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Exploring Entrepreneurship in the Public Sector: Examining the Application of Strategic Entrepreneurship to SOEs

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ABSTRACT

The purpose of this research is to elaborate on a model of entrepreneurship within the public sector. Case studies involving state-owned enterprises (SOEs) trace three examples of entrepreneurial ventures. A theme of strategic use of entrepreneurial action within these organisations emerges. We argue that these examples are representative of both a field of enquiry and a specific concept which has been termed “strategic entrepreneurship”. On the strength of the findings from this study we are able to draw two important conclusions. First, empirical support is found for the notion of “strategic entrepreneurship”, which is defined and explained in this paper. Second, incidences of strategic entrepreneurship are demonstrated in the SOEs, which extend the range of entrepreneurial types usually described in the public sector.

INTRODUCTION

While the importance of fostering entrepreneurial activity is widely acknowledged (Reynolds, Bygrave, Autio, Arenius, Fitsimmons, Minniti, et al., 2004; Timmons, 1999), much debate has centered on the existence, nature and application of entrepreneurship in the public sector (Bellone & Goerl, 1992; Borins, 2000; Terry, 1993). Moon (1999) argues that political leaders are becoming more interested in fostering entrepreneurship in public sector firms in an attempt to improve government performance. Others, including Moe (1994), suggest the approach to improving government performance should be one of entrepreneurial policy which fosters entrepreneurial activity in an economy rather than practice. Those who contend entrepreneurship has a place in the public sector, suggest that it may differ from entrepreneurship within private sector firms, explaining that its nature may be that of civic or social entrepreneurship (Bellone & Goerl, 1992), focusing on uplifting society or public entrepreneurship (Shockley, Frank & Stough, 2002), showing elements of democracy. Osborne and Gaebler (1992) emphasize the importance of competition and a strong customer orientation if governments are to undertake entrepreneurial activity. Linden (1990) highlights a deliberate search for innovative change as another important aspect receiving attention in this regard. These issues lead us to ask: are there other forms of entrepreneurship relevant to public sector firms?

One form of entrepreneurship identified in the literature which focuses on private sector firms is termed “strategic entrepreneurship” (Hitt, Ireland, Camp, & Sexton, 2001; Ireland, Hitt, & Sirmon, 2003). Given, however, that the strategic use of entrepreneurship is increasingly acknowledged as an important pathway to value creation, (Venkataraman & Sarasvathy, 2000), sustainable competitive advantage (Ireland, Hitt, Camp, & Sexton, 2001), and wealth (Ireland et al., 2003), investigation of this topic becomes important for all businesses with these objectives, both public and private. State-owned enterprises (SOEs) are a prime example of public sector firms with such objectives, and are the focus of this study.

Of the various forms of entrepreneurship identified above, only strategic entrepreneurship has not specifically been investigated in public sector firms. Hitt et al. (2001) are among the few who have considered strategic entrepreneurship in detail, and refer to this concept as 'entrepreneurial action with a strategic perspective' (Hitt et al., 2001:480). Research in this area is in its early stages, and most researchers to date have either put forth conceptual papers (e.g. Hitt et al., 2001; Ireland et al., 2003), or have examined the themes that represent strategic and entrepreneurial activity in isolation (e.g. Amit & Zott, 2001). None of these authors has expressly considered the scope of strategic entrepreneurship beyond private sector firms. This is perhaps due to strategic entrepreneurship's focus on growth and wealth creation; concepts or objectives not traditionally associated with public sector firms.

Furthermore, much of the research on entrepreneurship in the public sector focuses on academic institutions (e.g. Jones-Evans, Steward, Balazs & Todorov, 1998), or government organisations at the local or regional level (Teske & Schneider, 1994). Few studies have examined SOEs. This is surprising, given that SOEs face many of the same challenges as private organisations such as making profits and competing in an open market. Within New Zealand SOEs are government owned companies which operate on an independent and commercial basis, with the intention of promoting efficiency and accountability (Mulgan, 1997). Thus responsibility for core services such as electricity and telecommunications traditionally provided by government on a national scale were subsequently transferred to SOEs operating with an underlying profit motive. Industry deregulation and market forces have increasingly exposed SOEs to competitive and commercial operations in both national and international markets. Hence the importance of entrepreneurial and strategic activity as a means of survival, sustainability, and growth emerges.

This paper therefore investigates entrepreneurship within SOEs to determine the nature and scope of entrepreneurial activities in these firms. Our research and analysis targets entrepreneurial activities that may be approached strategically in these firms, indicating the possibility of strategic entrepreneurship. It reports our journey starting with our initial theoretical framework, showing our iterative analyses,

concluding with our final theoretical framework. The next section shows our theoretical framework at the beginning of the research, followed by the research design and initial results. After extended analysis and reanalysis of the data, and integration of our findings with the strategic entrepreneurship literature, a refined framework emerges. We conclude with our revised theoretical framework and a discussion of the implications of this research.

STRATEGIC ENTREPRENEURSHIP: AN EMERGENT CONSTRUCT

Research which has addressed strategic entrepreneurship reveals the roots of this construct lie originally in the field of economics (Knight, 1921; Schumpeter, 1934) and later in the field of management (Drucker, 1985; Mintzberg, 1973). Studies in the area of strategic management in particular, have gradually uncovered an intersection between the fields of strategic management and entrepreneurship. Specifically, Mintzberg (1973) introduced the notion of entrepreneurial strategy making; Pinchot (1985) examined intrapreneurship; Covin and Slevin (1989) presented the concept of an entrepreneurial strategic posture within organisations, referring to both strategic decisions and an operating management philosophy which incorporates an entrepreneurial focus. Lumpkin and Dess (1996) extended this concept introducing the entrepreneurial orientation construct, which they identify as the tendency of organisations to engage in innovative, risk accepting, and proactive practices or strategies.

In recent years, exploration of the nexus between entrepreneurship and strategy has become more deliberate. In particular, Hitt et al. (2001) suggest strategic management involves the actions, decisions, and commitments designed to achieve competitive advantage and earn above average returns. Venkataraman and Sarasvathy (2001: 165) suggest that entrepreneurship and strategy are “two sides of the same coin”, both focused on value creation. Ireland et al. (2001) extend and further broaden this concept to interpret strategic management as a context for entrepreneurial actions; a pathway to wealth creation. Thus, the overlap between strategic management and entrepreneurial activity emerged.

