Interactive Networks as Competitive Strategy for Small High-Tech Enterprises

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Abstract
The landscape of the Information Communication Technology (ICT) industry, as a national priority sector for Ireland, is mostly populated by small to medium enterprises (SMEs). Since most companies fail to produce major innovations (Enterprise Strategy Report, 2004), relationships and networks are often rendered as means of bringing the product or service to the market. While literature abounds in the field of relationship marketing, very little has been documented in the context of the Irish high-technology sector. In addition, there is profound lack of insight into how exactly those relationships and networks help smaller technology firms with less market power to carve out a competitive advantage. The paper roots the research in the realm of relationship marketing and indicates its relevance to SMEs. Ethnography as a research methodology was used for studying contemporary marketing practice in the high-tech enterprise. Empirical findings show that deep relationships and networks are a source of competitive advantage, because they reduce uncertainty and enable effective market research. Good relationships allow easier access to the market network, facilitate the formation of a value proposition and act as a communication vehicle. Preliminary findings show marketing to be formulated uniquely and individually through interactive relationships. Individual organizational members have a strong input to the formulation and practice of marketing. In addition, marketing is found to be subject to trial and error as well as constant changes depending on the amalgamation of deliberate strategies (Mintzberg, 1985) with reality. It is concluded that this research provides an empirical contribution to the study of relationships and networks as means of gaining competitive leverage for small technology companies operating a business to business environment.
1. Introduction

The ICT sector generates 53 billion Euro revenue and employs 83,000 people in Ireland (ictireland.ie) and is a national priority sector. It is suggested that in this industry, it is entrepreneurship and management of business and not the technology that determines success or failure (Cusumano, 2004). It is apparent that relationships are assets or values that can be leveraged for productivity and returns for growth, profitability and share value (Philipps, 2006). They also facilitate trust, long-term commitment and lower risk (Morgan and Hunt, 1994) if built on context-specific and extensive communication, trust, interaction and commitment (Harwood and Garry, 2006). While relationships and relationship marketing has generated much interest and has been richly documented over the last two decades, there has been little in-depth research in the context of the Irish technology sector. In addition, there has been comparatively little research that explores competitive advantage in small firms compared to studies on competitive advantage in larger companies. This research aims to explore dimensions of competitive advantage beyond the notion of innovation, product/market scope or pricing (Chandler and Hanks, 1994; Day and Nedungadi, 1994; Hooley et al, 1995, Katsikeas, 1994; Roth and Morrison, 1992). Empirical evidence is provided to support networking and relationships as positional competitive advantages allowing small high-tech enterprises to market their offerings and grow.

The proposed paper gives empirical support to Hunt and Arnett’s (2006) theory that relationships are imperative to provide the organization with a competitive advantage. While it is recognized that relationships constitute resources, there is a lack of understanding how exactly those relationships are contributing to the firm’s ability to produce market offerings that have value for their market. The paper will put forward empirical evidence to the question how high-tech SMEs utilize deep and interactive relationships to carve out a competitive advantage. The next section provides insight into the paradigm, on which the foundations of the research are built on.

2. Rooting Research in Relationship Marketing Paradigm

It has long been recognized that the foundations of the traditional marketing approach including the marketing mix (Borden, 1984), customer-orientation (Levitt, 1960), marketing analysis, planning, implementation and control (Kotler and Keller, 2006) and market segmentation (Dibb et al, 2006) are not comprehensive and conclusive enough to understand and explain contemporary marketing practices. Ever increasing heterogeneity of the customers as well as the saturation and maturity of markets are just some reasons why relationship marketing is the dominant paradigm today. Relationship marketing means to “establish, maintain and enhance relationships with customers and other partners, at a profit, so that the objectives of parties involved are met…by a mutual exchange and fulfillment of promises” (Groenroos, 1997, p.327). Hunt and Arnett (2006) propose that relationship marketing is the source of competitive advantage, financial performance, satisfaction, learning, propensity to stay, acquiescence and decreased uncertainty.

Philipps (2006) states that stakeholder relationships are assets, because relationships create wealth, therefore there must be a value attached to the relationships. He suggests that the relationship value can be leveraged by identifying the nature of the relationship and then identifying the tangible as well as intangible assets that are being deployed. This way, the organization can map the relationships with the stakeholders and analyze their productivity and returns for growth, profitability and share value.

