

An entrepreneurship policy framework for high-growth firms: navigating between policies for picking winners and market failure

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Abstract: This paper outlines an analysis of high-growth technology ventures framed within a time when innovation and entrepreneurship were clearly central pillars of economic policy in Australia. The paper first outlines the case that entrepreneurship policy is highly reliant upon supporting high entrepreneurial potential firms. It next outlines the innovation and entrepreneurship policy environment of the Australian government between 2001 and 2006 and discusses its shortcomings. Using a series of mini cases of technology-based high-growth firms coincidental with this policy environment, the policy areas that require attention in order to support high-growth technology ventures are highlighted. The paper concludes by providing a policy framework conceived through the lens of high-growth business ventures. When viewed in this way it is apparent that neither policy designed to pick winners or policy that addresses market failure fully support or facilitate high-growth ventures.

Keywords: entrepreneurship policy framework; high-growth firms; high entrepreneurial potential firms; high expectation firms; Australian policy environment; Global Entrepreneurship Monitor

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John Yencken originally worked as an industrial research chemist and more recently as a management consultant. In 1996, 1998 and 2000, he was co-chair of the Engineering and Physical Sciences Expert Panel in the Australian Cooperative Research Centre Program. Over the period 1999-2005, he completed a PhD at the Australian Graduate School of Entrepreneurship at Swinburne University of Technology, Melbourne, Australia. His research topic was "The role of spin-off companies in the commercialisation of university and other public sector research outcomes in Australia". In 2004 he carried out a consultancy for the Australian Commonwealth Department of Education, Science and Training on "The effectiveness of incentives to academic researchers to commercialise their research outcomes".

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1. Introduction

This study develops a framework for analysing, developing and implementing policy focused on what we call high entrepreneurial potential (HEP) businesses. HEP firms are defined as early stage ventures (less than 42 months old) characterised by both high-growth expectations on the part of their founders and the presence of attributes, which increase the probability that those high-growth expectations might actually be fulfilled. The study is centred on the disproportionate importance to job creation in particular and the national economy in general of new ventures whose owners begin their new businesses with high-growth expectations and the owners' commitment to pursue growth. The discussion and analysis of this position is developed by exploring the policy framework encountered by high-growth technology firms in Australia.

A principal device of the paper is to use the findings developed in two studies by Erkko Autio and his colleagues (Autio, 2005; Autio, Kronland and Kovalainen 2007) that highlight the importance of policy for businesses with high-growth expectations. We then consider the interrelationship of factors other than growth-expectation as characteristics distinguishing truly HEP businesses (the engines of job growth in an economy) from the majority of low or no growth firms.

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During the period of 2001 to 2006, the Australian government had made explicit links to innovation and entrepreneurial business through the *Backing Australia's Ability* (BAA) policy (Commonwealth of Australia, 2001). The influence of this overarching policy statement affected many policy areas. In 2004, the government reconfirmed its ten year commitment to this policy by both extending and enhancing the programs, initiatives and funding (Commonwealth of Australia, 2004). The clear economic intent of the policy spawned a series of programs designed to support innovation and entrepreneurship. The change of government in 2007 led to the Labour party being in government federally and in all Australian States. The new Federal government commissioned a major review of Australia's national innovation *Venturous Australia: Building Strengths in Innovation* (DIISR, 2008). This was followed by a policy White Paper, *Powering Ideas: An Innovation Agenda for the 21st Century* (DIISR, 2009).

This policy White Paper includes new initiatives to promote innovation by small companies, including proposed changes to the taxation system and venture capital support to better adjust these to the needs of start up companies. However, these adjustments still neglect any specific focus on HEP firms (DIISR, 2009, pp. 46-47).

Within this policy context we develop a framework for better understanding the design and implementation of entrepreneurship policy that is relevant to many countries by drawing upon examples provided by the Australian Deloitte Fast 50, 2006. The companies highlighted by this list of high-technology, fast-growth businesses emerged in the coinciding period of the focused policy strategy. The review of these firms, in this specific policy context, highlights how entrepreneurship policy for high-technology and high-growth firms has limited effectiveness while ever it focuses on start-up rather than the issues relevant to growth.

In summary, one aspect of entrepreneurship policy – support for high-potential firms – will receive focused and ‘disproportionate’ attention following the strong evidence of the policy importance of high-growth firms – both *a posteriori* (demonstrated and achieved high-growth) and *a priori* (high expectations in advance of specific performance). We overview the Australian entrepreneurship policy environment, within a specific time period, to highlight the misplaced emphasis of the policy regime. This scrutiny prefaces the development of a policy framework designed to help governmental policy makers create, analyse and implement better policy measures to support HEP businesses within the economies they serve. We conclude by discussing the utility and implications of our suggested policy framework.

2. Developing policy guidelines for high-expectation firms

This paper has a pronounced pedigree. Its principal progenitors are two studies conducted by Professor Erkkö Autio of the University of Lausanne (and more recently of the London Business School) and his colleagues. The study we shall often hereafter refer to as ‘Autio-1’ (Autio, 2005) was written by Autio as sole author and employed an analysis of data contained in the Global Entrepreneurship Monitor project (GEM). It was the first academic study to focus specifically and on a global scale, on high-expectation entrepreneurship. High-expectation entrepreneurs, though a small minority of all early-stage owner-operated firms, seem responsible for up to 80 per cent of all intended job creation by early-stage firms. If so, their policy significance is profound.

