs with operations in NZ).

The nine case firms in this study were all NZ-heritage firms that internationalized as the FMS industry evolved over 15 years, as described in Table 1. Code names are used to de-identify the firms. All firms except *Avro* were entrepreneurial start-ups and would have been classified as SMEs in 2014 using the OECD definition of having fewer than 250 employees (OECD, 2012). Prior to its acquisition by a large US multinational in 2012, *Avro* would also have been classified as an SME.

Table 1: Case firms (in alphabetical order)

Company Code	Year Established	First International	Revenue 2014 \$ USD M	2014 ownership	Special characteristics	Country and regional scope (order of entry)
Avro *	2001	2001	85.1	US MNE	Originally a division of NZ company; sold several times since.	UK, NZ, Australia, Europe, USA, South America
Bulldog	2005	2011	1.5	Private		NZ, Australia
Comet	2006	2010	2.7	Private	Exited FMS in 2009, subsequently internationalized.	NZ, USA, Australia
Dakota	2003	2008	7.7	Private		NZ, USA, Australia
Eagle	2001	2002	5.3	Private	Merger with Australian company in 2007.	Europe, NZ, USA, Australia, South Africa
Gloster	2004	2008	8.0	Private		NZ, Australia
Heron *	2004	2007	3.5	Private	Internationalized rapidly to multiple countries	NZ, Australia, India, Middle East
Javelin	2005	2011	1.5	Private		NZ, USA Australia
Lancaster *	2000	2010	7.4	Public	Slow internationalizer, first product not released until 2009.	NZ, USA, Australia

Sources: Interviews, analyst reports, press articles, company websites

* Case firm selected for in-depth analysis

3.3 Data collection

Semi-structured interviews were conducted in two phases approximately one year apart with senior and ex-managers in FMS SMEs and MNEs active in NZ, including founding entrepreneurs, CEOs, general managers, and sales directors. Although a research objective was to gain an internal perspective from each of the internationalized industry participants, two of the ten local firms (*Nimrod* and *Lancaster*) were unwilling to be interviewed. Nevertheless, data on *Lancaster* is included because relevant public information was

available: 1) a 40-minute radio interview with the CEO talking about its strategy and targets (which was transcribed and coded like the other interviews); 2) the 120-page prospectus for *Lancaster's* 2014 listing on the NZ Stock Exchange which provided extensive explanation of its history and strategy. Insufficient information could be gathered on *Nimrod*, so it was omitted from the case analysis, but is mentioned in industry-level description. In summary, the nine case firms represent almost a census of the ten internationalized NZ-heritage firms from the NZ FMS sector. Managers from two firms that had exited the industry were sought out and interviewed, along with industry consultants in NZ and government international trade officials. To provide greater international perspective, the first author attended the 2014 “Connected Fleets” industry conference in the United States (US) and interviewed US-based industry analysts and competitors of NZ firms there.

In face-to-face or Skype interviews lasting 60-90 minutes, participants were asked about their firm’s history and strategy, competitors’ strategies, and how and why the firm’s niches had changed over time. Phase 2 interviews probed concepts of interest revealed in the analysis of Phase 1 interviews with senior managers in five of the case firms willing to be re-interviewed. Firms that had exited the industry and the two remaining MNEs were not reinterviewed because they had no new perspective to contribute. Over 30 hours of recordings were transcribed and returned to respondents for review. Table 2 shows the distribution of the 33 interviews conducted with market actors over two phases.

Table 2: Interviews conducted

Respondent category	Phase 1	Phase 2
Senior managers of NZ-heritage firms	9	5
Local managers of MNE firms	2	0
Managers in firms no longer in FMS industry	3	0

US competitors	6	0
Industry consultants; government export agency	8	0
Total	28	5

A search of public information on all firms using the Internet, Factiva (Dow Jones, 2019) and the NZ Companies Register (New Zealand Companies Office, 2015) generated over 250 documents, such as news articles, formal announcements, industry journal articles and shareholding information that verified information gained in interviews or provided additional insights.

This coverage of data sources across the entire population reduced survivor bias by including “failed” firms. Further, because the primary data represents almost an industry-wide census, firms provided information on rivals which could be corroborated across multiple market actors. This meant that the researchers synthesized a perspective of the industry unavailable to any of the respondents individually and which minimized the effects of any individual’s respondent bias, giving us confidence in the quality of our data (Timmermans & Tavory, 2012).

3.4 Data analysis

Interview transcripts and *Lancaster’s* prospectus were coded using NVIVO software. As the research progressed, major themes were coded: references to competitors, competitive environment, customers, key events, geographic markets, pricing, resources, and survival (Dubois & Gadde, 2002). At the end of Phase 1 data collection, all transcripts were recoded to create subcategories. Themes were extended to social networks, performance, sales channels, vertical markets, and NZ-specific factors influencing the industry. Major events in the development of each case firm were entered into timeline diagramming software. Events

included firm foundation, first sales, first internationalization, ownership changes, mergers and exits.