More specifically, Ireland et al. (2001) identify six domains that are relevant to both entrepreneurship and strategic management, such that activity in these areas can be jointly classified as both entrepreneurial and strategic. Hence the intersection of strategic management and entrepreneurship is identified. Ireland et al.'s (2001) six domains include innovation, networks, internationalisation, organisational learning, growth, top management teams and governance. These domains were subsequently revised by Hitt et al. (2001) to include external networks and alliances, resources and organisational learning, innovation and internationalisation. A study by Ireland et al. (2003) only two years later presented four dimensions of strategic entrepreneurship: entrepreneurial mindset, entrepreneurial culture and entrepreneurial leadership, managing resources strategically, and applying creativity to develop innovation. Each of these frameworks is essentially conceptual in nature, and reveals distinct differences. This is particularly true in the case of Ireland et al.'s (2003) framework, which emphasises the entrepreneurial aspects of strategic entrepreneurship, reinforces its independent nature, and progresses the development of strategic entrepreneurship to a measurable construct. This indicates a gradual evolution in the understanding of this field of study, which is further addressed in this paper. Thus, based on the above, the value of understanding strategic entrepreneurship is acknowledged, but essentially a clear understanding of the dimensions of this construct remains elusive.

Hence, two significant issues emerge. First the difference in perspective, and second the divergence and inconsistency within prevailing conceptual frameworks of strategic entrepreneurship. With respect to perspective, authors such as Lumpkin and Dess (1996) examine the management processes resulting in entrepreneurial activity, and identify the underlying elements which influence and enhance such activity. Specifically, they introduce the notion of entrepreneurial orientation as a specific concept at the intersection between strategy and entrepreneurship and present this as a force or influence directly associated with entrepreneurial activity and firm performance. In contrast, authors such as Ireland et al. (2001) and Hitt et al. (2001) examine the elements central to both strategic management and entrepreneurship, in order to identify their point of intersection. This reflects the fundamental division in the strategy verses process research traditions projected onto the "strategic entrepreneurship" domain. Therefore it becomes unclear whether

the notion of strategic entrepreneurship is essentially a field of study which should be examined from different perspectives such as context, process, and culture (as Lumpkin & Dess, 1996 have done), or whether the topic of strategic entrepreneurship can be more precisely defined as a point of intersection (consistent with the approach of Hitt et al., 2001; Ireland et al., 2001).

Regarding the divergence between various frameworks of strategic entrepreneurship, and the elements presented as central to both entrepreneurship and strategic management, such inconsistencies suggest the notion of strategic entrepreneurship is still being uncovered and understood in a practical setting. Thus, further investigation is required to develop that understanding, which would essentially be enhanced through an examination of strategic entrepreneurship in practice, and ultimately a theoretical framework which is empirically supported or driven.

STATE OWNED ENTERPRISES: AN IMPORTANT CONTEXT

As alluded to earlier, the public sector of New Zealand witnessed significant change during the 1980s, with the intention of making government organisations more effective (Mulgan, 1997). As part of these reforms, government departments with a strong trading function were corporatised or privatised, on the premise that such services could be more efficiently provided by commercially orientated organisations, rather than subject to ministerial control and government interference. Thus, as SOEs there is a requirement to balance financial and social objectives.

This approach to government is prevalent throughout the OECD and is often referred to as “new public management” (NPM), consistent with the view that public sector management is “all business”. Based on the ideas of practitioners such as the New Zealand Treasury (Hood & Peters, 2004) the exact nature of this notion is often elusive. In general SOEs are seen as an excellent example of where the state is in business at the vanguard (Wettenhall, 2001), truly enacting the principles of NPM. It can therefore be argued that SOEs, already seen as espousing private sector values,

provide us with a unique opportunity to evaluate the potential for and scope of entrepreneurship in the public sector.

Bringing together this emergent idea of strategic entrepreneurship and the specific nature of SOEs, we consider whether strategic entrepreneurship can be applied in this context. Thus, the research questions to be addressed are as follows: *Is there evidence of strategic entrepreneurship in SOEs?* and if so, *What are the underlying elements which characterise this form of entrepreneurship?* These questions are addressed in this study through within case analyses and cross case comparisons of activities recognized as entrepreneurial and potentially strategic within three SOEs, following a brief overview of the research method.

RESEARCH METHOD

Research design

Given the absence of empirical research on strategic entrepreneurship, and the emphasis on conceptual frameworks within contemporary studies, a qualitative approach was considered appropriate (Cohen, Manion, & Morrison, 2000). Thus, case studies on three different SOE activities recognized as innovative and entrepreneurial (Birchfield, 2005; Pullar-Strecker, 2002; Talbot, 2004) provided the opportunity to examine the practical application of this topic in detail facilitating inquiry from the inside (Evered & Louis, 1981), leading to a 'deep understanding of a particular social setting and the benefits of comparative insights' (Dyer & Wilkins, 1991: 614).

Essentially the purpose of this study was to evaluate and elaborate upon the existing literature, drawing on the ideas of authors such as Hitt et al. (2001), Ireland et al. (2001), and Ireland et al. (2003). Maitlis (2005) suggests that theory elaboration can be used when existing theory provides the basis for a new study, to the extent that the need for a pure grounded theory approach (Glaser & Strauss, 1967) becomes unnecessary. As such, a preliminary framework of strategic entrepreneurship was derived based on a review of the literature (as indicated in the first column of Table 2). Preparation and analysis of multiple case studies

subsequently provided a basis from which the preliminary framework could be examined, as well as the opportunity to develop the framework based on knowledge gained inductively from a comparison of the case study findings (Yin, 2003). Conceptual frameworks of strategic entrepreneurship presented in the literature were also examined against findings from the cases, both individually and collectively. Strong associations between the case data and various themes within existing literature provided practical support for the validity of the results (Yin, 2003).

Case selection

This study explores the concept of strategic entrepreneurship in three SOEs which have undertaken activity recognized as entrepreneurial. In this regard a history of innovative products or projects was considered essential for the inclusion of organisations in this study. Initial review of the relevant literature provided guidance in both framing the research questions, and identifying appropriate activities as case study subjects for inclusion in this research (Eisenhardt, 1989). Three separate case studies were developed using a triangulated data collection design. Interviews with a senior executive from each firm were supported with observation and publicly available data from websites, annual reports, and texts. Such data were collected in two separate phases over a six month period in order to identify the developments and changes resulting from each activity over time, thereby providing a valuable longitudinal perspective (Low & MacMillan, 1988). The data were subsequently transcribed and analysed using N6, a qualitative data analysis package.