The GEM national population survey is conducted with an identical questionnaire each year in each participating country. One question it asks of business owners and would-be business owners is about their expected number of employees in five years from the time of the survey. The categories of business owners are divided into three

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types but the primary interest of the Autio studies was in only the first two. The first category is that of those who will own at least part of a business that they are actively starting and who have not paid wages for more than three months while the second category includes those business owners who have been paying wages for at least three months but not more than 42 months; that is, none of the businesses in these two categories were more than three and a half years old at the time of the survey. The third category holds businesses beyond the scope of interest of the Autio investigations: firms older than three and a half years. The GEM Executive team calls the first category *nascent entrepreneurs* and the second *baby-business owners*. The Australian GEM team refers to these categories with slightly different nomenclature that may better describe the types of business activities of these business owners. The first is *start-up* while the second is *young business* (Hindle and O'Connor, 2005).

Having demonstrated the importance of high-expectation entrepreneurship, Autio and his colleagues next proceeded to examine the policy measures adopted to support the phenomenon in nine countries of the world. The study we shall often hereafter refer to as 'Autio-2' (Autio, Kronland and Kovalainen, 2007).

The Autio-2 study contained eleven major conclusions that outlined dedicated policy initiatives to address high-growth entrepreneurship. Autio, Kronland and Kovalainen (2007, p.76.) claimed that high-growth policy should:

- (1) be highly selective, particularly when addressing later stages of venture development;
- (2) require strong growth motivation from participants;
- (3) be proactive in inviting prospective growth firms;
- (4) consistently address managerial motivation and skills;
- (5) involve close collaboration with private-sector service providers;
- (6) nurture an image of professionalism, competence, and a certain degree of exclusivity;
- (7) implement sustained and focused development efforts;
- (8) involve highly customized and tailored management development activities that involve experience sharing and apply an interactive approach;
- (9) link grants and participation to growth aspiration and achievement of milestones;
- (10) be prepared to accept casualties;
- (11) involve seasoned managers who have experience in rapid growth.

The Autio-2 study identified several other very important issues with reference to extant policies prevailing in the nine countries covered by the study. Some initiatives, such as Finland's Growth Firm Service, proactively approach potential high-growth firms that might benefit from support. Instead of waiting for the firm to approach them, the service actively scans the environment for potential high-growth firms with the idea of developing individually customized support packages for these. As concerns policy design, the multi-faceted nature of the entrepreneurial process means that a single policy department, or a single policy initiative, is unlikely to produce lasting results. To address high-growth entrepreneurship comprehensively, broad-based collaboration between multiple policy departments and ministries is essential. Autio and colleagues argued that, to effect the requisite collaboration across policy departments for an effective program,

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the horizontal program should be supervised by a board consisting of high-level government ministers, preferably chaired by the Prime Minister.

Another very important recommendation of the Autio-2 study is that policy-makers should be ready to accept casualties. High rates of survival may imply insufficient dynamism. Particularly in high-income countries that have small domestic markets, internationalization becomes a necessity, rather than choice. Disincentives must be removed. Finally, an important facet of high-growth oriented entrepreneurship policy should address disincentives for entrepreneurial growth. For example, compliance requirements tend to increase progressively as firms grow (Autio, Kronland and Kovalainen, 2007, pp.77-78).

The present paper then, is an attempt both to utilise and to enhance the work of Autio and his colleagues. Our study aims to build upon the findings of the Autio studies to develop a highly structured and tightly focused entrepreneurship policy framework. We will concentrate specifically upon improving policy with respect to technology-based, HEP firms, a term we will clarify in the next section of this paper. The evidence and argument in support of our suggested policy framework will be drawn from examination of the Australian case which has, we argue, global relevance and implications. Better structure and tighter focus on entrepreneurship policy offers many benefits to policy makers and the nations they serve and this paper goes further toward mapping policy areas specifically for high-growth potential firms than any we have been able to identify from our extant literature review.

2.1 High-growth expectation is necessary but not sufficient

The Autio studies strongly suggest that high expectations with respect to job growth by owners of early-stage new ventures comprise an important indicator of the likely success and economic impact of the firms that they create. However, we argue that high-growth expectation is a necessary but not sufficient criterion upon which to base government entrepreneurship policy and support programs. Any firm founder can *say* that he or she *expects* to create a high volume of future jobs. Moreover, if the flow of government support were based too overtly and too exclusively on merely 'expecting' to create jobs, this munificence would itself be a strong incentive to an insincere increase in the number of business founders expressing that expectation. Clearly, mere expecting and mere saying are not enough. Entrepreneurship support policy in this environment, by necessity, would need to assess the likelihood that expressed growth intentions are feasible as well as desirable. Somewhere in the operational zone of the policy there has to be some machinery for enhancing the likelihood that projected growth expectations can be converted to actual, achieved growth. Hence there is a need for a policy framework that articulates the precise areas of policy that require focus when the issues of high-growth or HEP firms are to be considered.

2.2 The challenge of a high entrepreneurial potential policy framework

The Autio-2 study prefaced its recent analysis of the GEM data on the respondents' expectations for generating or developing new high-growth entrepreneurial ventures, with a compact but comprehensive review of the literature that places an emphasis on the importance of new businesses in economic growth, particularly in regional economies. That literature review demonstrates conclusive evidence that a very high proportion of expected new job creation, in any developed economy, can be attributed to *high expectation companies*. Entrepreneurship policy, therefore, should assist ventures to identify and overcome some of the hurdles that impede successful development of ventures with high-potential for growth.

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Much criticism can be levelled at the lack of effective entrepreneurship policy due to misunderstanding about what constitutes innovation policy and the failure to distinguish genuinely entrepreneurial businesses (such as those with, *inter alia*, high-growth expectations) from the 'me too', 'mom and pop' or so-called 'lifestyle' ventures. Hart (2003) goes to some pains to stress that entrepreneurship policy has to be about the minority of high-aspiration businesses: not the majority of low-aspiration, low employing operations (Hart, 2003, p.7).