Zontanos and Anderson (2004) mention that relationship marketing provides a better fit to the environment, behavior and processes found in small entrepreneurial enterprises. This view is shared by Harwood and Gary (2006), stating that even though research on relationship marketing is conducted in larger companies, there are considerably more small and medium enterprises (SME) for which relationship marketing is crucial.

The next section articulates the research methodology employed to investigate the dynamics behind the question how ‘high-tech SMEs utilize deep and interactive relationships to gain competitive leverage’.

3. Empirical Research Design

Ethnography as qualitative interpretive research methodology was chosen, because it highlights the way culture simultaneously constructs and is formulated by people’s behaviors and experiences (Arnould and Wallendorf, 1994). This means that the observed group not only formulates, but is part of deep and interactive relationships with their stakeholders. Through the means of participant observation the author was able to
immerse herself into the research settings of an Irish high-tech SME, observing and learning their local vernacular as well as ‘seeing the world through their eyes’ (Elliot and Elliot, 2003).

The researcher attempted to generate deep insight into the marketing practices of an Irish high-tech SME through a period of forty weeks participant observation. Working as a marketing executive, data was collected from observations, formal and informal interviews and other discussions with informants (Prus, 1987). Organizational material gathered include e-mails, market research reports, sales proposals, boardroom and sales presentations, sales forecasts, business plans, client databases and press releases. Eventually this type of research allowed the researcher, as an outsider, to be accepted into the structures, processes and culture of the organization. It also allowed her to gain deep insights and perspectives into the meaning of relationships to the organization through sustained involvement (Schouten and McAlexander, 1995).

Self-reflexivity, developing perspectives and building an identity assisted the researcher in understanding and processing organizational values, rules, norms, dominant practices, language and symbols, consensual authority and understanding as well as other rules (Prus, 1996). This process of performing within the organization, influencing others, making commitments and becoming involved, dis-involved and re-involved, actually leads to an experience of relationship formation according to Prus (1996).

Ethnography enabled the study of formation, structure and maintenance of intraorganizational relationships between the researcher and the organization, within the members of the organization themselves and the organization with its stakeholders. However, this research method also assisted the researcher to understanding and make sense of the relationship phenomenon in general. Embedded deep in organizational as well as national culture, social behavior according to Geertz (1973) should be capture in a ‘thick description’ by the ethnographers to understand the “multiplicity of complex conceptual structures, many of them superimposed upon or knotted into one another, which are at once strange, irregular and inexplicit and which he [the researcher] must contrive somehow first to grasp and then to render” (p.10). The researcher aimed to capture the essence and make sense of the role of relationships within this high-tech organization. The next section presents preliminary findings that facilitate an understanding into how the high-tech SME use relationships to gain competitive leverage.

4. Deep Relationships as Source of Competitive Advantage

The data analysis of the fieldnotes, observations, ethnographic interviews, organizational materials and collaterals gave way to the preliminary empirical findings outlined in the following sections. Those include that networking and relationships are not only permeating, but are the core of the existence of this high-tech SME. Building, maintaining and enhancing interactive relationships with stakeholders like suppliers, partners and customers, enable this high-tech SME to compete in an industry that is marked by rapid pace of change, volatile product-life cycles, high competition, issues of backwards compatibility, need for R&D investments and customer perceptions of the cost/benefit of the new technology (Mohr, 2001).

4.1. Relationships to Reduce Uncertainty

The company networks and builds relationships with stakeholders to reduce the market uncertainty, technological uncertainty and competitive volatility inherent in the high-tech environment (Moriarty and Kosnik, 1989). Preliminary evidence show that more traditional established strategic business units within the researched enterprise have higher competitive volatility as they often operate in established and mature markets. On the other hand, innovation-based newer strategic business units have higher technological and market volatility as a result of operating in emerging markets. Those divisions have yet to establish concrete a fit between the technological propositions and a target markets. For example an intense networking effort with the Irish government transportation body ‘Dublin Transport Office’ was conducted to establish the viability between the enterprises transport-related innovation and Ireland as target market. The utilization of relationship and networks clarified the lack of suitability of Ireland as target market and exposed attitudes and opinions that would have adversely impacted on marketing the technology innovation in the home market. In effect, a reducing of uncertainty was achieved.