To analyze niche strategies, detailed case reports on each firm were written from transcripts and secondary data to describe the firm's history and pattern of strategic changes in relation to the other firms in the NZ FMS segment (Piekkari, Plakoyiannaki, & Welch, 2010). Target markets in 2008 and 2014 (representing the end of the industry growth phase and the consolidation phase, respectively) were mapped in relation to the competitors that case firms identified as rivals to track industry-level changes. The specific niches in which firms reported they were operating were listed and tracked. Niche strategies were rechecked against source data. The next section provides an overview of the FMS industry in NZ and the niche strategies of the case firms.

4 Findings

We first present the development of the industry population (representing ten NZ-heritage SMEs and three MNEs that entered the market), then examine the niches targeted by the nine case firms - in detail for three cases that showed the widest variation. The section concludes with a cross-case analysis.

4.1 Niches in the New Zealand FMS industry

The FMS industry segment in NZ appears to have gone through three evolutionary phases of emergence, rapid growth, and consolidation (Abernathy & Utterback, 1978; Klepper, 1997). Industry emergence (approximately 2000-2002) occurred when *Nimrod*, *Avro* and *Eagle* were established and immediately targeted international markets. Rapid growth occurred between 2003 and 2008 (representing the period when the largest number of

firms entered the industry - Klepper & Graddy, 1990). Consolidation, when the number of firms in the industry stabilizes and then declines (Klepper & Graddy, 1990), began in 2009 when *Comet* exited the FMS industry due to competitive pressure.

“Everybody who’s around now has started in the last 10 years. And we were all little backyard start-ups.” (Interview, *Bulldog* manager, 2014)

Given the importance of proximate competitors in influencing SME learning and action (Greve, 2000; Poudier & St. John, 1996), rivalry in the domestic market is likely to influence internationalization (Hsieh, Tsai, & Chen, 2015; Sui et al., 2018). In the emergence and rapid growth phases, firms identified rivals based on underlying hardware and software technologies offered, and defined themselves as competing in product-focused, horizontal niches. Once the industry consolidated, firms’ identified rivals radically changed, and they defined vertical, customer-focused niches representing highly specialized industry applications.

“What you are getting increasingly in this market are verticals where you have one or two companies who are the main service providers, with the feature set that the industry wants in that particular space and the competitive advantage. They have done sufficient specialization on their product to be able to appeal in that market, to a degree that is very, very difficult for someone to emulate unless they pump a significant amount of development and resource into that area as well.” (Interview, ex-*Avro* manager, 2014)

Three MNEs had sales offices in NZ but none was influential in the market. Although *Meteor*, from the United Kingdom (UK), was the first MNE to open an office in NZ around 2003, the firm collapsed globally in 2010 and its assets, including its NZ operations, were bought by South African MNE *Kestrel*. No additional international firms entered the NZ industry until MNE *Fairey* (from The Netherlands) established a local office in 2014.

Table 3 shows the vertical niches that firms targeted in 2014 during the consolidation period (across the entire industry, not just the nine case firms), illustrating that few competitor-free niches were evident. The shading highlights that half of the NZ-heritage firms (*Avro*, *Bulldog*, *Gloster*, *Heron* and *Nimrod*) targeted different niches in foreign markets from those in NZ. *Eagle* did not actively target the NZ market and *Javelin* had little international success, so little change would be expected for these firms. Containing eight competitors, the road freight vertical appears crowded, but case firms developed even more specific offerings within this vertical industry. For example, *Heron* developed an FMS system that transmitted over radio frequencies that allowed vehicle tracking in areas outside digital telecommunications coverage, while *Lancaster* developed a system for electronically calculating and verifying road user taxes (eRUC). Although case firms claimed they operated in niches without close competitors, this is not the pattern revealed when the broader industry ecosystem is examined.

Table 3: Vertical niches in 2014 in NZ FMS industry (ranked by number of niches)

Case firm	Road freight	SMEs, white van	OEM	Vehicle security	Refrigeration	Forestry	Construction	Oil Gas Mining	Utilities	Use-based insurance	Local government	Public transport	Sub-prime finance	TOTAL
Gloster	1	1				1			1		1	1		6
Avro		1				1	1	1						4
Javelin			1	1						1			1	4
Bulldog		1	1	1										3
Eagle	1						1		1					3
Heron	1				1			1						3
Dakota	1				1									2

Nimrod	1		1											2
Lancaster	1													1
(Comet)														Exit
MNEs														
Fairey	1	1								1				3
Kestrel	1	1												2
TOTAL	8	5	3	2	2	2	2	2	2	2	1	1	1	33

Sources: firm interviews, consultants, competitors, websites, press articles

Key: shaded=foreign market only

Next, the changing niche targets of three of these nine case firms are analyzed in depth, in a chronological sequence relative to industry evolution, to highlight the variety of approaches. *Avro* (est. 2001), a pioneer, shows niche replication as the firm initially internationalized; *Heron* (est. 2004) represents a firm that changed niches as it internationalized, and *Lancaster* (est. 2000 but the last to develop and internationalize) demonstrates *ex-ante* targeting. A summary of the remaining six firms concludes this section.