Audretsch, Grilo and Thurik (2007) present a policy framework for entrepreneurship that addresses the supply and demand of entrepreneurs. While acknowledging the interdisciplinary nature of entrepreneurship, these disciplines are subordinated to the concept, derived from economics, of the supply of and demand for entrepreneurs. The resulting policy framework therefore, emphasises the starting of new ventures while leaving open the question about how to make policy choices with respect to the growth of new ventures.

Government support for truly entrepreneurial ventures, the ones that create the jobs, the HEP firms, must be about creating the environment that genuinely assists high expectation ventures to become high achieving ventures. Government's role is first, not to hinder and second, to facilitate where needed, the creation and development of ventures powered by a highly motivated, high-growth-expectation venture team, that understands relevant innovation processes, operates in a market where seed capital is encouraged and populated by entrepreneurs with the requisite entrepreneurial capacity (i.e. the right skills) to navigate the rough seas separating a potentially good idea from the achievement of a sustained, commercially successful reality. The government is there to build lighthouses, not to bet on which boat will cross the sea fastest or with the richest cargo. This perspective on the proper role of well-designed entrepreneurship policy is the exact opposite of a 'picking winners' approach. Let us call it the 'lighthouse' approach. It is recognised that good infrastructure in any area (lighthouses in troubled seas, good roads in rough terrain, good policy in fostering the commercialisation of innovation and the creation of wealth by creative citizens) is all about removing unnecessary dangers and hurdles (taking dangerous reefs out of the equation in sea voyages, ensuring enhanced entrepreneurial capacity for citizens seeking to innovate).

Entrepreneurship policy is also not simply about correcting market failures. Government intervention that creates an artificial market can become tantamount to providing corporate welfare (Auerswald, 2007). This occurs as the government intervention attracts more than the legitimate high-growth ventures and the well intended measures ultimately generate the inverse to the desired and intuitive result. For example Parker (2007) illustrates a number of policies in the United States of America where the intended outcome of a policy actually produced the inverse result. Government intervention in these cases either crowded out the private sector or created the environment for strategic switching by entrepreneurs who aligned their ventures with the program criteria rather than to the market opportunity, thus, severely reducing the effectiveness of the policies.

Entrepreneurship as a societal phenomenon involves those competitive behaviours that drive the market process (Davidsson, 2004; Kirzner, 1973). Most people within a society (including a country's business people themselves, politicians and policy makers) are interested in entrepreneurship because it has the potential to improve economic development. Therefore, from a societal perspective what is most important about for-profit entrepreneurial activities are the aspects of it associated with innovation, newness and change – not things that merely 'fill in a gap' left by other economic actors.

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Entrepreneurship as a societal phenomenon, in this perspective, concerns activities and actors who introduce new, improved or competing offerings in an emerging or pre-existing market, give buyers new choice alternatives to consider, open up new markets, attract additional new entrants as followers and give firms in existing markets reason to improve their market offerings (Davidsson, 2004). Technology-based firms are typically cases in point, leveraging off the advances in technology. Entrepreneurship as a societal phenomenon, very broadly, concerns *the introduction of new economic activity that leads to change in the marketplace* (Davidsson, 2004). The purpose of entrepreneurship policy (Lundström and Stevenson, 2005) is directed towards this societal understanding of entrepreneurship as the commercializing output of innovation and the focus is on positive outcomes that change the production function and the economy by introducing innovation.

3. The Australian entrepreneurship policy environment

Australia as a sample frame of theoretical relevance Davidsson (2004; 2005), in developing his thesis on the conduct of entrepreneurship research, has argued that it is possible to draw highly generalisable conclusions from a sample of a very specific population if the sample has demonstrable theoretical relevance to the subject matter of the study. This line of argument follows the theory building rationale that describes research as an inductive process (Mintzberg, 1979; Eisenhardt, 1989) working from the data to produce a theoretical framework. Accordingly, we contend that the Australian entrepreneurship policy environment in the period between 2001 and 2006 provided a sample relevant to the drawing of conclusions that will be germane to many countries. Yin (1994) makes the point that particular cases can be used to generalize to theory and further notes that a single case can represent a significant contribution to knowledge and theory building when it tests what is considered to be well-formulated theory.

During the period between 2001 and 2006, the Australian federal government, led by John Howard as Prime Minister, had made explicit links to innovation and entrepreneurship in its policy statement, *Backing Australia's Ability* (BAA) (Commonwealth of Australia, 2001). This policy, released in 2001, acts as a primary reference point for this present study. The influence of this overarching statement affected many policy areas and in 2004, the government reconfirmed its ten year commitment to this policy by both extending and enhancing the programs and initiatives with a funding package to the tune of AU\$5.3 billion, allegedly to implement programs that were 'to foster innovation and turn great ideas into jobs' (Commonwealth of Australia, 2004).

Australia is a highly developed Western economy, with policy frameworks generally comparable to those of other OECD nations. Since 2000, Australia, via a team of researchers at Swinburne University of Technology, was a participant in the international GEM study. It was one of the many countries whose data were used as the basis of the Autio-1 study (Autio, 2005) and one of the nine countries used in the Autio-2 study (Autio, Kronland and Kovalainen, 2007). Australia is thus integral to the analysis and conclusions developed in those investigations.

While Australia's economy is small, in comparison with economies such as the United States of America (USA), it has similar dynamics that display variations across different regions. In most economies entrepreneurship policy is not concentrated but diffused among a complex array of regions with different characteristics and Australia, with its large land area, unevenly dispersed populations between east, west and central regions and economic and entrepreneurial activities varying between states, is no exception (Australia is a federation of six states and the Commonwealth federal

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Government). Therefore, if an analysis based on the Australian federal policy environment produces conclusions of interest, it will be possible to replicate the study in other OECD nations as a means of testing the generality of the findings.

