

Committee Secretary
Standing Committee on Science and Innovation
House of Representatives
Parliament House
CANBERRA ACT 2600
AUSTRALIA

Submission No. ... 51

02 May 2005

Dear Sir/Madam,

Re: Standing Committee on Science and Innovation - Inquiry into pathways to technological innovation

I refer to the request for submissions to the above mentioned Standing Committee and am pleased, on behalf of my firm, Momentum Funds Management (MFM) to make the following brief submission.

MFM was established in 1997 to tender for one of the Innovation Investment Fund licences that were to be awarded that year by the Federal Government. In the event we were one of five successful tenderers and launched our IIF – the \$30 million Momentum Ventures Unit Trust – in December of 1998.

It is worth noting that even at that time, well before the “tech wreck”, it was difficult for most of the IIFs to raise private equity, notwithstanding the attractive financial leverage offered to private investors under this Federal Government initiative.

In the event our Fund began its operations in early 1999 and subsequently made investments in twelve businesses with activity across a broad spectrum of technology sectors. We have supported companies in the IT, Telecommunications, Biotechnology, Manufacturing, Technology Services and Plastics industries.

At the end of six years of activity we have written off four of the investments while the remaining eight are progressing, albeit at different paces. As the Manager we are happy with our performance to date and confident that we will provide our investors with returns on their investment very much in line with our initial forecast.

We will have assisted in the global commercialisation of eight innovative technology Australian companies who have grown their employment from approximately 20 individuals in 2001 to over 120 today and are generating revenues in excess of \$12million.

By and large we would call our performance “vanilla” for the early stage venture capital business that we represent.

In the course of putting our portfolio together we must have actively assessed over 150 companies and briefly looked at nearly 300 others.

We were and remain impressed with the range and quality of early stage Australian technology innovation.

We are however deeply concerned as to the future of this segment of the capital market.

The plain fact of the matter is that there is a current dearth of early stage professionally managed Venture Capital in Australia.

The number of “funded” VC Managers (Funds with available capital to invest in early stage innovative technology businesses) can be counted on one hand. Indeed in Melbourne there is only one active VC Fund – Starfish – and with over \$130 million in their new fund to deploy they will be looking at the later stage business deals.

(It is important to note that the basic rule of traditional venture investing is that an individual professional VC manager can actively and responsibly handle a maximum of 5-6 deals at any one time. Given that it takes years to accumulate the necessary experience to be a successful VC, most Fund Managers run small teams. Even a Fund of the size of Starfish would not have more than 5-6 Investment Professionals. As a result a typical fund portfolio would involve a maximum of sixteen investments. With over \$130 million to deploy Starfish would be looking to commit \$6 –10million over the life of each of its deals. This is generally a sum far too great to commit to an early stage deal. The capacity of the early stage deals to absorb large amounts of capital does not exist, particularly if the founders wish to retain a majority of the equity in their company.)

Further complicating the issue is the total reluctance of Australia’s institutional investors to commit to Management teams active in the early stage VC area. Their arguments vary. On the one hand they say that the sector is still unproven. There are no management teams with a proven “track record” of success. While this is undoubtedly true, it is not at all surprising given the average ten year life cycle of all funds. At age six, the Momentum Fund is only now in the latter stages of the “nurturing phase” of its life cycle. We anticipate to begin financially “harvesting” our investments over the next 2-3 years. It is hard in these circumstances to show a successful track record even though a number of our portfolio companies are, by any measure, evidently very valuable.

Another Institutional argument is that they will not acquire more than a 10% interest in any Fund. Given the economics of early stage VC investing, an ideal Fund size is between \$40-60million. Applying the institutional criteria to these numbers the maximum any individual institution would invest in an early stage Fund would be \$4-6million. For almost all of Australia’s major superannuation Funds these are ridiculously small numbers and don’t justify the effort to undertake the due diligence necessary to assess the investment and the investment risk.

The net result of all of the above is that the flow of capital to professional early stage VC Funds Management teams has slowed to a bare trickle.

For the large number of early stage technology companies that are being encouraged by various governments and government programs to advance their businesses there is likely to be almost nowhere to go when the time comes to raise sums of capital in excess of the initial "angel" capital from family and friends.

In the USA this issue was addressed early on by the Small Business Administration (SBA) who control the Small Business Investment Corporation programme after which the IIF was modelled.

The SBA took the long term view that if a management team had passed the rigorous review and due diligence reference checks that preceded the awarding of an SBIC licence then they should be presumed to be entitled to receive at least one and most likely two additional licences. This was understood to be necessary to cover the situation where a first fund was fully deployed over a 3-4 year period (without any realisations and therefore no "track record") and where even by years 6-7 the fund had not "harvested" its initial investments. Having the ability to maintain their investment activity was understood by the SBA to be essential to the professional Fund Manager. How else could the management teams meet the needs of the potential investees that kept approaching them and maintain the enthusiasm and skills of the senior managers that are required.

By contrast, in Australia the IIF licences were "one-off" events. Almost all the existing IIF Fund Managers have struggled to raise new funds.

While it is by no means a given that, even with an IIF licence, a Manager could raise the required private equity, there is no doubt that the attractive leverage structure of the IIF/SBIC makes the likelihood of a successful raising much more likely.