Consistent with the notion that case studies should be purposefully selected on a theoretical basis (Burgess, 1984; Eisenhardt, 1989), case studies focused on activities recognized as entrepreneurial, but also potentially strategic, within three New Zealand SOEs for a number of reasons. Similar to the views of Drucker (1985), this study supports the notion that entrepreneurial activity is not specific to a particular type of business, but rather applies to businesses of all forms and sizes. "In every case there is a discipline we might call entrepreneurial management" (Drucker, 1985: 165). Thus, partly in acknowledgement of Drucker's (1985) broad perspective, and partly in response to the notion that an understanding of concepts such as entrepreneurship has been stifled by considering only specific aspects (Gartner, 2001), often at the exclusion of entrepreneurial activity within the public

sector and non-profit organisations (Bahae & Prasad, 1992), this study takes a deliberate focus on entrepreneurial activity within SOEs.

Studying activities and opportunities in appropriate depth limited the number of case studies to three (Dyer & Wilkins, 1991). The core commonality of strategic and entrepreneurial activity within three SOEs provided the opportunity to strengthen replication or consistency of results (Yin, 1993). Diversification as a basis for extended or enhanced generalisability was established within the study by exploring a range of different businesses within the SOE sector. While the activities examined exist within context with the “new public management” or “managerialism” model prevalent throughout the OECD (Martin, 2003), and an area where New Zealand may be recognised as a leader of these initiatives (Easton, 1999; Erakovic & Powell, 2006, Hood & Peters, 2004); these activities are not considered specific to or representative of that environment. Rather, they are viewed as being representative of activities and opportunities identified in a changing competitive landscape, supported in part by the fact that each of the activities and opportunities examined, occurred at different points in time. As such, findings from the study are not considered relevant solely or specifically to New Zealand, but rather viewed as relevant to all changing competitive landscapes. Thus, two levels of generalisations apply (Yin, 1993): directed (those specific to New Zealand government organisations), and extended (business activity in changing competitive landscapes).

Against this background, three such organisations were considered in detail as part of this study: Meteorological Service of New Zealand Limited (MetService), New Zealand Post Limited (NZ Post), and Quotable Value New Zealand Limited (Quotable Value). Each of these organisations was corporatised as a SOE as part of New Zealand’s government reforms introduced in the 1980s. As at September 2005, each of these organisations continued to operate on that basis, with a strong commercial focus. Accordingly, the case studies and related findings on these organisations have been considered and evaluated in the context of government organisations which operate with a deliberate commercial focus in the context of New Zealand’s political system. The individual case studies addressing both the operations and strategies employed by these organisations in recent years were considered as part of this research. A brief summary of the three organisations and

the specific entrepreneurial ventures that were examined in each case is provided next.

Incidences of entrepreneurial ventures examined

MetService. New Zealand's weather forecasting services began in 1861 as part of the then government's Marine Department. In response to increasing pressure on government funding, the introduction of a user-pays system for government services, and the subsequent deregulation of the meteorological services industry, responsibility for weather forecasting was transferred to the newly incorporated SOE "MetService" in July 1992. MetService's main business activity involved the provision meteorological services: forecasting and communicating weather related information. Specifically, the organisation focused on three main customer groups: The Minister of Transport (for the people of NZ), civil and military aviation, and media and industry (MetService, 2004a).

John Lumsden, Chief Executive of MetService since its incorporation as a SOE reflects on the progress made. Following incorporation, MetService's senior management worked together to consider how someone in the future would describe the organisation; "what we would like an intelligent observer to say about us" (Lumsden, 2004, personal communication, 1 December). "We had a rough idea of what we intended to do" (Lumsden, 2004), and an awareness of core strategic issues such as a commercial imperative, a secure future for the organisation, and the development of qualified staff. The outcome of the meeting was formalisation of MetService's vision, namely to be:

- a recognised leader in weather and information presentation services,
- profitable and well managed, with enthusiastic and highly skilled staff dedicated to the success of the company, and
- growing worldwide through customer appreciation of our valuable and innovative services (MetService, 2004a).

Actions taken and recognition gained in addressing this vision included obtaining ISO 9001 certification in November 1995 and being the first national meteorological service to do so; winning numerous contracts for weather information and presentation services in competitive international markets. Outside the

organisation, MetService had also gained increasing recognition as a successful, innovative, and entrepreneurial organisation (Pullar-Strecker, 2001; Talbot, 2004; Van den Bergh, 2004a). Examples of recent innovative and entrepreneurial products and services included turbulence forecasting over the Himalayan Mountains for Qantas Airways Limited, low cost weather systems for isolated areas using mobile phone technology, heat stress and pasture growth indices for New Zealand's agricultural industry, and energy forecasts for various power stations based in the United Kingdom. One project in particular, Weatherscape XT: a three-dimensional weather graphics package sold to the British Broadcasting Corporation (BBC) in 2004, may be recognised as one at the intersection of entrepreneurship and strategy.

Essentially, Weatherscape XT's entrepreneurial nature is evidenced by the innovation and creativity applied to produce technologically advanced software, which has changed the way weather forecasts are presented. The combination of opportunity identification and flexibility within MetService to apply its weather forecasting capabilities in the context of television media, and show the vision to anticipate customer expectations; further evidences the entrepreneurial nature of Weatherscape XT. The strategic aspect is perhaps highlighted by the clear direction and purpose of MetService: focusing on customer solutions to enhance the success of both customers' businesses and MetService's own business operations. This strategy effectively aimed to establish competitive advantage for MetService, and secure a profitable future for the organisation.

New Zealand Post. Jim Bolger (2004: 5), Chair of NZ Post's Board of Directors, comments on the organisation's character as follows: "like most large businesses, it faces challenges and opportunities in its operating environment. Unlike most businesses, it is essentially a commercial organisation with a public character."