Data analysis reveals interactive relationships to be aiding the company’s understanding of buyer behavior including the customer’s plans, intentions and decision-making process as well as predicting how innovations
are adopted by the market. Evidence shows that the SME has dynamic and collaborating relationships with potential and existing customers. Those reduce uncertainty by ensuring a fit between the customer value creation process (Vargo and Lusch, 2004) and the organizational value proposition. Networking and relationships therefore help targeting their proposition as well as allowing for more accurate plans and forecasts. More insight and certainty into the workings and requirements of the market means the better chances of the high-tech company to carve out a competitive advantage grow and scale.

Constant contact with stakeholders like customers, suppliers and partners helps the technology company to reduce information impactedness (Williamson, 1979) and therefore redundancy. The constant information exchange between members as well as between members and external stakeholders closes holes in the network (Burt, 2000) and enables insight into what the customers want. This is essence carves out a competitive advantage for the high-tech SME.

4.2. Relationships to Research Market

The technology company uses their network of relationships to research the market, establish a learning curve and spot opportunities to deliver value. In a quest to find a market for a transport-related innovation, the high-tech SME engaged with government agencies like the Irish Department of Transport and the Dublin Transport Office, but also with other commercial organizations like the Automobile Association and VIPRE. Those relationships facilitate information flow and exchange between organizations, enabling the SME to identify markets and carry out in-depth primary and secondary research to identify viable opportunities ahead of competitors.

The research shows that the constant formation, negotiation and re-negotiation of relationships within the market network are fluid processes. The SME as actor within those relationships gains deep insight into the market’s structures and workings, helping them essentially to understand markets and finding pockets of opportunity. This finding stands in line with Vargo and Lusch (2004) who that claim deep and interactive relationships enable the SME to get privileged insight and understanding into how the customer creates value from their offerings.

By understanding the customer value creation process through constant contact and nurturing of interactive relationships, the high-tech organization facilitates the customer’s fulfillment of value in use (Groenroos, 2008). This means through adopting a customer intimate approach to marketing (Treacy and Wiersema, 1993), the organization carves out a competitive edge by ensuring the best fit between organizational offerings and customer needs.

4.3. Relationships as Access Point to Market Network

The empirical evidence suggests that the high-tech SME as a smaller player in the market is at a clear disadvantage in accessing the market network, because it lacks the relationships and structures which established and large multinationals have in place. Preliminary findings give a strong indication that the SME struggles with the lack of access to the market network infrastructure, especially getting access to the ‘power persons’ within the targeted organizations. To get access the market or achieve higher access points within the stakeholder’s organizational network, the SME is offering value-adding services such as free consultation and technological expertise to get powerful corporations on board for partnering and networking purpose. Relationships and partnering with larger institutions like government bodies as well as high-profile commercial institutions provide the small technology firm with a unique selling point to pick up communication and access the targeted market network.

Even though the consultancy and research offered often do not generate a profit, they are aimed at establishing relationships and extending the network. With long-term thinking in mind, these initiatives “stimulate to get the product into the market” (excerpt from fieldnotes from Informant 2, Commercial Director.)

Collaboration, mediation, consultation and expertise are strong selling points to access the market network and promote the SME’s brand. Realizing that their strong point is not necessarily the technology, but the relationships with the partners and the experience and knowledge that results from this cooperation, the SME crystallizes their competitive edge around them. The SME gains credibility and status through the piggyback
marketing of their products and services on the stronger brand of the partner. This process generates crucial referrals and qualifies leads to the market pockets or niches, which the SME targets.

4.4. Relationships to Create Value Proposition

Crucial relationships have to be formed with suppliers such as data providers, which often hold a monopolistic position in the industry. Without those interactive relationships, the high-tech SME would not be able to formulate their offerings or tailor their proposition to the customer’s demands and needs. Since the small company lacks influence and market power, partners and suppliers hold a quite powerful position which they can use to negotiate the terms of the relationship agreement.

There is a constant effort to understand and establish connections in the market network and to discover new nodes and create new ties in order to formulate a profitable proposition that fits the market’s requirements. It can be said that partnering and networking enables both parties to experience symbiosis, share resources and work towards common goals.

It becomes clear that the high-tech company studied operates within a complex and entangled network of organizations, marked by deep ties and relationships to create a proposition that can be marketed profitably. Contracts are used to tie down partners, suppliers and customers, formalizing relationships.