3.1 How the Australian policy environment compared with Autio-2s recommendations

In this section the Australian small business and entrepreneurship programs of the analysed period are assessed against the criteria developed by Autio, Kronland and Kovalainen (2007). While Australian governments provided access to advisory programs and subsidies to professional advisers and consultants, the major Commonwealth support programs were designed to support technological innovation arising from knowledge transfer and commercialization of new R&D derived knowledge. As applied to new businesses, these policies are thus highly selective but not necessarily selective for high-growth or growth motivation. All grants involved achievement of milestones but were not always linked to growth aspirations. One result of the continuation of these programs was a number of high-performing and well experienced consultancies with a good track record of helping new firms to obtain support through the various Commonwealth government programs. However, these consultancies provided no guarantee of ventures with growth potential.

The driving initiative in almost all the Australian government programs had to come from the business or its owners. The exceptions were the role of case managers in the Australian COMET program, who had to go looking for clients, and venture capitalists in the Pre-Seed Fund program subsidized by government, who were even more highly selective in their approach. Autio, Kronland and Kovalainen (2007, p.75) notes that 'only a small minority of all entrepreneurial ventures are both motivated and able to achieve rapid growth'. Autio-2 uses this to support an argument for a proactive approach by government agencies to identify potential high-growth firms for support: '... a major reversal of the traditional SME support philosophy, under which SMEs approach support initiatives to seek solutions to problems and needs' (Autio, Kronland and Kovalainen 2007, p.59). Such a philosophy, adopted by Finland's *Growth Firm Service*, enabled '... the agency to implement a highly selective approach, as well as to address emerging needs even before these [were] necessarily felt by the client venture' (Autio, Kronland and Kovalainen 2007, p.59). Valuable initiatives in assisting such proactive selectivity in Australia, particularly by the private sector were the Deloitte (2006) and Business Review Weekly (Walker, 2006) lists of fast growing companies. Particularly for members of the Deloitte list, the application for a Smart Company award was often a starting point in identifying critical issues for firm development, whether or not those issues were already recognized by the firm applying for the award. These types of initiatives should have provided a vehicle for Autio-2s recommendation that high-growth policy:

'... involve close collaboration with private sector service provider; consistently address managerial motivation and skills; nurture an image of professionalism, competence and a certain degree of exclusivity; implement sustained and focused development efforts; involve seasoned managers who have experience in rapid growth' (Autio, Kronland and Kovalainen 2007, p.60).

Hierman and Clarysse (2004) in their study of high-growth firms in Belgium found resources and commercial/business skills as the significant factors affecting growth performance. Interviews by the authors of the GEM study in Australia showed that the major concerns both of public servants and industry practitioners were the shortage of

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seasoned and serial managers (and also serial business angels) competent to drive high-growth and the need for improved training and development to fulfil these roles (Hindle and O'Connor, 2005). These matters involve the private sector as well as government and educational institutions at all levels. Schools have been shown to have a role in creating awareness of entrepreneurial opportunities and forming one's own business (Langworthy, Mawson and O'Connor, 2007). Further, as the intensity of research may indicate (Béchar and Grégoire, 2005; Chia, 1996; Falkäng and Alberti, 2000; Garlick, 2000; Gibb, 2002; Hytti and O'Gorman, 2004; Koch, 2003; Zhao, 2004), universities need to be involved in awareness creation and in postgraduate high-growth management training. Yet there was only limited recognition of these needs in the Australian educational system and indeed in large areas of the Australian national innovation system (Yencken and Hindle, 2005; Yencken, O'Connor and Hindle, 2006).

In summary, the Australian Government seemed to recognize the importance of entrepreneurship – that is the activities associated with high-potential firms - but had shown few initiatives directly focused on it. The Howard Government in Australia claimed it had taken the lead in encouraging Australians to recognise the importance of innovation and entrepreneurship for Australia's future but seemed only to operate at the level of stimulating participation in business ownership with too little conscious attention to developing the skills and infrastructure necessary to affect the entrepreneurial quality and job-generation capabilities of early-stage Australian firms. By comparison with the 'Autio yardsticks', Australian entrepreneurship policy was:

- too diffusely located to be comprehensively accessible;
- too lowly positioned in the priority list of government economic and social policies;
- too little attuned to any credible focus on the businesses most likely to produce the highest proportion of new jobs;
- too prescriptive and presumptive about the set of characteristics that define firms that are most likely to be of most economic benefit to the nation;
- too reactive rather than pro-active.

Much of this failure to be daring and proactive may be a continuing legacy of the massive and laudable reluctance of Australian governments to get into the game of 'picking winners'. This legacy extends from the 1980s when governments were rightly pilloried for scandals such as the collapse of the State Bank in South Australia, the fiasco of the Victorian Economic Development Corporation (VEDC) in Victoria, the corruption of the 'White Shoe Brigade' in Queensland and the crony capitalism of 'W.A. Inc.' in Western Australia (Hindle and Gillin, 1991). We will argue in the concluding section of this paper that such policy reticence is an abrogation of responsibility rather than a rightful reticence to go where governments should not go. It is perfectly possible to distinguish the pro-active creation of conditions conducive to HEP firms from meddling, heavy-handed interference with processes more properly the domain of market forces than government patronage. However, at times government intervention where markets fail is also useful in supporting high-growth business activity. Accordingly, in the next section we develop, present and illustrate a policy framework that can, we argue, enhance the effectiveness and lower the risks for governments that are serious about developing policies to support entrepreneurship and the prospects of greater productive employment that flow from it.