NZ Post had provided mail services for more than 160 years, and was one of the few postal organisations in the world operating in a deregulated market (NZ Post, 2004). In 1987 the former New Zealand Post Office was formally divided into three separate government organisations: Telecom, Post Bank, and New Zealand Post; each of which was incorporated as a commercial, profit-oriented entity as part of the

government reforms at that time. While mail services were referred to as the “engine room” of NZ Post, there was an awareness of the decreasing trend in traditional mail (NZ Post, 2004: 1). Thus, in recent years the organisation made a very deliberate decision to diversify its business around a central theme of connecting people. Such diversification included personal and customer communications, banking and payments, physical goods distribution, and document and information management. Thus, the operations of NZ Post were both diverse and growing.

NZ Post saw its role as an “essential intermediary” (Bolger, 2004: 4) in the business and personal activities of New Zealanders. “Our purpose has not changed, although how we meet the needs of our customers continues to evolve as New Zealand and the world change” (Bolger, 2004: 4). Outside NZ Post, the organisation was seen as a successful and proactive organisation (Birchfield, 2005; New Zealand Herald, 2002). In 2001 NZ Post won a major consultancy contract with the Nigerian Post Office to prepare it for privatisation, and had similar contracts in Trinidad, Tobago, and Malta. Growth was a key feature of NZ Post’s expansive business operations. In 2004, approximately half a million people came through the doors of NZ Post’s expansive retail network each week. “We help connect New Zealanders nationally and internationally. Our networks and Post people give us extraordinary reach into our communities” (Bolger, 2004: 4). With over 1,000 retail outlets in New Zealand, and approximately 17,500 staff; “approximately 1 in every 100 working New Zealanders” (Allen, 2004: 9); certainly NZ Post had established a strong national presence.

As part of an ongoing search for innovative and entrepreneurial opportunities, NZ Post had engaged in a number of new activities and projects including electronic systems for the archive and retrieval of customer documents, electronic mapping of customer delivery points, and agency services enabling online payment of fees for more than 80 different organisations. Such initiatives involved a search for opportunities through the adoption of new technology; creative and customer-focused solutions. Consistent with this strategy, NZ Post took the rather bold and controversial step of entering New Zealand’s banking industry in 2001, with the establishment of Kiwibank. Although controversial, this activity may be viewed as one at the intersection of entrepreneurship and strategy. Essentially, its

entrepreneurial nature is evidenced by identifying the opportunity to create a New Zealand owned bank which offers innovative financial services to a market largely ignored or under-emphasized by NZ's large foreign-owned banks. The strategic aspect of Kiwibank is highlighted through NZ Post's focus on maximising the use of their existing infrastructure and core capabilities to create a sustainable income stream and a secure future for the organisation.

Quotable Value. In 2004 Quotable Value was New Zealand's largest valuation and property information organisation, with approximately 230 staff, and 22 offices throughout New Zealand. Incorporated as a crown entity in 1998, the organisation's status was subsequently transferred to a SOE in early 2005, consistent with its commercial focus. Quotable Value had three divisions, each focused on a common goal: developing innovative products and services with the use of mass property data (Quotable Value, 2003).

As a government department, Valuation New Zealand's main business operations involved the provision of government property valuation services to local councils within the 74 territorial authorities throughout New Zealand. Essentially these valuations were provided to territorial authorities on a fee for service basis, and used by the various councils for the purposes of determining local council rates. With the deregulation of New Zealand's valuation industry, responsibility for and ownership of property valuation data was assumed by the relevant councils, and Quotable Value was forced to operate in a competitive market. An initial consequence of that deregulation was the significant reduction in Quotable Value's revenue. Steve Langridge (2005a, personal communication, 23 February), General Manager of QV Online, described the situation as follows: "Effectively over that period, QV's revenue from rating and valuation work halved over the space of a three year cycle. That was pretty much 90 per cent of Valuation New Zealand's revenue". Thus, decreasing business activity meant substantial changes were required within the organisation. "There needed to be some fairly innovative ways of replacing that lost revenue to ensure that we didn't [lose] all of our staff as well; making sure that we survived" (Langridge, 2005a).

In an effort to address the situation, Quotable Value looked for opportunities both within the organisation and within the market to identify additional income streams. Quotable Value's focus shifted to build on its core business activity and establish a pathway for further growth (Quotable Value, 2003). One activity in particular which reflects Quotable Value's search for activities both entrepreneurial and strategic as part of its growth strategy, was the introduction of E-Valuer. Essentially E-Valuer combines information technology with a professional valuation methodology, such that internet users can log-on to Quotable Value's website and obtain immediate and current valuations of any property within New Zealand. The introduction of E-Valuer served a number of purposes. Firstly it represented a creative and innovative product which provided an additional income stream for Quotable Value. Further, it assisted the organisation in capturing new target markets, thereby expanding its customer base, and increasing the organisation's profile. Lastly, it was consistent with the organisation's overall strategy to grow the business by leveraging from its existing resources, such that Quotable Value continued to be New Zealand's largest valuations provider. Hence the development and implementation of E-Valuer may be viewed as both entrepreneurial and strategic: identifying the opportunity to combine existing resources and core capabilities with innovation and vision, effectively facilitating growth.

Initial data analysis

The analysis procedure followed aspects of the inductive approach as set out by Glaser and Strauss (1967). Although not fully developing theory from data as happens within grounded theory, the data and theory were compared during the data collection and analysis process (Isabella, 1990). Thus, theory evolved from the data while simultaneously recognising and highlighting previously developed dimensions. As such, the analysis process facilitated an evaluation of previous frameworks while also providing the opportunity for reconceptualisation (Eisenhardt, 1989).

Within this process, the researcher is influenced by events and prior research before the actual data collection begins. Thus, existing theory, as briefly summarised earlier, initially helped to frame the research and develop initial coding categories. Table 1 presents the evolution of the coding categories used for this research, which were gradually revised and refined through a review of subsequent data such

as the interviews and documents used in this study, to arrive at the final coding categories (Isabella, 1990).