4.5. Relationships as a Communication Vehicle

Findings have shown that the high-tech company thrives on intraorganizational communication and information exchange through close-knit personal relationships between the organizational members. Constant interactive information sharing and informal communication networks give the organization a knowledge environment, in which key information organically flows. This interactive fluid approach to communication represents a competitive edge because the relationships and organic culture are difficult for competitors to duplicate or imitate (Porter, 1988).

Existing structures within the organization’s network of relationships are used to communicate and advertise their brand and offerings to and within the market. This is achieved through marketing communication initiatives like having a dedicated website, releasing white papers on research and technology, taking the stage at market relevant events with sponsorships and exhibitions, having professional collateral, advertising in industry relevant magazines and interactively communicating information through PR as well as through direct contact with various stakeholders groups.

The network of partners, clients and suppliers is also utilized to diffuse the technology and innovations. “The way knowledge flows around an innovation project are complex and interactive, woven together in a kind of social spaghetti where different people talk to each other in different ways, more or less frequently, and about different things” (Bessant and Tidd, 2007, pg. 83). This means there is a move away from a linear technology-push or customer-demand pull marketing process (Rothwell, 1992) towards an interactive, complex, entangled and cross-boundary process, which is facilitated and accelerated by networking, relationships and communication.

4.6. Competitive Advantage beyond Rhetoric

The ethnographic journey revealed that marketing is not some static definition concept, model or theory in which the individual is removed from the organization. One cannot remove individual’s construction of reality (Berger, 1989) from marketing. Nor can the intersection of culture on organizations (Smircich, 1983) be denied. It becomes clear that all social life consists of actions of separate individuals or collectivities whose members act together for a common cause or organizations acting on behalf of a constituency (Moeran, 2005).

Empirical findings support that the marketing mix is carefully composed and executed in harmony with the network of partners and associates, formulating unique and innovative (O’Dwyer, 2009) marketing practices for this small technology company. Marketing is formulated by extensive communication coined by complex and deep interaction between organizational members as well as external stakeholders. Individual members of the organizations bring tacit knowledge, strong personal characteristics as well as individual experience to the table. Since the company is small in size with thirty to forty members overall, they influence and are
influenced (Arnould and Wallendorf, 1994) by the open, organic and entrepreneurial culture of the company as a whole (Turner and Spencer, 1997).

To demonstrate the influential nature of the individual’s input into this unique marketing mix, some personal characteristics of key management members and their influence on marketing practices were documented (Table 1).

Table 1 - Observations of Individual Input to Marketing Practice

<table>
<thead>
<tr>
<th>Member</th>
<th>Position</th>
<th>Characteristics</th>
<th>Influence on Marketing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informant 1</td>
<td>Chief Executive Officer</td>
<td>Meticulous, thorough, inspirational, focused, balanced, fair, considerate, critical, analytical, composed, visionary</td>
<td>- core business development</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- running and leading marketing practice every day basis</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- monitoring plans and targets</td>
</tr>
<tr>
<td>Informant 2</td>
<td>Commercial Director</td>
<td>Conservative, multitasking, focused, quiet, open, observing</td>
<td>- monitoring market and competition</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- understanding customer value creation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- sales through pull</td>
</tr>
<tr>
<td>Informant 3</td>
<td>Chief Operations Officer</td>
<td>Challenging, analytical, economical, observing, decision-oriented, direct, entrepreneurial</td>
<td>- challenges status quo in bus dev</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- technical development and progress on innovations</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- operational implementation and delivery</td>
</tr>
<tr>
<td>Informant 4</td>
<td>Managing Director UK</td>
<td>Direct, confident, convincing, goal-driven, sales oriented, conceited</td>
<td>- accessing market network</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- establishes contacts and relationships</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- sales through persistence and skills</td>
</tr>
<tr>
<td>Informant 5</td>
<td>Chief Technical Officer, Founder</td>
<td>Open, communicative, creative, imaginative, entrepreneurial, opportunity spotting, abstract, complex, weird</td>
<td>- New Product Development</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Innovation</td>
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<td></td>
<td></td>
<td></td>
<td>- R&amp;D</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Business Development</td>
</tr>
<tr>
<td>Informant 6</td>
<td>Chief Financial Officer</td>
<td>Conservative, communicative, sensitive, economical, observing</td>
<td>- observing financial boundaries</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- monitoring plans and targets in financial terms</td>
</tr>
</tbody>
</table>

Source: Author’s Data, collected April – December 2007

In addition, key management team marketing decisions such as the identification of core propositions and target markets is marked by the influence of uncertainty. Elements of uncertainty include unpredictability of customer’s and competitor’s intentions and decisions, constant movement and fluidity of markets network and structures, information impactedness (Williamson, 1979) and information redundancy as well as diverging interpretations and ideas of reality. Despite the fact that strong relationships as well as deliberate marketing planning (Mintzberg, 1985) reduce uncertainty, there strong evidence of that marketing practice still often emerges and evolves through trial and error. This leads to a complex and unique marketing approach, which is not documented or represented in marketing textbooks. The uniqueness and convolutedness of the marketing practiced may not only a facilitating force to creating a competitive advantage, but the essence of it.