4.2 Avro – niche replication

Avro launched in the UK in 2001 because its product relied on General Packet Radio Service (GPRS), an early digital cellular mobile telecommunications standard, and the first commercial service was operating there. This technology infrastructure represented the resource needed for value co-creation in its launch market. *Avro* also had a competitive motivation; to both challenge and learn from the FMS market leader, *Meteor*, in its UK home market. *Avro* next released its product in NZ in 2002 (once GPRS services were available) to gain direct customer feedback for new product development. By 2004 *Avro* had expanded

into Australia, the US, Canada, and several European markets as GPRS services became available and would often use these telecommunications providers as sales channels (bundling FMS systems with data packages).

“*Avro* setting up their channel in Australia has made it very hard for everyone else. Because if you’ve got the distribution organized ... it’s very hard for anyone to follow you at a dealer level... Those who got the early play did well. And that’s the kind of issue we’ve got in going into the US and other places.” (Interview, *Eagle* manager, 2015)

Initially *Avro* occupied a horizontal technology niche of GPRS transmission of vehicle data to differentiate itself from competitors’ switched, satellite and radio-based transmission products. *Avro* identified its niches in hindsight:

“...it’s kind of like, “How many units have we got in this vertical?” Then we started crunching the numbers to see where we were having our successes.” (Interview, *Avro* manager, 2014)

By 2006 *Avro* recognized that it was in the light vehicle niche (vans and light trucks) in multiple geographic markets, having developed relatively simple and straightforward systems for small business customers. However, this niche became increasingly more price competitive as others entered; the customer application knowledge that had been *Avro*’s key resource became widespread, meaning *Avro*’s knowledge value reduced. In response *Avro* deliberately targeted narrower niches and new countries for expansion.

“Initially it was transport and white vans. Around 2007, you started to see the beginnings of a lot more specialization and it’s really snowballed. It’s a function of market maturity.” (Interview, ex-*Avro* manager, 2014)

After becoming a subsidiary of a US conglomerate, in 2013 *Avro* entered the mining niche because it could leverage links with other subsidiaries, where the key resource was

access to new customers. Figure 1 shows changes in *Avro*'s niche strategies for four countries to illustrate the influence of competitors, customers, sales channels, and shareholders.

Figure 1: Niche changes of *Avro*, *Heron* and *Lancaster*

[Figure 1 about here – see page 46]

4.3 Heron – changed niches on internationalization

Two business associates with foreign connections formed *Heron* in 2004. Its first product was sold exclusively via a channel partner's radio transmission network to give *Heron* access to NZ's heavy transport and off-road fleets in forestry, quarrying and road construction. This was necessary because *Avro* dominated the channel relationships with all NZ's mobile telecommunications providers. *Heron* thus mimicked *Avro*'s initial strategy of adding new value to existing technology infrastructure.

In 2007 *Heron* expanded to Australia, India, and the Middle East. Negotiating a channel contract with a large telecommunications company in India (bundling FMS and mobile data) took two and a half years and subsequently had only limited success because Indian competitors had better local connections (as resources) and could employ low-cost local software programmers to develop applications (reducing the value of *Heron*'s knowledge resources). In response, *Heron* targeted oil and gas producers in India which needed a feature-rich product and were willing to pay for quality. In the Middle East, *Heron* developed a new niche in cold-chain logistics monitoring (applying its system knowledge to a new customer application). Economic drivers underpinning the value of FMS in NZ, such as

high fuel and wage costs, were unimportant there, meaning that the value of Heron's resources changed:

“We got sucked in considerably into those (NZ niches) in hindsight, but we weren't able to replicate that... New Zealand is the easiest place to get some quick wins, but what's dangerous is trying to replicate the quick win globally and scaling it.”
(Interview, *Heron* manager, 2014)

In 2012 *Heron* focused on the electronic road user charging (eRUC) niche in NZ as an alternative to the early niche leader, *Lancaster*. Figure 1 shows how competitors, channels and customers influenced *Heron*'s development.

4.4 Lancaster – *ex-ante* niche targeting

Lancaster was founded in 2000 by a technology visionary who foresaw a need for eRUC systems because changing technology, such as electric cars, would eventually reduce government fuel tax revenue. However, *Lancaster* did not make headway until 2007 when an *ex-Avro* executive introduced a methodical approach to product development and targeting. The firm launched its first eRUC product in 2009 to minimize diesel taxes and grew rapidly in NZ's heavy transport sector. In 2014 *Lancaster* launched the first commercial electronic road tax compliance system in Oregon, USA along with operations in Australia, also focused on heavy transport. *Lancaster* co-created its tax compliance niche with other market actors, notably the US and NZ governments. Figure 1 illustrates how *Lancaster* initially identified its niche and maintained this focus as it internationalized.