Preliminary organizing categories	Final coding categories	Support for final coding categories
Opportunity identification	Opportunity identification	<ul style="list-style-type: none"> identifying opportunity alertness and discovery evaluation of opportunity, through balanced judgement, intuition, and strong execution skills
Innovation	Innovation	<ul style="list-style-type: none"> innovation to create competitive advantage
Risk-taking	Acceptance of risk	<ul style="list-style-type: none"> willingness to accept risk, based on analysis, judgement and intuition perception of risk as manageable
Flexibility	Flexibility	<ul style="list-style-type: none"> flexibility to identify the need for change and implement change quickly, flexibility to apply existing resources and core capabilities in new ways
Vision	Vision	<ul style="list-style-type: none"> establishing a clear vision for the future breadth of vision to identify new opportunities acting on that vision
Reward	Growth	<ul style="list-style-type: none"> growth through achievement growth in the size of the business and profits growth as reward, implying success
Strategy	Strategy making process	<ul style="list-style-type: none"> may be either formal or informal, but should be closely aligned with the business' vision
	Culture	<ul style="list-style-type: none"> no single culture identified, but rather one which emphasises the importance of confidence, and people both internal (staff) and external (customers)
	Branding	<ul style="list-style-type: none"> brand differentiation in the context of commercially oriented organisations establishing a profile independent of traditional government organisations
	Operational excellence	<ul style="list-style-type: none"> assists in identifying opportunities through leveraging from core capabilities foundation for acceptance and management of risk enhances recognition, such that opportunities may be identified externally and presented to the business
	Cost minimisation	<ul style="list-style-type: none"> assists in pursuing innovations and opportunities effective tool for managing risk provides financial flexibility
	Transfer & application of knowledge	<ul style="list-style-type: none"> assists in the identification of opportunity and innovation reinforces flexibility within vision

Table 1: Development of coding categories

The first column presents the categories that were identified from the literature, which include opportunity identification, innovation, risk-taking, flexibility, vision, reward, and strategy. The second column shows how those categories evolved during the reiterative data analysis process during which newly acquired evidence either modified our understanding of a particular category (e.g. risk-taking to acceptance of risk, strategy to strategy making process), or added additional categories (e.g. culture, branding, and knowledge transfer and application).

Following the data collection the individual case studies were prepared and presented in a similar format to establish familiarity with each case, thereby enabling both “within-case analysis” (Eisenhardt, 1989: 540) and cross case comparison. Themes identified through the process summarised in Table 1 formed the outline of the case studies, and provided an initial understanding of the questions at hand.

THEORY DEVELOPMENT ACROSS CASES

Once the case studies were completed, a search for cross-case patterns was undertaken (Eisenhardt, 1989). Elements and themes identified from the literature review were once again used as the basis for this analysis, supported by additional themes which emerged from the case studies, revealing clear similarities between cases in terms of the elements identified and only minor differences in terms of the nature of each of those elements. Table 2 provides an overview of the elements deemed central to strategic entrepreneurship in each of the three case studies, together with examples of the application of those themes to Weatherscape XT, Kiwibank, and E-Valuer.

Core elements	Identification of elements within Weatherscape XT	Identification of elements within Kiwibank	Identification of elements within E-Valuer
Opportunity identification	<ul style="list-style-type: none"> • identification of core capabilities in weather forecasting leading to opportunity identification both internally and externally (e.g. TVNZ asking for assistance to develop weather graphics software) • subsequent opportunity identified internally to further develop the software once TVNZ withdrew 	<ul style="list-style-type: none"> • accumulation of opportunities • to create a new and sustainable income stream for NZ Post • to leverage from NZ Post's existing infrastructure and core capabilities • to seize a gap in the market for a New Zealand owned bank • job security and development opportunities for staff • customer focused banking services for all New Zealanders from 'Kaitaia to Invercargill' (NZ Post, 2004) 	<ul style="list-style-type: none"> • provision of data maintenance services to the local authorities, thereby obtaining access to property data throughout New Zealand, and a new revenue stream for QV • purchase the property data where necessary to ensure a complete property dataset was maintained • generate revenue from the provision of easily accessible property data to both competitors and the general public via the internet
Innovation	<ul style="list-style-type: none"> • applying weather forecasting skills to create unique 3-D weather graphics software • balancing innovation with practical, customer focused solutions, "we understand how a forecaster's mind works" (Lumsden, 2004) • flexible and tailored products (modifications to WXT subsequently required by the BBC were features already accommodated within the software) 	<ul style="list-style-type: none"> • applied innovation through customer focused services which were both creative and practical (e.g. automatic overnight transfers between accounts to ensure maximum interest rates; automatic redirecting of a percentage of deposits to savings accounts) • creative application of NZ Post's core capabilities and infrastructure to quickly establish a retail banking network 	<ul style="list-style-type: none"> • combining a complete property dataset with professional valuation skills to develop the online valuation service, E-Valuer • creating a new platform for the provision of valuation services, via the internet • introducing a service not offered elsewhere
Acceptance of risk	<ul style="list-style-type: none"> • risk identified, evaluated, and viewed as manageable • management of risk via standard procedures to address project, financial, and operating risk • project risk managed by reliance on core competencies • financial risk managed by cost minimisation • risk averse nature balanced with confidence in core capabilities 	<ul style="list-style-type: none"> • risk identified, evaluated, and viewed as manageable • minimised through market research, recruitment of experienced bankers • exercising judgement to implement Kiwibank at the appropriate time. "We had been talking about the idea of establishing a bank long before the politicians became involved" (Hogg, 2004, personal communication, 1 December) 	<ul style="list-style-type: none"> • various risks identified, evaluated, and accepted: • substitution risk due to QV's alternative valuation services • business competitor risk due to objections from competitors • operational risk: maintaining an updated dataset • evaluation of risk: "there are opportunities and risks, but the opportunities outweigh the risks" (Langridge, 2005a)
Flexibility	<ul style="list-style-type: none"> • flexibility of resources (work hours and staff) • freedom to innovate within working environment • flexibility to transfer and apply knowledge of weather forecasting to new markets and services • flexibility of a 'can-do' attitude, combined with confidence in core capabilities 	<ul style="list-style-type: none"> • new banking software provided the opportunity to offer flexible banking services (e.g. automatic overnight transfers between accounts) • flexibility of vision to establish a bank through NZ Post • timeframes to implement changes quickly (e.g. new services introduced earlier than expected due to increased demand) 	<ul style="list-style-type: none"> • provision of data maintenance services and the purchase of that data where QV's services were not required • flexibility in the communication of property data: reports, visual mapping, historical records, future projections • flexibility in the work environment (e.g. work hours, location)
Vision	<ul style="list-style-type: none"> • clear vision of MetService's core capabilities and the activities it did not want to engage in • vision to see the what is and what might be; potential opportunities to further develop WXT • vision to transform creative ideas such as flexible weather graphics software into innovative, user-friendly, and practical commercial services 	<ul style="list-style-type: none"> • to identify the opportunity to establish Kiwibank, and see that opportunity as viable • to apply NZ Post's infrastructure in a different context • to connect people throughout New Zealand with value for money, customer focused banking services 	<ul style="list-style-type: none"> • to see the importance of a complete property dataset • offering services to maintain that dataset, or purchase the data where necessary • applying a professional valuation methodology to create unique, online service • vision for the future use of and revenue sources from the property dataset, offering benefits to competitors, the general public, and QV • overall vision for the future promoted within the organisation and shared by employees
Growth	<ul style="list-style-type: none"> • financial (sales, revenue, profits, wealth) and non-financial (scope of services, products, innovations, customer base) • developmental growth, learning from experience, developing expertise in new domains • reputation, recognition, internal satisfaction 	<ul style="list-style-type: none"> • both financial (revenue, profits) and non-financial (growth in the scope of services, increase in customer base) • developmental growth through learning from experience and developing expertise • internal satisfaction and security 	<ul style="list-style-type: none"> • financial (e.g. sales, revenue, profits) and non-financial (growth in the scope of services, increase in customer base) • developmental growth through the maturity of the organisation • enhanced profile, increased recognition • internal satisfaction and reward

