

Market validation in the context of new high-tech ventures

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Abstract

Experienced mentors report a frustrating inability among first time high-tech entrepreneurs to connect technologies to customers in new ventures, suggesting that a practical approach to establishing market feasibility or validate markets is lacking. We present the results of an initial exploratory study, based on a convergent interviewing process. We found the market validation process held similarities to experiential learning processes, and to notions of value co-creation and experiential marketing. We present these initial findings, including a conceptual framework of the market validation process, a construct definition, and suggestions for future research. The study provides the foundation for further investigation into the theoretical and practical implications of effective market validation in the context of high-tech new ventures.

Introduction

Recently, two executives in residence at a major New Zealand research university's technology and business incubator reported a frustrating inability among their entrepreneurs to undertake the market feasibility or validation process systematically. The executives were new to the incubator and were surprised that very few, if any, of these ventures had a market validation process in place. This resulted in some ventures remaining in the incubator for much longer than useful or desirable. Under their guidance, the incubator instituted a fail-early/fail-fast strategy – in which each venture had a 90-day limit for validating (in some general way) the market potential for a new venture. The entrepreneurs were thereby forced to very quickly focus on markets and customers and to validate their value proposition and business model through some form of market sensing. Very few of the budding entrepreneurs knew how to undertake such a process – rather, they focused on the new ventures' technologies and on building their businesses' infrastructure. Inability to connect technologies and customers is typical in new high tech ventures (see for example Schindehutte, Morris, and Kocak 2008; ICEHOUSE 2009). “How,” asked these experienced business mentors, “could the business school help entrepreneurs develop marketing capabilities that would allow them to understand if their venture may be or could be feasible?”

The rapid creation of a new product market space where the firm has some form of positional advantage is critical to those seeking to exploit technology to create or shape markets (see for example Berthon, Hulbert, and Pitt 1999; Jaworski, Kohli, and Sahay 2000; Kumar, Scheer, and Kotler 2000). In addition, recent work by Darroch and Miles (forthcoming) found that for firms that create new markets, financial performance is dependent both upon superior R&D and superior marketing capabilities. In new high tech firms, these entrepreneurial initiatives that create new value propositions and new markets are their strategic and economic *raison d'être*.

New high-tech ventures, therefore, should be driven to ensure that their new disruptive or radical innovations are market validated. Indeed, in conversations with venture capitalists, business angels, corporate venture capitalists, and entrepreneurs, we found that market validation is a critical antecedent to commercial success. In new ventures, market validation describes a process that ultimately determines if venture survival is feasible.

Oddly, while the academic research suggests that marketing is a critical function of venture success (see for example Kuratko and Hodgetts 2007); there is a paucity of research in the area of market validation. Adams (2002) presents market validation as a systematic process of estimating demand and potential cash flows of a proposed new market offering. The value proposition is developed in close consultation with the customer to determine market acceptance, to estimate demand, to refine product or service attributes, and to assess the product's value to both the customer and the business (see for example Price and Meyers 2006). While this step-wise approach reduces risk for established offerings, it is less useful for more radical or disruptive innovations developed by new high-tech ventures, owing to high levels of market and technology ambiguity. We argue there is a need for a richer understanding of the market validation process, both for entrepreneurs (as a mechanism to minimize the probability of commercial failure), and for researchers (defining market validation to guide future research).

Purpose

The purpose of this manuscript is to better define the market validation process in the context of new high-tech ventures. In addition, the manuscript offers a definition (Hunt 2010: 60) of market validation that:

“(1) include(s) all phenomena that should be ‘taken in,’ (2) exclude(s) all phenomena that should be left out, (3) differentiate the definiendum from other (often closely related) terms, (4) clearly define(s) the term, (5) communicate(s) well the term’s meaning to its intended audience, (6) be consistent with the meanings of other important terms, and (7) be no longer than necessary to accomplish criteria 1-6.”

New ventures by definition do not have a past history in the market as a firm, and often their product is a disruptive radical innovation (as in this case) that has no sales history as a product category.

Methodology

Market validation is a complex, process-based phenomenon, and in technology based ventures, typically more complex. Consistent with Norman, Palich, Livingstone, and Carini’s (2004) ‘paradoxical logic,’ processes are characterised by complexity, multi-dimensionality, ambiguity, context-specificity, longitudinally and subjectivity (Bonoma 1985; Mintzberg and Lampel 1999; Gummesson 2001). Accordingly, we adapted a convergent interviewing approach (Simons and Thompson 1998; Rao and Perry 2003), allowing for issues of access to case sites and busy senior managers, and drawing on the expertise of the research team. The convergent interviewing approach allows knowledgeable interviewees space and flexibility to explore and expand on phenomena (Nair and Riege 1995; Rao and Perry 2003). It also enables knowledgeable researchers the flexibility to apply their own academic capabilities to the research problem. This approach however provides both advantages and disadvantages. While it would clearly not be appropriate in confirmatory research, it is very useful in the preliminary stages of multi-stage studies (such as the present study) to build a

foundation of the phenomena of interest (Gummesson 2002). We used industry and academic research participants, and previous studies to provide the foundation for the next stage of research). With this in mind, our research team is diverse, consisting of four members with interests in entrepreneurship, marketing strategy, strategic management, the role of IT in marketing, marketing practice, and innovation.