4.5 Other case firms

Bulldog (niche focus in NZ; changed niche on internationalization): In 2005, *Bulldog* received such an overwhelming response from small businesses for its first product, a consumer security tracking device, that it redesigned and relaunched it as a basic FMS. Hence its initial niche was co-created by customers recognizing new value that the developers had not. Responding to continuing hardware and software commoditization at the low end of the FMS market, *Bulldog* made multiple business model changes to outsource product development and sales functions to remain the FMS cost leader until its last remaining resource of value was its installed customer base. In 2013 it refocused to act as an OEM “white label” supplier of FMS systems for other firms to brand and sell in NZ and Australia.

Comet (niche focus in NZ; exited on internationalization): After initially surviving on bespoke project work, including FMS software for a major trucking company, in 2006 a new investor concentrated all *Comet*'s product development resources on FMS for general trucking and forestry because it won a second early customer in this segment. In mid-2009, just before launching and replicating this niche in Australia, *Comet* decided to exit the FMS industry altogether because management considered FMS too competitive in NZ and could not see an available niche in the equally competitive Australian market. *Comet* subsequently applied its IP and skills to the mobile resources segment, tracking people instead of vehicles.

Dakota (niche changes in NZ, and on internationalization): Soon after founding in 2003, an early customer wanted to monitor the operating conditions of refrigerated rail freight containers. *Dakota* experimented with multiple product designs to withstand the extremely harsh environment of freight car shunting (dust, rain, ice, voltage and current spikes, rapid deceleration) to develop proprietary knowledge for its eventual specialization in refrigerated transport. In the US, *Dakota* developed an equity partnership with a multinational

refrigeration specialist that provided *Dakota* with unique source code for remote control of proprietary refrigeration units while trucks are in transit.

Eagle (little emphasis on NZ, changed niches on internationalization): *Eagle* formed in 2007 through a merger between a NZ FMS hardware firm and an Australian FMS software firm. Both firms had operated since 2001 and the NZ firm had internationalized by targeting telematics service providers primarily in Europe. In 2008, *Eagle* won a \$ 12 M hardware order with one of the largest third-party logistics corporations in the US, as well as another large project in Canada. These customers remained critical references that enabled *Eagle* to successfully bid for large enterprise projects internationally, despite its small size and NZ location. In 2013 *Eagle* pursued further international expansion as an FMS and telematics platform for large enterprise customers.

Gloster (niche changes in NZ, and on internationalization): Initially, *Gloster* focused on bespoke projects involving telemetry over Radio Frequency (RF), then in 2007 developed digital cellular technology and won early customers in local government and utilities. Specialist applications for these large, well-resourced customers continued as the firm's primary niches, although discovered by accident. *Gloster* focused on one-off major projects in Australia in public transport and energy utilities.

Javelin (niche focus in NZ; failed niche replication on internationalization): *Javelin*'s founder built a simple tracking device in 2005, then searched for opportunities for the product. He found a niche in vehicle finance through a distribution partner but an attempt to internationalize to the US by replicating this niche was unsuccessful. Sales plateaued after seven years, and *Javelin* built "white-label" consumer-oriented applications from its core technology that it sold as an OEM to suppliers in finance, insurance, agriculture, and recreational vehicles.

4.6 Cross case analysis

Three key themes can be identified in the niche strategies of the nine internationalizing SMEs over time. First, all firms grew in niches in some form. In the early stages of the industry, prior to 2007, firms like *Avro* and *Heron* created horizontal niches based on hardware technology but, as the industry matured, firms specialized into vertical niches. Second, most firms did not *ex-ante* identify a single niche early in their development and then continue to pursue that target. Only *Lancaster* appears to have identified an opportunity then continued to deliberately build a product, succeed in that target niche, and internationalize in the same niche. Most firms kept changing niche in response to market actors, then later made sense of where they had created value:

“What has happened with us, and most telematics companies, is we've dabbled in everything. We think ‘Okay, we know we've done that, we've been there, solved that’. Then you pull back and say, ‘let's fine tune only this one vertical.’” (Interview, *Heron* manager, 2014)

Third, when firms internationalized, most did not follow the replication logic of targeting the same niches (Cannone & Ughetto, 2014). Although pioneer *Avro* replicated niches as it internationalized in the emerging and growth stages of the industry, those SMEs that internationalized later, *relative to the FMS industry evolution*, were often forced to change niche.

“Markets are different. You can't transpose one way of doing business and say, ‘OK, it works here, let's go to Australia - it will work there’, because it doesn't quite equate that way. People have different drivers for how they go about business.” (Interview, *Fairey* manager, 2014)

As shown in Table 4, only two case firms, *Eagle* and *Lancaster*, appeared to independently identify their initial niche *ex-ante*. While all firms actively created firm resources and identified opportunities for their products and services, three categories of market actor heavily influenced the initial niches that most firms entered: customers that firms gained early in their development, key partners such as sales channels or shareholders, and competitors. By co-developing products and sharing application knowledge, early customers co-created niches with *Bulldog*, *Comet*, *Dakota* and *Gloster*. *Javelin*'s distribution partner (subsequently a shareholder) co-created its niche in subprime-financed vehicle tracking. Competitors influenced initial niche selection by *Avro* and *Heron*: *Avro* mimicked a competitor in the UK and entered that firm's markets to compete directly by adding value to the new GPRS infrastructure, while *Heron* avoided direct competition with *Avro* by adding value to the existing RF infrastructure.