Table 2: Core elements of the strategic entrepreneurship concept

Supporting elements	Identification of elements within Weatherscape XT	Identification of elements within Kiwibank	Identification of elements within E-Valuer
Strategy-making process	<ul style="list-style-type: none"> • no formal strategy • clear guidance provided by the organisation's vision 	<ul style="list-style-type: none"> • both deliberate and emergent • closely aligned with vision 	<ul style="list-style-type: none"> • planned approach to strategy within QV • closely aligned with vision
Culture	<ul style="list-style-type: none"> • relaxed, open, and informal work environment • confidence in core capabilities to take on new projects • strong focus on relationships both internal and external • providing a challenging and rewarding work environment for staff • working closely with customers to understand their needs 	<ul style="list-style-type: none"> • pride in the organisation's image as a New Zealand icon • confidence in the organisation's core capabilities • strong appreciation of and concern for staff • genuine focus on serving and connecting customers and potential customers; all New Zealanders 	<ul style="list-style-type: none"> • challenging and rewarding culture • clear emphasis on confidence in the organisation's abilities • strong focus on people both internal and external • genuine appreciation of staff and concern for customers • close relationship with customers likened to a partnership
Branding	<ul style="list-style-type: none"> • benefit identified in distinguishing the organisation's image from that of traditional government organisations 	<ul style="list-style-type: none"> • benefit identified in establishing different brands for different applications of NZ Post's core capabilities (postal operations, versus consultancy services) 	<ul style="list-style-type: none"> • strong emphasis on enhancing the firm's profile through the promotion of E-Valuer and QV • branding may emerge as a later issue once QV's business develops and its profile is enhanced
Operational excellence	<ul style="list-style-type: none"> • clear emphasis on operational excellence • "we've got the capability to forecast for any particular spot on earth" (Lumsden, 2004) 	<ul style="list-style-type: none"> • clear emphasis on operational excellence within the core business, leading to new processes (clear floor policy), products (ergonomic sorting cases), and further consultancy opportunities as foreign postal services requested NZ Post's assistance 	<ul style="list-style-type: none"> • not specifically identified within Quotable Value, but examined for comparative purposes
Cost efficiency	<ul style="list-style-type: none"> • key principle of MetService's operations • "we are able to solve a range of problems, not the least of which is cost" (Lumsden, 2004) • provides flexibility in pursuing ideas and opportunities 	<ul style="list-style-type: none"> • economies of scale highlighted through the use of NZ Post's infrastructure to quickly establish a retail banking network 	<ul style="list-style-type: none"> • cost minimisation viewed as necessary, such that cost effective promotional activities were pursued (participation in newspaper and television features versus mainstream advertising)
Transfer and application of knowledge	<ul style="list-style-type: none"> • applying weather forecasting skills to television production, turbulence forecasts for Qantas, cow heat stress indices for New Zealand's agricultural industry 	<ul style="list-style-type: none"> • transfer of payment processing skills to establish a retail banking network 	<ul style="list-style-type: none"> • applying professional valuation skills to create a unique online valuation service

Table 3: Supporting elements of the strategic entrepreneurship concept

Essentially each of the six elements presented in Table 2 is viewed as fundamental to the nature of each project as both entrepreneurial and strategic. Thus the notion of strategic entrepreneurship as a concept at the intersection of entrepreneurship and strategy is supported in an applied setting, and the underlying elements central to strategic entrepreneurship are identified. An examination of the data relevant to Weatherscape XT, Kiwibank, and E-Valuer which were collected in the second phase of the study reveals each of these six elements remained central to the project, and had effectively assisted the business in establishing a competitive advantage. “Very definitely Weatherscape XT has created competitive advantage for MetService. It is the biggest weather graphics project ever” (Lumsden, 2005, personal communication, 12 August), and has shown MetService to be a serious player on the world stage. Ian Long (2005, personal communication, 13 July), Senior Communications Manager of NZ Post refers to competitive advantage both direct and indirect through the establishment of Kiwibank, with the bank’s sustainable and growing income streams providing both financial security and further diversity for the NZ Post group. With respect to Quotable Value, Langridge (2005b, personal communication, 12 August) refers to “major growth” over the past six months. “E-Valuer was always viewed as a competitive advantage for QV” (Langridge, 2005b), and developments in revenue and customer base since early 2005 reflect this.

Individually the elements presented in Table 2 highlight the key themes from each of the three cases, and characterise each of the activities examined as entrepreneurial in nature. Consistent with the literature on entrepreneurship, opportunity identification (Kirzner, 1979), innovation (Schumpeter, 1934), acceptance of risk (Busentiz and Barney, 1997), flexibility (Bhide, 1994), vision (Hamel & Prahalad, 1994) and growth as a form of reward (McClelland, 1961) are commonly associated with entrepreneurship.