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4. A comprehensive policy framework for technology HEP firms

In an attempt to articulate a policy framework that can achieve the ‘lighthouse’ policy goal described earlier, this section of the paper will utilise some vignette case studies of technology firms drawn from the Deloitte Fast 50 data base (Deloitte, 2006). The aim is to depict the varying characteristics of quite different growth venture profiles in juxtaposition with quite well-established areas of policy focus that most developed nations already have in place. Thus we are not suggesting a radical overhaul of the system of policy priorities prevailing in well-entrenched economies, policies and public service regimes. We are offering a liberating perspective on how established policy areas can contribute to the hitherto very elusive and highly idiosyncratic population of HEP businesses.

4.1 Growth context: entrepreneurial activity as a network of six components

Business participation is not synonymous with entrepreneurship; neither is growth-orientation (which is underpinned by an expectation of growth). Each is merely one of six components that can be said to offer a practically-actionable determination of ‘entrepreneurial activity’. At the level of the nation and of the firm, entrepreneurial activity is well described as a function of: participation, motivation, growth-orientation, innovative propensity, financial adequacy and entrepreneurial capacity (see Hindle, 2006, *passim*). In deciding upon how to support firms with appropriate ‘lighthouse’ policy, there is a need to consider the influence of the other **four** factors (i.e. those beyond mere participation in early stage venturing). We may regard the decision to participate in business or not as intrinsic to the entrepreneurial actors as is the choice or expectation to be growth oriented. ‘Motivation’ is at once so broad and so personal a factor that it can be considered as either what entrepreneurship policy is all about or that it is intrinsic to the firm and beyond the reach of external policy. This leaves three of the six entrepreneurial activity factors as overtly amenable to influence of government policy support initiatives. They are ‘innovation’, ‘finance’ in the sense of setting agendas that make particular industries attractive to investment and create the environment for adequate development of appropriate capital markets and intermediaries (such as angel and venture capital finance), and ‘entrepreneurial capacity’ which, at the national level, involves policies related to education and the achievement of pertinent demographics through immigration, skills enhancement and regional development programs. We now illustrate how these three factors interact by using case studies, taken from the Deloitte Fast 50 list of technology based firms. Though the inter-relationship of all three factors is the theme, the focus is on what von Bertalanffy (1968, pp.139-140) described as ‘equifinality’ and what less exalted systems theorists might call the fact that there is more than one way to skin a cat. We can get the same desired result, in our case high-growth firms, from many different strategic approaches. Since innovation, we argue, is at the heart of growth strategy, we focus on it.

4.2 A variety of ‘innovation’ trajectories

Currently, eclectic support for technology and research and development is commonplace — and certainly was a feature of the Australian policy environment of the period of this study — as these factors have been shown to contribute to innovation (Aghion and Tirole, 1994; d’Aspremont, Bhattacharya and Gérard-Varet, 2000; Gans and Stern, 2003, Hull and Azumi, 1991; du Pre Gauntt, 2004). However innovation has often been considered, too narrowly, to deal specifically with new product development (Jensen and Harmsen, 2001; Katila and Ahuja, 2002; Matusik, 2002; Romano, 1990; Shepherd and Ahmed, 2000) and we argue that businesses based on this strategy represent only some of the total number of HEP businesses. Teece (2000, p.35) has aligned superior firm performance with innovation through ‘flows from the creation, ownership, protection and use of difficult-to-imitate knowledge assets’. However, firm

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performance can also mean different things to different people. For example innovation has been claimed to be the cornerstone of competitiveness (Denton, 1999; Jäggle, 1999; Johannessen, Olaisen and Olsen, 1999; Neely and Hii, 1998) and profitability (Bose, Oh and Thomas, 2002; Roberts, 1999). The role of innovation in a firm's strategy is further said to contribute to competitive advantage (Johannessen, Olaisen and Olsen, 2001) and is responsible for the acquisition of market share (Robinson, 1990). Clearly innovation can be responsible for all types of business performances and, not all of these may be aimed at delivering substantial business growth that is destined to deliver economic benefit to a broader community.

Furthermore, many of the studies mentioned above rely on an historical record of performance to establish the relationship with innovation. However, the concern of government policy is the future performance of firms, particularly HEP firms. Therefore, a more precise classification system of factors that influence growth could be extremely valuable in determining the types of support structure that might be useful. A blanket, fuzzy reference to innovation is too imprecise and a tighter taxonomy is needed on the relationship between innovation and growth in order to locate policies that can have a direct impact on a wide range of different possible business types and trajectories.

To illustrate how varied the entrepreneurial play-out and payout of 'innovation' can be, examples can be drawn from the data bank contained in the *Deloitte Technology Fast 50 Australia 2006 Report*. This is a data set featuring a range of technology ventures that have experienced growth based upon a compound increase in revenue over the three previous consecutive years, expressed as a percentage. In these businesses, we find, of course that innovation in science and technology is fundamental to each business due to the nature of the list itself. However, the trajectory of venture growth paths may be and often are distinctly different. For instance, the business RedBalloon Days (ranked 37 with growth of 193 per cent) is essentially a service business that makes available a range of experiential gift ideas to purchasers over the internet. These gifts range from helicopter flight tuition to wine and cheese tasting. Internet, secure purchasing and communication technologies are all fundamental to this business but are common advantages, readily available to many businesses. The truly distinctive advantage for this firm is likely to be its unique and convenient service offering, which is most probably responsible for the firm's growth. In this case, technology was an enabler, but the service offering was the key to achieving high-growth. It might also be added that the sheer novelty of this sort of service has meant that market demand has had to be stimulated rather than the firm being able to rely on existing demand.