Table 4: Actors involved in initial niches (linked resources in brackets)

Initial niche influenced by early customers won	Initial niche influenced by channels or shareholders	Initial niche influenced by competitor position	Initial niche primarily determined by firm
<p><i>Dakota</i> developed expertise in refrigeration based on initial customer in railways (application knowledge)</p> <p><i>Gloster</i> developed bespoke applications and then sold these to similar customers (application knowledge)</p> <p><i>Bulldog</i> adapted consumer product to FMS based on sales response to launch (application knowledge)</p> <p><i>Comet</i> developed bespoke applications and then sold these to similar customers (application</p>	<p><i>Javelin</i> focused on car finance applications to support finance company partner (customer access)</p>	<p>At launch, <i>Avro</i> deliberately targeted main competitor <i>Meteor</i>'s UK home market to challenge and learn (technology infrastructure; application knowledge)</p> <p><i>Heron</i> developed radio-based system because <i>Avro</i> already dominated cellular transmission niche in NZ (technology infrastructure)</p>	<p><i>Eagle</i> identified an opportunity to sell FMS hardware as an OEM in Europe (unclear)</p> <p><i>Lancaster</i> founded to pursue global applications of electronic road charging systems (technology vision)</p>

knowledge)			
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These three categories of actor (see Table 5) were heavily involved in case firms' subsequent changes in niche, with firms making multiple adjustments when the value of resources changed as the industry evolved. *Eagle* exited the OEM hardware niche in Europe because it was unable to compete with better resourced European suppliers. *Avro*, *Gloster* and *Heron* recognized in hindsight which vertical markets had greater customer success then optimized their product to suit these customer applications. New shareholders with proprietary knowledge or relationships provided the necessary resources for *Avro* and *Dakota* to co-create new niches in other countries. Competitors directly motivated changes for several firms. *Comet* exited the industry after determining that competitors controlled the resources critical for success. *Heron* moved into oil and gas to avoid low-cost competitors in India and invested in eRUC in NZ because *Lancaster* threatened its existing position in heavy transport. *Bulldog*, constrained by low-price competitors, lacked funds to develop differentiated products and was forced into an OEM strategy in Australia because competitors like *Avro* controlled all the potential sales channels, while *Javelin* was forced into a similar niche. While *Eagle* rebuilt its technology platform, it observed and mimicked the strategies of a competitor while avoiding the same niches.

Lancaster was the only firm to continue in the same niche, including when it internationalized to the US. Although other market actors co-created the eRUC niche with *Lancaster*, by the time it internationalized, FMS technology had become so specialized that *Lancaster* could not reapply its resource of tax collection knowledge to another niche. In other words, it was relatively locked in by its prior resource investment choices and the actions of competitors limiting *Lancaster's* options in the mature industry.

Table 5: Actors involved in niche changes (linked resources in brackets)

Niche change influenced by early customers won	Niche change influenced by channels or shareholders	Niche change influenced by competitor position	Niche change primarily determined by firm
<p><i>Avro</i> analysed success by customer application to determine where to focus resources for expansion in other foreign markets (application knowledge into new geographies)</p> <p><i>Dakota</i> used experience developing robust hardware for railway cars to expand into refrigeration (application knowledge)</p> <p>Applications for initial customers allowed <i>Gloster</i> to expand into other applications for local government and utilities in NZ and Australia (customer industry knowledge)</p> <p><i>Gloster</i> expanded into public transport after winning one major project in Australia (application knowledge)</p> <p><i>Heron</i> switched into cold-chain monitoring applications based on sales to Middle-East customers (change in knowledge value).</p>	<p><i>Avro</i>'s initial international expansion was determined by GPRS availability in different countries (technology infrastructure)</p> <p><i>Avro</i> entered mining and construction verticals globally because parent company divisions provided customer access and references (customer access)</p> <p>After <i>Eagle</i> merged with Australian software firm, it focused on Australian niches where new partner had already been successful (customer industry knowledge)</p> <p><i>Dakota</i> narrowed focus to truck refrigeration after accessing unique software from a sales partner in the US (proprietary knowledge)</p> <p><i>Heron</i> targeted transport in Australia because this was the channel partner's expertise (industry knowledge)</p>	<p><i>Avro</i> reduced its commitment to the small fleet "van" niche due to pricing pressures from foreign "no-brand" integrators (knowledge value change)</p> <p><i>Heron</i> exited small fleet "van" niche in India due to pricing pressures from Indian "no-brand" integrators (knowledge value change) and instead targeted the quality-sensitive oil and gas in India (application knowledge)</p> <p><i>Heron</i> entered eRUC niche in NZ to maintain market share against <i>Lancaster</i> (customer access)</p> <p><i>Comet</i> exited FMS industry due to strength of competitors in NZ and Australia (knowledge value change)</p> <p><i>Bulldog</i> exited small fleet "van" niche and focused on generic OEM platform niche because of strength of competitors in NZ and Australia (knowledge value change)</p> <p><i>Eagle</i> mimicked elements of key competitor.</p> <p><i>Nimrod</i>'s strategy to target large corporate customers globally (knowledge value change)</p> <p><i>Javelin</i> ceased development of own brand products and focused on generic OEM</p>	<p>(<i>Lancaster</i> made no changes)</p>

		niche because of strength of competitors in NZ (knowledge value change)	
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The next section returns to the concepts of market co-creation to revisit what a niche is and explain how niches are co-created by market actors.