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5. Locating the Research

Beyond any doubt, the paper was inspired by concepts such as market-as networks, inter-organizational relationships in industrial settings and firm behavior as influenced by the work of IMP academics like Johanson, Hakansson, Mattson and Ritter. Since the 1980’s IMP scholars have argued that social, cultural, technological and organizational interactions and exchanges influence business markets beyond the notion of economic reason. Since then networks have been recognized as sets of connected firms and relationships (Johanson and Mattson, 1990; Hakansson and Johanson, 1992). The common notion is the impact of relationships on efficiency through the creation of leverage and symbiosis. Another function of relationships is creating chains of activities, constellation of resources and shared network perceptions (Anderson, Hakansson and Johanson, 1994).

Within the IMP group, extensive research has been conducted on business relationships. Relationships are understood to be a marketing capability (Ritter, 2005) and specific propositions have been developed to enable companies to manage complex business networks (Ritter et al, 2004). In addition, concepts have been proposed to identify relationship values (Ritter et al, 2002). In the context of a high-tech environment, customer and supplier relationships have been found to create value and profitability (Ritter and Walter, 2004).

Networks and relationships have also been linked to industrial technological development and are believed to be crucial parts of corporate technological behavior (Hakansson, 1987a, 1987b). The paper’s contribution to the IMP debate lies in the empirical support, which has the ability to broaden the discussion on the nature and impact of relationships in high-tech environment. Evidently, high-tech relationships reach beyond the notion of profitability to reduce uncertainty, facilitate market research, enable access to the market, aid the formulation of the value proposition and work as communication vehicle to advertise and market the brand and proposition through the social network structure.

It becomes clear that very little research has been carried out on relationships and networks as a source of competitive advantage. Trondsen’s (2001) work on SMEs and competitive advantage recognized networks as source, but omitted to identify exactly how the competitive differentiation is achieved. Duysters and Dittrich (2003) examined innovation networks as means of business transformation in a large software company, IBM. Competitiveness was also assessed in other industries such as the IT industry (Cunningham, 2000) and automobile industry (Stocchetti et al, 2003), food industry (Hollingsworth and Hingley, 2003) and wine industry (Assadi and Brouard, 2002). The research findings add empirical depth to the area of relationships and networks as source of competitive advantage by underpinning claims with ethnographic evidence on competitive behavior of a small enterprise competing in the Irish technology market.

6. Conclusion

It can be said that a lack of complex innovation, product/market scope or cost leadership in most of the strategic business units forces the small high-tech organization to spin its competitive advantage through interactive plural relationships. The empirical evidence highlighted that deep and interactive relationships reduce uncertainty, facilitate insight into the market network’s structure and enhance the SME’s access to the market through improved credibility and brand exposure. Relationships are also crucial for the company to understand the customer’s value creation process (Vargo and Lusch, 2004) and gain access to solution components that are needed to form a targeted value proposition. In addition, networks of relationships can be considered as a means to navigate the market network, form new connections, advertise the brand and proposition, but also to diffuse the technology. Evidence also shows that the SME achieves competitive differentiation by acknowledging, allowing and utilizing ‘intangible’ influences on marketing. These include the complex and deep interaction between stakeholders, tacit knowledge, strong personal characteristics, individual experience of organizational members as well as a trial and error approach to marketing.

It is clear that deep and interactive relationships permeate most other aspects of the SME’s marketing practice beyond the conventional notion of relationship marketing (Groenroos, 1997; Harwood and Garry, 2006; Morgan and Hunt, 1994; Zontanos and Anderson, 2004). Constantly defining and dynamically redefining its core propositions and target markets, relationships and networks provide the company with a competitive edge that allows them to get to navigate their way through complex market networks, to gain recognition and to grow.
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