In other cases, a business may incorporate new technologies into products that serve generally mature industries. Another example, Intellection Pty Ltd (ranked 31 with growth of 245 per cent), incorporates innovative technologies in products that are offered into the geosciences, metallurgy, mining, oil and gas industries. Intellection serves analytical laboratories with advanced equipment for the quantitative analysis of minerals, rocks, particles and metals, a market with a recognisable need for better analytical devices. The growth of Intellection can be attributed to an innovation in technology. However, policy that supported only high-technology innovative industries (biotechnology and nanotechnology for example) would fail to identify growth businesses that might blossom in markets that might be too readily dismissed as 'mature' and offering no business growth opportunities. A different type of example is the company Blackmagic Design Pty Ltd (ranked 26 with growth of 282 per cent). In this case, it was a differentiated product that had the most influence on rapid growth of the firm. Blackmagic Design operated in the computer industry, a sector that is characterised by high levels of competition. The combination of Blackmagic's particular niche

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market's demands, plus leading edge software and hardware, has successfully differentiated the company and provided an avenue for growth. Again, policies only aligned to new and emerging markets could fail to assist firms operating in mature, crowded or competitive market environments.

The first punchline is that an undifferentiated or vague commitment to 'innovation', in the absence of a carefully selected market strategy, is not likely to provide the right ingredients for growth. The second punchline is that there is a huge variety of ways in which a well-defined approach to 'innovation' can contribute to fast growth and success. Admittedly, in the Blackmagic case, the company's market selection was dictated by the founder's extensive experience in post-production, editing and engineering in film and video production. This further reinforces our argument that government support for 'innovation' is necessary but insufficient for stimulating high-growth business.

Innovation is most demonstrably connected to growth in the Deloitte Fast 50 list and when one considers the top ten fast growing companies, they show growth rates ranging from 1,079 per cent through to a massive 6,846 per cent. Industry sector variety is prominent and included communications, payment systems, biotechnology and software, which all may be considered emerging industries. Most of these businesses are currently providing definable products and services, although at times the product and service distinction becomes blurred as may be illustrated by the case of Customers Ltd (ranked three with growth of 5,021 per cent).

Customers Ltd was in the payment systems industry sector and its primary product was automatic teller machines (ATMs). However if one was to consider just the product, the advantage of the business offering would be lost. Growth for this business is strongly supported by certain enabling technologies in communication and transaction processing and by advances in product design and the provision of support services. Furthermore, Customers Ltd has stimulated demand by locating the customer value proposition for the client as an enhancement of customer service levels by facilitating easy access to cash in their own premises. In this case it was and is the total, 'bundled' offering by the firm that provides the essential ingredients for growth. This suggests that government policy designed to develop high-growth business requires attention directed to each of these elements in order to extract the highest benefit from any support investment in 'innovation' assistance.

A final case concludes the argument that no vague panacea or over-specified approach can hope to embrace the complex variety of ways in which, as we have said, innovation plays-out and pays-out as a means of helping firms achieve high-growth. While we have argued that both service and product orientations can provide avenues for business growth, one case in the top ten of the Deloitte list further confounds precise definition of either of these categories. Binomics Ltd (ranked seven with growth of 1,454 per cent) is classified in the biotechnology industry sector and its business attended mainly to the development of intellectual property by operating a fully-integrated drug discovery platform. Discoveries were 'on sold' to commercial drug companies through its partnership network, who had an identified demand for new solutions. This form of business further illustrates the diversity of business models and therefore the range of considerations that must be incorporated into the support mechanisms provided by government to foster HEP businesses.

4.3 A comprehensive policy framework for HEP firms

We now seek to present a policy framework for providing assistance to that elusive minority of all early-stage businesses, the HEP firm. We have coined and used the acronym HEP because the 'E' in it stands for 'entrepreneurial' – distinguishing these

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firms from the mass of me-too, non-aspirational, low growth expectation firms – and the ‘P’ stands for ‘potential’ – where the measurement of real potential involves assessment of a range of tangible factors that well exceed mere nebulous ‘expectations’.

Even the very brief suite of case vignettes provided above is sufficient to demonstrate that firms adopt all manner of product/service and customer solutions. Prescribing ‘high-growth expectations’ by a business owner as the basis upon which to construct policy ignores the complexity involved in identifying and capturing high-growth business opportunities.

Figure 1, below, is a diagram presenting a framework that offers policy makers the ability to match a wide variety of HEP business profiles with the presence or absence of support programs in the major policy areas currently prevailing in a particular government’s existing policy portfolio. The left hand side of the figure is a tree diagram whose various ‘boxes’ can be used to map the characteristics displayed by any particular venture coming under consideration for any reason (say the award of a grant under some particular government program). Imagine starting with the tree diagram completely blank of any shading. By shading in a given set of boxes, you will effectively describe a meaningful and distinct venture profile. The right hand side of the diagram embraces the range of established government policy focus, arranged under the headings of entrepreneurial capacity, finance and industry, innovation and market as areas that would deserve attention if a government were to influence the creation and growth of high potential businesses. Figure 2 exhibits the case of Customers Ltd and shows the boxes shaded to represent the Venture Profile of this particular case.

INSERT FIGURE 1 ABOUT HERE

INSERT FIGURE 2 ABOUT HERE

This approach to mapping the policy and venture profiles allows policy-makers to assess the relevant policies germane to a particular type of HEP firm. Similarly, it also highlights the type of venture that any particular policies might influence and exposes the gap between actual policy and preferential policy with respect to influencing the emergence of HEP firms. The example set out in Figure 2 adopts the former approach and therefore the policies that would foster the development and growth of this HEP business should be identifiable in policies that influence for instance the emergent industry, product and process innovation, the service and product innovation strategies and the stimulation of demand for the new market offering. Policy may not be directed specifically toward the venture but more generally to the areas that businesses of this nature are likely to find the most difficulty. An example of this may be where the venture is seeking to open a new market, marketing and sales support subsidies or rebates might be best leveraged by the firm to create early sales and demand for the new market offering. Having created the early demand and subject to market acceptance the product/service offering would establish itself and the market dynamics would be created.