In the initial stage of the convergent interviewing process, one member of the team engaged in extensive dialogue with senior managers in a large agribusiness (the market) and the small high-tech new venture manufacturer over four months . The executives were the CEO of a new high-tech venture (Beta¹) and the senior manager of a division of a large multi-national agribusiness (Alpha²). The initial conversations were held in 2009, and typically lasted one hour. The research team then embarked on a process of sense-making, holding further conversations with expert informants including business incubator mentors and other members of the university's entrepreneurial ecosystem. In this way, knowledge has been developed iteratively, resulting in construct definition, and a conceptual framework describing the market validation process in this context. We proceed by presenting the current state of our understanding – which forms the point of departure for the next stage of the research.

Findings

One finding that emerged from this study is a more complete understanding of market validation developed by the university's high-tech new venture incubator. This market validation process attempts to assess the market feasibility of new high-tech ventures that are based around radical and disruptive innovations. It does so by addressing five major questions. These five questions that define the market validation process include: (1) “what problem do I solve”- in the discussion with Alpha's executives, there were mounting financial pressures to minimize logistics costs, - creating a “pain-point” for the executives who felt that these costs control issues MUST be solved; (2) “who has this problem”- in this case, Alpha, and other firms who like Alpha use similar materials handling processes and are experiencing financial constraints; (3) what is the “draft value proposition,” and what business model will allow Beta to appropriate the financial value of innovation while simultaneously creating value for the customer Alpha; (4) “proposition validation” through co-creation of the product with the customers “driven-by-pain” explicitly and highly involved; and (5) making the “go/no go decision” (see ICEHOUSE 2009).

¹ Disguised name

² Disguised name

FIGURE 1 A model of market validation for new high-tech ventures: The case of Beta

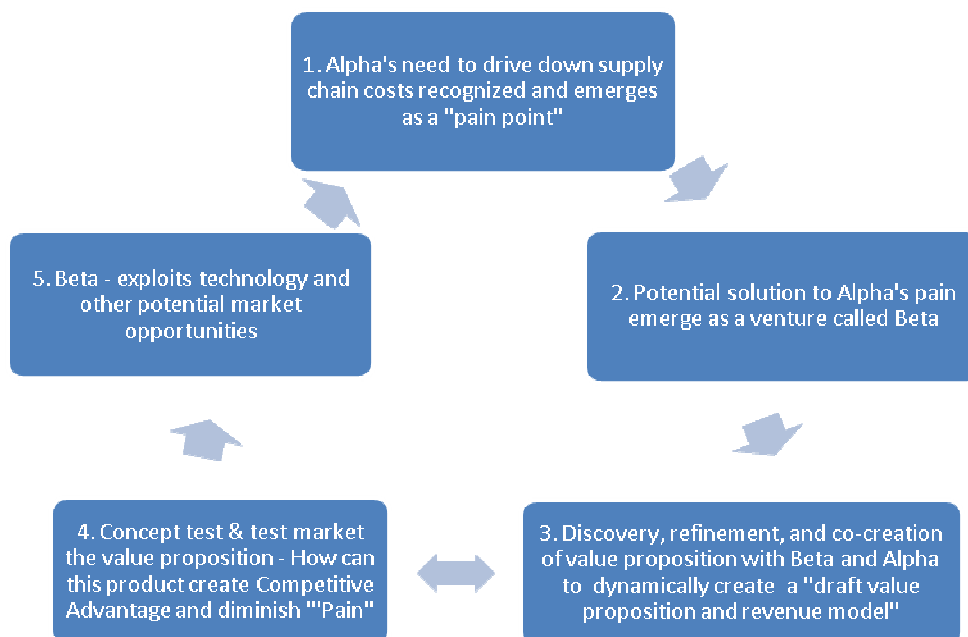


Figure 1 illustrates our findings of an iconic model of market validation in one new high-tech venture (see Hunt 2010 for a discussion on models in marketing). While much of this model is sequential there is an iterative process between steps 3 and 4.

We found high levels of ambiguity in the market validation process. Some of this ambiguity appears to be contextual. For example, in new high-tech ventures creating disruptive innovations, market validation emerges out of interactions and exchanges between the venture and its lead customer(s). Market validation is not a static test in which the new high-tech venture simply assesses secondary research and conducts web-based surveys to determine the market acceptance of a product, but a dynamic and iterative process in which the potential market is explored, lead technology customer prospects are identified, and long-term exchange relationships are developed to co-create an offering that meets the market's explicit and latent needs and overcomes specific customers' "pain points". This highly iterative process is most successful when the new high-tech venture is able to find lead customer prospects that have problems that are congruent with the venture's core technology and capabilities.

Market validation in high-tech markets is a dynamic and interactive **process** of integrating the venture's core technology and capabilities with the latent and explicit needs of the customer; with the goals of (1) resolving the customer's "pain-point," (2) **creating** a superior value proposition for the customer, and (3) generating economic rent.

Relevance of Findings for Practice and Scholarship

We found in discussions with the business incubator mentors that new entrepreneurs tend to not understand what ‘market validation’ entails or how to undertake the market validation process usefully, i.e. to the point where market risk is minimized for the investors. Current marketing theory was not seen to be helpful viewed in this regard, as it focuses on large scale ventures in established markets with established technologies. We hope that this study can contribute to a better understanding for entrepreneurs in the context of high-tech new ventures, through both developing an initial model of the market validation process and initial definition of market validation. We also contribute to theory by exploring the nature and role of the market validation process, which lies at the interface of the marketing and entrepreneurship domains.

These findings are exploratory and have limited generalisability due to the limited sampling design, however are generalisable to theory. Future research will be both qualitative and quantitative in nature, the former providing more in-depth understanding and a more detailed model of the market validation process, and the latter testing that model across different product-market contexts. Our focus will be on the exchange relationships between the high-tech venture and the lead customers, and the process of value creation for both through the market validation process.

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