Through an iterative analysis of the cases, additional themes also emerged as relevant to each of the cases. These themes are: strategy-making process, culture, branding, operational excellence, cost efficiency and transfer and application of knowledge. Individually these themes were not identified as central or fundamental to the relevant activities, but rather established a strategic context for each activity, thereby creating an environment conducive to the establishment of strategic

entrepreneurship. Table 4 provides an overview of these supporting elements, together with a summary of their application to each of the three projects. Tables 2 and 3 form the basis of the discussion which follows next.

DISCUSSION: A MODEL OF STRATEGIC ENTREPRENEURSHIP IN THE PUBLIC SECTOR

From each of the three cases, clear findings emerge regarding the elements both fundamental to, and supportive of strategic entrepreneurship. While Tables 3 and 4 present only brief summaries, substantial data supporting these elements was obtained from each of the three cases involving SOEs in distinctly different industries. The elements identified also reinforce several dimensions from previous conceptual studies undertaken by Hitt et al. (2001), Ireland et al., (2001), and Ireland et al. (2003). Further, our data and findings provide practical support for the preliminary framework of strategic entrepreneurship drawn from the relevant literature and presented earlier in this paper. Hence this study has taken strategic entrepreneurship research beyond a purely theoretical approach, and found substantial support for proposed theory through a detailed examination of strategic entrepreneurship in practice.

Given that contemporary frameworks of strategic entrepreneurship are conceptual in nature and have not expressly considered the application of strategic entrepreneurship to public sector organisations, findings from this study provide insight in two important areas. Accordingly, this discussion is divided into two parts, each focusing on one of the research questions regarding entrepreneurship within the public sector stated earlier.

The concept of strategic entrepreneurship in public sector firms

Essentially the study of strategic entrepreneurship involves the combination of actions distinctly entrepreneurial: focusing on opportunity, with actions essentially of a strategic management nature: creating competitive advantage (Hitt et al., 2002). This concept may be viewed as an extension of entrepreneurial strategy making, being a mode of strategy making which integrates multiple strategies with each other

and the external environment (Mintzberg & Waters, 1982); the ability to make quick decisions in a changing environment (Bird, 1988). Specifically Mintzberg and Waters (1982) characterise entrepreneurial strategy-making by its degree of deliberateness and clear, complete vision; with the flexibility to allow that vision to change. Bird (1988) reinforces the concept of vision within strategic entrepreneurship, by identifying a focus on the present with a firm picture or vision of the future; Eisenhardt, Brown, & Neck (2000) reinforce flexibility within the notion of a chaotic environment.

As a field of study, the integration of entrepreneurship and strategy, *strategic entrepreneurship*, may be explored from various perspectives, such as culture or orientation (Lumpkin & Dess, 1996), and context or environmental forces (Miller, 1983). Essentially, however, the examination of activity which lies at the intersection of entrepreneurship and strategic management provides the opportunity and perhaps the obligation for strategic entrepreneurship to also be explored as a specific concept. Within the individual cases of Weatherscape XT, Kiwibank, and E-Valuer the analysis of a single activity revealed clearly defined themes central to both entrepreneurship and strategy. By way of example, identifying the opportunity to establish a New Zealand owned bank through NZ Post's existing infrastructure (Kiwibank), and leveraging from the organisation's resources and capabilities, highlights the entrepreneurial and strategic nature of this activity. Thus, consistent with the studies of Hitt et al. (2001), Ireland et al. (2001) and Ireland et al. (2003), case study findings reveal strong support for "strategic entrepreneurship" both as a field of study and a specific concept within an applied business context.

The nature and elements of strategic entrepreneurship

Once we established that the entrepreneurial activities examined were approached strategically in each case, our attention turned to identifying the nature and underlying elements of this construct, strategic entrepreneurship. Both individually and collectively the case study findings confirm and reinforce the elements considered central to the preliminary framework of strategic entrepreneurship. Consistent with the notion of opportunity identification (Kirzner, 1979; Meyer & Heppard, 2000) in each case activity stemmed from a series of opportunities identified either internally (Kiwibank & E-Valuer) or externally (Weatherscape XT).

Innovation (Hitt et al., 2001; Ireland et al., 2001) became a central feature of such opportunity (e.g. creative and customer focused products and services such as MetService's weather graphics software). Acceptance of risk (Busenitz & Barney, 1997) is highlighted in all three cases, such as NZ Post's evaluation of the relevant risks and perception of those risks as manageable before proceeding to establish Kiwibank. Consistent with Eisenhardt et al. (2000), flexibility emerges as a clear theme within each project, as evidenced by Quotable Value's approach to accessing property data in order to maintain a complete dataset through the provision of maintenance services or purchasing the data where necessary. The notion of vision is consistent with Covin & Slevin's (1989) reference to focus within an entrepreneurial strategic posture, and is highlighted through MetService's clear vision, promoted and reinforced throughout the organisation. Growth (Ireland et al., 2001) is highlighted in a number of contexts both financial and non-financial, within each case.

Findings from the cases also reveal six supporting elements for inclusion in the strategic entrepreneurship framework. While a range of strategy making processes were identified, in each case those processes were closely aligned with vision (Baum, Locke, & Kirkpatrick, 1998). Similarly, a range of organisational cultures emerged from the cases, but in each organisation key elements of that culture included confidence in the organisation's capabilities (Ramamurti, 1986), and a genuine concern for people both internal (Morris & Kuratko, 2002) and external (Barwise & Meehan, 2004). Branding (Koehn, 2001) as a means of differentiation from traditional government organisations was highlighted within MetService and NZ Post. Within Quotable Value the focus remained on establishing a stronger profile, such that branding may become important at a later stage. Developing operational excellence within the business' core competencies (Hamel & Prahalad, 1994) emerged as a clear theme in two of the three cases, and provided the added benefit of opportunities being identified externally, and presented to the SOEs (e.g. TZNZ approaching MetService, foreign postal organisations approaching NZ Post). Closely related to operational excellence and innovation, cost efficiency through process improvements (Porter, 1980) provided each of the organisations with the opportunity and financial flexibility to pursue ideas and innovations. Lastly, the transfer and application of knowledge (Bissell, 1997) was highlighted in each case as a pathway to innovation; applying core skills and resources in new domains to create new

products and services. These elements effectively provided a strategic context for each of the three entrepreneurial activities. Hence the intersection between entrepreneurship and strategy is identified. On the basis that the elements above were not the only strategic context available, but rather represent the specific elements identified in the context of the three activities examined, these elements are viewed as supporting rather than fundamental to strategic entrepreneurship. Certainly a strategic context in some form is necessary to establish strategic entrepreneurship, but arguably that context is variable in nature.