5. Discussion

Due to a growing body of research on entrepreneurship and its influence on economic development, global interest in entrepreneurship policy has been escalating (Lundström and Stevenson, 2005). Although it is admitted by researchers that the relationship between entrepreneurship and economic development is complex, there is strong

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evidence that governments are able to enhance economic development by influencing conditions for entrepreneurship. Hart (2003) expresses his optimistic view on entrepreneurship policy and argues that public policy:

... means the intentional use of the powers of government to effect a societal outcome, like a change in the number of entrepreneurial ventures (Hart 2003, p.8).

Entrepreneurship policy must first be clearly distinguished from all other policies in general and small business policy in particular. Whereas small business policy covers one hundred percent of all firms in the SME sector, irrespective of their entrepreneurial potential, entrepreneurship policy should endeavour to focus on the extreme minority of firms capable of a disproportionate percentage of future job growth. These cannot be defined simply as 'high expectation' firms. Proactive policy needs to go beyond what may be unrealistic 'expectation' and deal with feasible 'potential'. Difficult as they may be to distinguish and categorise, minority though they may be among all early-stage firms, it is with HEP firms, as we have defined them that any entrepreneurship policy, worthy of the name, must deal.

This is not to say that entrepreneurship policy need necessarily be brought into its own discrete and isolated policy 'box'. Inevitably, some aspects and initiatives germane to HEP firms will be generated and properly belong under the established auspices of existing policy areas: economic policy, regional development policy, education policy, innovation policy, *et cetera* – even, dare one say it, small business policy! So long as the policy initiative clearly expresses a direct address for the emergence of HEP businesses, and this initiative can be brought into the context of all other such initiatives, it does not matter where it is formally housed in the established policy hierarchy. Entrepreneurship policy truly requires a whole of government approach.

That is the virtue, we feel, of the policy framework developed in this paper. It facilitates an accurate focus on HEP firms, while recognising their diversity as much as their similarity, and links that focus to the relevant set of policies (including policies that do exist and those that should exist) affecting those firms.

Entrepreneurship policy is something that can be effective on different levels, including federal-level initiatives and more regional and local initiatives. It can also vary in terms of strategic horizon. Some initiatives are more long term than others. Recent literature suggests different ways of categorising different initiatives as well as the way they are intended to influence entrepreneurship (e.g. Dreisler, Blenker and Nielsen, 2003; Smallbone and Welter, 2001; Lundström and Stevenson, 2005). All-together, the general understanding is that depending on the nature of entrepreneurship, different short term and long term initiatives can be designed and implemented. Thus, efficient entrepreneurship policy depends on the current situation in the region and where this region intends to go. Lundström and Stevenson (2005) argue that making entrepreneurial policy is contextually influenced. Thus, design and implementation of entrepreneurship policy needs to consider the general economic and social conditions and the nature of entrepreneurship activities within a country in order to be successful. Dreisler, Blenker and Nielsen (2003) put it this way:

The choice of strategy depends on whether the target groups: have a positive or a negative attitude towards what is socially desired, and are engaged or not engaged in socially desired action. (Dreisler, Blenker and Nielsen 2003, p.383).

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Thus, entrepreneurship policy has, in many countries become of crucial importance as a recognised and targeted means of enhancing national economic development. However, in order to design and create effective entrepreneurship policy, policy makers need two principal tools: they need evidence in the form of reliable, well-designed research and they need a well-designed framework to help them through the complexities of the multi-faceted, multi-disciplinary field of entrepreneurship. These tools, of course, can only be effectively used in the context of empathetic consideration of the specific national or regional conditions that apply in particular areas. Effective policy can only be developed in correspondence with these conditions. It is therefore essential, first, that policy makers have access to reliable and valid data on the nature of entrepreneurship in their countries. This issue has been addressed in another work (Hindle, 2006) and has simply been taken as a given for this paper. In the absence of a well-structured research base and a well-designed policy framework, policy directions might be completely wrong and targeted at the wrong people.

The Australian Government policies, during the period of 2001 to 2006, recognized the importance of entrepreneurship and provided an interesting context within which to consider the challenges faced by technology-based HEP firms. The Australian Howard Government seemed only to operate at the level of stimulating broad participation in business ownership and supporting technological innovation, knowledge transfer and commercialization of R&D. These worthwhile programs, when viewed through the lens of the policy framework developed in this paper, are isolated initiatives focused within the industry and innovation segments of the framework and are disconnected from the broader, holistic policy framework necessary to facilitate the growth of ventures rich in technology-based innovation. More business participation and more R&D commercialisation do little for the technology-based firms positioned for growth. The increasing participation and commercialisation approach to policy ignores the market trajectory challenges and other finance and human resource infrastructure support needs that are essential for converting technology-based HEP firms to actual high-growth performance.

This paper has addressed the urgent need for the second tool: a framework for integrating the existing (and missing) policies currently resident in a wide variety of policy locations and focusing them on the right target: the HEP firm. We commend the framework to the attention, usage and critique of both entrepreneurship policy makers and entrepreneurship researchers and suggest its value lies in its ability to assist policy makers in navigating between policies that pick winners and those that deal with market failure.