5 Discussion

Competing in niches is fundamental to internationalizing SMEs’ B2B marketing strategy and is evident in the FMS industry population studied. This paper asked how internationalizing SMEs come to compete in the niches they do and how these niches change over time. In addressing these questions, we also reconsidered what a niche is. The NZ FMS industry shows that early customers, sales channels and shareholders co-create niches with SMEs, so SMEs come to compete in the niches they do as a consequence of the resources contributed by various market actors to create new value in shared arrangements (Nenonen et al., 2019; Storbacka & Nenonen, 2011a). Niches change over time as market actors enable or restrict access to resources, or as the value of these resources changes. Accordingly, niches are an evolving resource domain recognized *post hoc* as a consequence of competing. We explicate this definition of niches first, before examining the implications of niche co-creation on SME marketing in B2B contexts.

5.1 Niches are dynamic, co-created resource domains

Traditional marketing perspectives present markets as devices for exchanging products and services for money (Vargo & Lusch, 2011), and niches as market subsections defined by existing customers and the absence of competitors. In contrast, market co-creation perspectives present markets as socially constructed by multiple, interdependent market actors over time (Chandra & Wilkinson, 2017; Humphreys, 2010; Saarija, 2012; Wieland et al., 2017) through mutual production of something valuable by combining resources in new ways (Vargo, 2020). Markets are co-created as the means to access, create, combine, and exchange resources (Nenonen et al., 2019). From this perspective, the traditional definition of niches as gaps in existing markets no longer makes sense.

Instead, niches represent spaces where market actors co-create specialized value through new combinations of resources. That is, resources and their new value define the niche, rather than the actors who own or control resources. We therefore identify niches as a resource “domain”, to highlight the resources’ bounded nature within a larger space as well as to connote a sphere of knowledge or activity. These domains are co-created by market actors who contribute resources to deliver something of value that had not previously existed. For example, by working with a local customer in the Middle East, *Heron* co-created a system for cold chain monitoring that adapted its knowledge of NZ transport applications.

Actors that control access to specific resources needed for co-creation (and thus can withhold resources from other actors) may influence firms to co-create in another resource domain. *Avro*’s prominence with NZ digital telecommunications network providers encouraged *Heron* to co-develop systems with a RF network provider.

Niches are dynamic because the resources within them, and their value, change as the industry evolves. *Avro*’s customers encouraged the firm to continually adapt its original

infrastructure-oriented platform to become more optimized for operating fleets of small trucks and vans in urban conditions until that became *Avro*'s vertical niche. As actors combine resources, some are consumed, meaning the market cannot go back to where it was, and scarce resources may become more valuable. Further, as highlighted by the FMS industry, many critical resources are based on knowledge; once this knowledge becomes public, it cannot become private again. This means niche co-creation processes are also path dependent (Vergne & Durand, 2011), consistent with evolutionary theories of industry development that predict that as markets grow and become more legitimate, more resources, customers and suppliers enter the market in a self-reinforcing process (Hannan & Freeman, 1977; Klepper, 1997; McKendrick, 2001). The options available to co-create niches depend on the prior actions of a firm in developing its own resource base as well as the actions of other market actors. *Lancaster*'s options for applying its knowledge resources and finding partners were constrained by the time it became active nine years after establishment.

In summary, we have returned to the ecological conception of niches as the resources needed for an organization to survive. Accordingly, we define niches as dynamic, co-created resources domains where market actors create specialized value.

5.2 Niche co-creation by market actors

We identified early customers won, channel partners, shareholders, and competitors as critical market actors that variously co-created the FMS niches, and changed the niches over time. In the emerging stage of the industry, fleet management was a relatively innovative concept, so the first customers were those willing to risk investing in new technology for their own competitive advantage (Moore, 1991). Customers committed to particular FMS hardware and software technologies for several years – a relatively long time in the

development of a start-up firm - so when firms gained such a customer, this limited resource was withdrawn from competitors. Further, winning early customers gave SMEs access to further resources in the form of ongoing revenue, customer industry and application knowledge as well as legitimacy (Aldrich & Fiol, 1994) that allowed them to sell more easily to similar customers. Early customers are a double-edged sword, however; although providing access to valuable new resources, they may also consume the SME's meager internal resources on bespoke product developments and bargain the price down to reflect their risk. This has a path-dependent effect of limiting the SME's options to explore co-creation in other resource domains.