While findings from our study provided clear support for various elements within existing strategic entrepreneurship frameworks such as innovation (Hitt et al., 2001) and growth (Ireland et al., 2001), case study findings also revealed a distinct lack of support for other elements presented as central to strategic entrepreneurship such as internationalisation (Hitt et al., 2001) and top management teams and governance (Ireland et al., 2001). Case findings also indicate themes such as networks and alliances (Hitt et al., 2001; Ireland et al., 2001) may be more precisely defined as a strong customer focus within the broader notion of culture. The distinction between the two concepts is blurred within each case, as Lumsden (2004) and Langridge (2005a) each refer to “working with” customers; Robyn Hogg, Organisational Development Leader of NZ Post (2004, personal communication, 1 December) inadvertently refers to customers as “partners”. Only when details of the relationship are specifically questioned, is the actual relationship identified as a customer one. Thus, case study findings provide the opportunity to distinguish between elements which may in some cases be relevant to strategic entrepreneurship, and elements which are essentially fundamental to all cases of strategic entrepreneurship, and therefore included in the strategic entrepreneurship framework. Further, they provide the opportunity for themes included in established frameworks to be examined, clarified, and (where appropriate) reclassified.

Several issues arising from this research lead us to reconceptualise some of the elements originally included in the preliminary framework of strategic entrepreneurship in order to create a better fit in a SOE context. For example, even though all three activities studied in this paper can be viewed as innovative in a traditional sense, risk is conceptualised somewhat differently in the context of SOEs.

Although encouraged through a specific obligation to generate profits, the aversion to risk is highlighted within each organisation through the cultural changes required to develop confidence internally, and take on new projects.

Further examination of strategic entrepreneurship as a specific concept in an applied business context therefore indicates not only its existence, but also the nature or underlying elements contributing to that existence. Case study results pertaining to Weatherscape XT, Kiwibank, and E-Valuer revealed well defined themes both central to and supportive of strategic entrepreneurship. As such, the conceptual framework presented in the initial phase of this study can now be extended and used as a basis for the development of our revised framework.

Implications for practice

This research has a number of important implications for public sector managers. An understanding of the core elements promotes an awareness of the necessary elements in order to create strategic entrepreneurship. These elements include opportunity identification, innovation, acceptance of risk, flexibility, vision, and growth. The strategic context (or supporting elements) for these core elements may take various forms, however, due consideration should be given to the importance of fostering strategic entrepreneurship through means such as aligning strategy with vision, emphasising confidence and people within the organisation's culture, the use of branding, operational excellence, cost efficiency, and the transfer and application of knowledge.

Of particular importance for practice is the collective nature of the core elements, such that strategic entrepreneurship cannot be created from any single element alone, but rather a combination of the core elements. Thus an emphasis or reliance solely on innovation (for example) will not result in strategic entrepreneurship. With respect to the supporting elements, businesses should also understand the importance and related nature of specific strategic aspects to the various core and supporting elements. Thus, operational excellence becomes an important tool for building confidence within the organisation, and provides a strong foundation for flexibility and innovation to be adopted in pursuing opportunities in new domains.

Strengths and limitations of the study

The major limitation towards a broader theory of strategic entrepreneurship is the use of public sector organisations to build the framework presented in this paper. While we acknowledge that SOEs as a specific type of public sector organisation have a different set of environmental pressures, and are therefore more likely to act like private sector organisations, there are several key differences directly relevant to the investigation of entrepreneurship in this context. In particular, acceptance of risk within SOEs is often discouraged or viewed as inappropriate (Morris & Kuratko, 2002), but ultimately as a government organisations, New Zealand's SOEs have both a legal obligation to establish profitable operations, and access to extensive financial support from central government should an entrepreneurial venture go wrong. Hence, the nature of risk in these organisations is fundamentally different from that in private sector organisations.

Further, the detailed approach of this study and depth of each case prevented the study of additional cases involving firms with distinctly different profiles. Thus, we have not yet extended the study of strategic entrepreneurship to incorporate a more diverse range of businesses, both public and private, from individuals in business to large multinational organisations. As an initial step, however, this study has highlighted the application of strategic entrepreneurship to the public sector, and identified the underlying elements in a number of SOEs.

Future research directions

This study provides an excellent platform for further research into the strategic entrepreneurship concept. In particular it identifies themes and elements characteristic of strategic entrepreneurship, together with an examination of dimensions relevant to these themes. Such findings can be easily modified and used as a basis for a scale to quantitatively investigate strategic entrepreneurship in a larger sample of businesses. Such research would be important in order to extend and generalise the findings from this study. Further examination of the framework in different contexts involving both quantitative and qualitative approaches will also provide the opportunity for a fuller understanding of strategic entrepreneurship as both a field of study and a specific concept.

CONCLUSION

Based on the above analysis and discussion, a number of important conclusions can be drawn from this study. Firstly, the different perspectives of strategic entrepreneurship as both a field of study and a specific concept have been explored in both theory and practice, such that a distinction has been made between the two, and an understanding of the latter, strategic entrepreneurship as a specific concept has been established in an applied business setting. This clarification has provided a basis from which further examination of strategic entrepreneurship may proceed. Iterative analysis of three activities identified as being at the intersection of entrepreneurship and strategic management provided the opportunity to examine the precise nature and underlying elements of strategic entrepreneurship within SOEs. Six elements: opportunity identification, innovation, acceptance of risk, flexibility, vision, and growth, were revealed in each case. Further examination also revealed elements which assisted in fostering or supporting strategic entrepreneurship by establishing a strategic context for entrepreneurial activity. These elements include strategy making processes, culture, branding, operational excellence, cost efficiency, and transfer and application of knowledge. Final conclusions drawn from a comparison of the cases revealed important developments in strategic entrepreneurship research, such that preliminary empirical support for a strategic entrepreneurship framework has now been established. Based on that support the concept of strategic entrepreneurship is not limited to private sector organisations, as incidences clearly exist within a public sector context.

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