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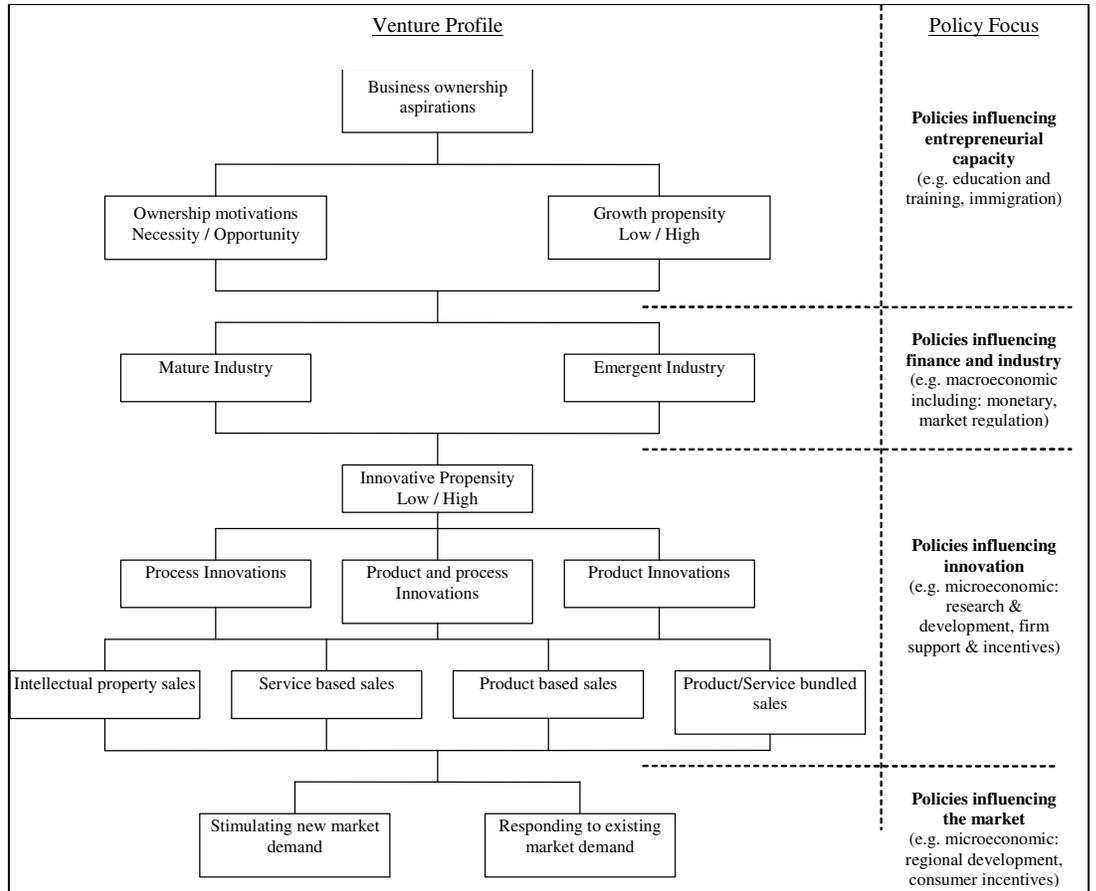


Figure 1 The High Entrepreneurial Potential (HEP) Business Support Framework

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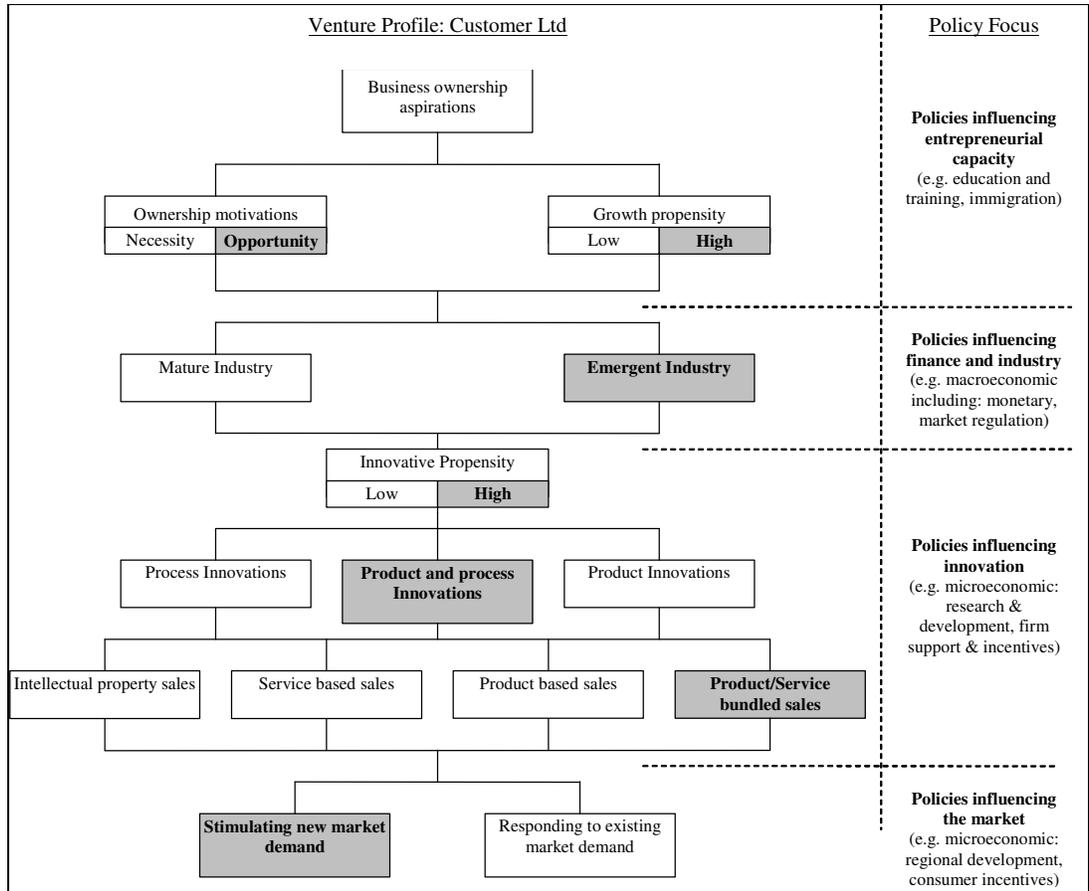


Figure 2 Venture Profile and Policy Support Availability for ABC Company