Sales channels and shareholder partners co-created new niches with FMS SMEs by providing access to new resources. Only a limited number of partner organizations exist with the relevant knowledge and willingness to invest in a new technology such as FMS. Similarly, only a limited number of distributors and resellers in any geography were capable of selling and supporting FMS technology. These actors provided similar resources for FMS niche co-creation (see Tables 4 and 5) such as customer access, specialized knowledge, or infrastructure.

Competitors indirectly co-created niches by constraining access to resources. Salient competitors' control of key resources motivated *Avro* and *Heron* to co-create new niches. *Comet's* managers determined that competitors controlled all important resources and exited the industry entirely. Competitors' actions were most evident in niche changes; because firms learn through competitive activity, decisions to exit niches may be based on greater information (Terlaak & Gong, 2008) and be more deliberate than decisions to pursue new, uncertain opportunities (Sarasvathy, Kumar, York, & Bhagavatula, 2014). Firms made sense of which niche they were in after gaining competitive experience, so niche targeting could be

more accurately described as a firm's commitment to remain in a particular resource domain, made in hindsight after initial competitive success.

5.3 Industry evolution changes niche options

Although the industry pioneer *Avro* internationalized by targeting similar niches in other countries, firms that internationalized later, *relative to the industry evolution*, found that the resources required for co-creation in their domestic niches were inaccessible (or controlled by competitors) in international markets or that customer needs (the value of those resources) were different.

As an industry pioneer, *Avro* had a range of alternative partners available for new niche co-creation, meaning it could target similar niches in other countries because this option was still available. As it grew and consumed resources useful for niche co-creation, such as signing up major channel partners in the growing industry, *Avro* influenced the co-creation of competitors' niches. Thus *Heron*, entering the domestic market later in the growth period of the industry, had its options constrained by *Avro* and needed to create new niches in response. When *Heron* internationalized, it discovered that its domestic niches did not exist or had already been taken in other countries. *Lancaster*, entering the industry almost at the point of consolidation, had to be far more analytical and focused, but this was possible because the market and the supporting service ecosystem had reached a level of maturity and stability that data were available to do this. This latecomer firm was also responding to competitive actors, who by that stage had captured the key resources and institutionally defined the market and its rules (Vargo, Akaka, & Wieland, 2020). Latecomer firms have fewer options because co-creation is path dependent (Vergne & Durand, 2011) and they may be forced into less attractive niches containing scarcer or lower quality resources (Carroll & Hannan, 1989).

Internationalizing SMEs may therefore have to change niche when entering new countries, rather than replicating their domestic niches, because the resources they need may already be controlled by competitors in the new country, or their own resources may have different values in the new country.

5.4 Contributions to B2B marketing theory and practice

This paper contributes to marketing theory by showing why traditional concepts of *ex-ante* niche targeting still prevalent in the B2B marketing strategy and SME internationalization literatures are unworkable when markets are understood as co-created and evolving. The paper redefines market niches as dynamic, co-created resource domains where market actors create specialized value, and further contributes by reconceptualizing niche targeting from a market co-creation perspective. Secondly, the paper explains that niches are dynamic and path dependent because actors change the available resources and their value over time. Going beyond the abstraction of “market actors”, we highlight early customers won, sales channels, shareholders, and competitors as particularly important for B2B SMEs. Lastly, we show that B2B SMEs co-create new niches as they internationalize in response to new values in new contexts (Wieland et al., 2017).

The paper has two important implications for practice. First, it challenges academic and consultant advice to SMEs to carefully analyze prospective niches prior to entry. SMEs co-create value with other actors so the niche potential cannot be determined *ex-ante*. Despite their resource limitations, SMEs should pursue multiple opportunities and work with partners to further their value, while expecting these partnerships to keep changing. In other words, niche focus may be counterproductive to co-creation, especially in the early stages of industry

evolution. To facilitate co-creation, marketers should conceptualize their niches in resource terms, rather than by customers or products, to better recognize specialized value.

Second, SMEs must develop a realistic perspective of the evolutionary stage of their industry because this affects the appropriate strategies to capture the resources needed for co-creation in international niches (Akaka et al., 2013; Odlin, 2019). Firms can track the number of firms entering and exiting the industry, particularly other SMEs, as an indicator of growth and consolidation. Although industry boundaries are ambiguous and tracking multiple competitors is expensive, taking a broader perspective of current and potential competitors pays off (Downing, Kang, & Markman, 2019). Early entrants in emerging and growing industries should prioritize capturing critical resources, such as sales channels.

6 Limitations and future research

The research focus on a single country and industry may obscure other actors and processes in niche co-creation. Also, retrospective interview data limits the detail that may be drawn about the processes involved in niche co-creation. Retrospective reports potentially contain inaccurate or biased data because respondents are motivated to present themselves in a positive light or because of imperfect recall and hindsight bias (Huber & Power, 1985; Podsakoff & Organ, 1986). To minimize this, a number of strategies recommended by Huber and Power (1985) were applied: attempting to interview the person most knowledgeable about the issue of interest such as the entrepreneur founder or senior management, encouraging factual information within the questions, encouraging accurate responses by stressing the research's contribution to NZ's export sector, probing answers and challenging those that appeared inconsistent with what was known to the researchers through other sources.

Opportunities for future research to better understand the intersection of market co-creation and niche marketing include: How can existing marketing techniques be reconciled with the perspective of niches as resource domains? What tools could help marketing managers to recognize, conceptualize and communicate potential niches as resource domains? How do managers define the value of resources under their control and put working boundaries on their niches? How do managers balance internal resource demands to explore co-creation in potential niches, and is sequential or parallel exploration more effective? Integrating market shaping concepts (Harrison & Kjellberg, 2010; Kindström et al., 2018; Nenonen et al., 2020), can SMEs with limited resources actively shape niches? What do SMEs need to know about resources, values, and market actors prior to entering international niches?

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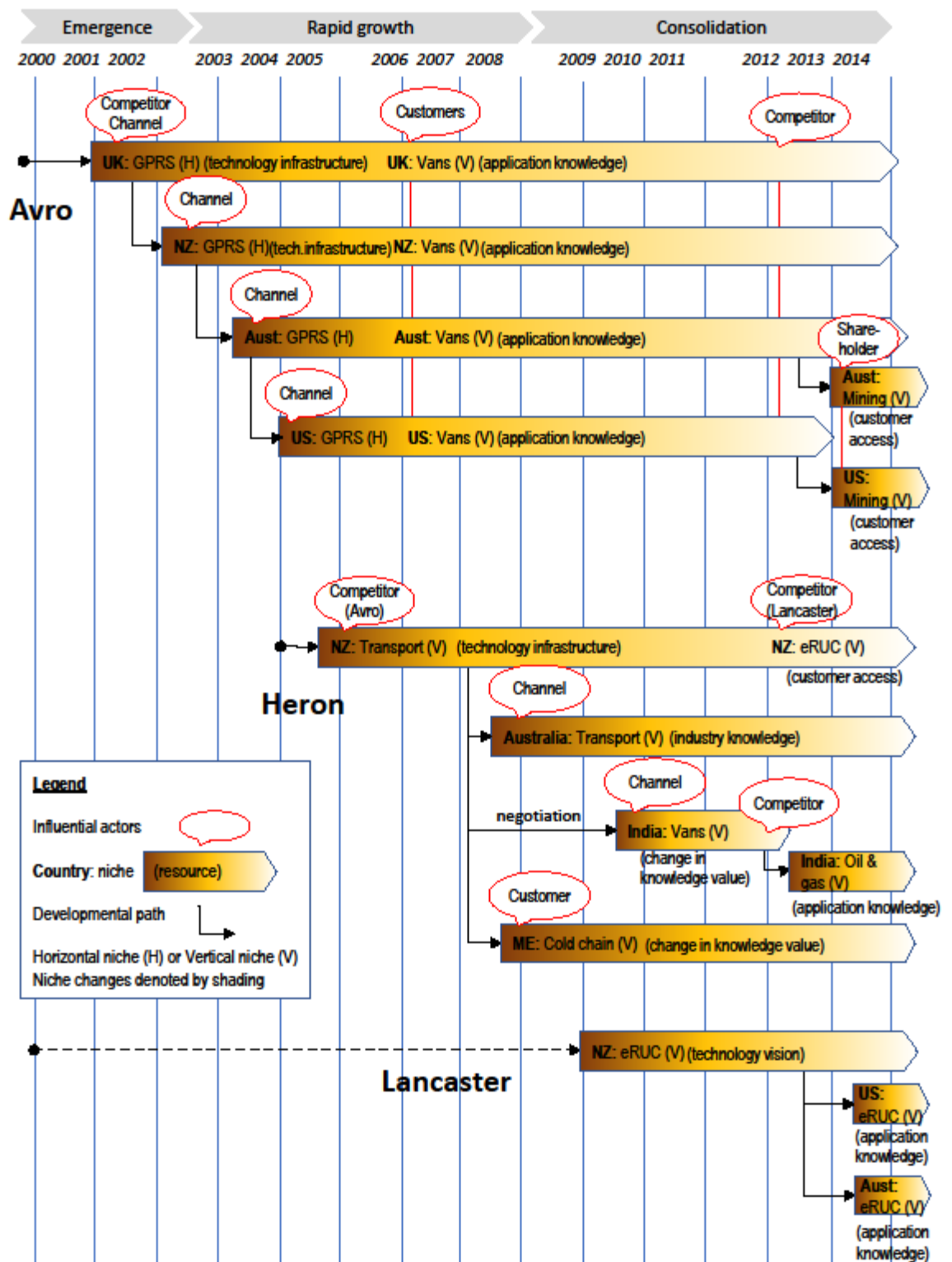


Figure 1: Niche changes of *Avro*, *Heron* and *Lancaster*