It is against this background that the call has gone out from Victor Bivell the Editor of the Australian Venture Capital Journal for a new IIF round. (see attached).

It also reinforces the key messages regarding the scarcity of early stage Venture Funding that are amongst the key findings of the recently released Westpac GEM report. (see attached).

In summary, it is the strong contention of MFM that Australia is fast approaching, indeed may already have arrived at, a situation where economic growth driven from the commercialisation of innovative technology will grind slowly to a halt as the increasingly desperate search by entrepreneurs for patient, smart private equity goes unsatisfied.

It is time for governments at the Federal and State level to proactively address these challenges.

Ron Finkel on behalf of Momentum Funds Management.

Victor Bivell
Editor, Australian Venture Capital Journal

The Federal Government's current major review of the Innovation Investment Fund (IIF) Program is good news - at last someone, somewhere is taking an interest in the seriously out of fashion early stage technology sector. The fact that it is the Federal Government, which so far has committed the biggest cheque of anyone in Australia to this sector, is also good news. While no one can pre-empt the Review's findings, which theoretically could even recommend closing the program - I firmly believe that the Review is the best time for the Government to undertake another round of funding for the Program. The best reason for another funding round is the theory of counter cyclical investing, which the Government (along with almost everyone else in Australia) has so far failed to implement. Vintage year theory works. In fact, timing is just about everything in venture capital. And timing is almost always a subset of luck. When it's not, the next most likely reason is experience. And that Australia has.

The main problem with the long defunct MIC program was that it commenced in 1984. Managers were buying in a boom time and when the stock market crash came in October 1987 they became sellers. Buying in a boom and selling in a crash is about as unlucky and inexperienced as investing can get. So bad was the crash that technology was out of fashion among investors until the US sparked another boom in 1998 that swept the western world and was irresistible to all - even Australian investors and the long chastened Federal Government. But-it happened again. The new program, the IIF Program, came along at the start of the boom and Australian VCs were once again, with only a few exceptions, buyers in the boom and sellers in the bust that soon followed.

Let's not do it again. The right way is to buy in the bust and sell in the boom, as shown by Australia's buyout managers, who bought in the bust of 2000-02, and for the past two years have been very happy sellers indeed. For technology, the bust is still now. Venture capitalists should be buying, building their portfolios, making sure they have enough stock to sell when the next uptick comes, however long that may take. The second IIF round was in October 2000 - four and half years ago. Since then the sight of fully committed managers sitting on their hands for two or three years and possibly more just waiting for an exit so they can free up some cash is not what venture capital should be about.

One problem for the Government may be persuading reluctant institutional investors to co-invest in a third round. But among the institutions there is now a core of believers, and if they are not enough the Government has the scope to offer as much or as little carrot to investors as it needs to. And who should get the money? In both previous rounds the Government has got it right - a nice blend of experienced managers and new blood. The Program is now advanced enough for the Government to have a good idea of which managers are performing. Some money should be used to top up those managers who deserve it, and the rest go to one or two new managers who want it badly enough and are mostly likely to succeed. Under IIF the Government has put over eight years and together with

investors \$358 million into creating a viable and self sustaining venture capital sector in Australia. We are still not there, but we are certainly a lot closer than we have ever been.

The future of later stage private equity in Australia is assured for the next few years because the sector now has a dozen or so managers who have proven they can deliver excellent returns to investors and have no difficulty in raising new capital. They have won the confidence of investors.

The early stage venture capital sector also needs to have a dozen or so managers who, like their buyout colleagues, have proven they understand the game and have a serious track record that comforts and inspires the investors. That dozen still does not exist. Third time 'lucky', or perhaps that should be 'third time experienced', might get Australia there.



**Global Entrepreneurship Monitor
2004**



Westpac GEM Australia

A STUDY OF AUSTRALIAN ENTREPRENEURSHIP IN 2004

Kevin Hindle & Allan O'Connor

Westpac

Business Bank



Westpac *GEM Australia*

A Study of Australian Entrepreneurship in 2004

Kevin Hindle | Swinburne University of Technology
Allan O'Connor | Swinburne University of Technology

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Preface

Peter Herington
General Manager Business Banking
Westpac Banking Corporation



The Global Entrepreneurship Monitor (GEM), both internationally and in Australia, is an independent research project provided in the public interest. GEM research has created a valuable, growing database and challenging explorations of the nature, extent and effects of entrepreneurship in the social and economic life of individual nations and the global community. Since the inception of the project in 1999, GEM data and insights have been provided by some of the world's best entrepreneurship researchers, working in independent but strongly coordinated national teams. During the last six years, more than 40 sponsored national teams have participated in GEM and it is expected that the number will grow. GEM constitutes one of the largest multinational social research projects in history. Westpac is proud to sponsor the Australian GEM research team based at Swinburne University of Technology's Australian Graduate School of Entrepreneurship and led by Professor Kevin Hindle. They conduct the Australian component of this multinational research. Their independent work culminates in an annual report – the Westpac GEM Australia Report – encompassing the key features of Australia's entrepreneurial activity and environment.

In the pages of this comprehensive document every interested Australian can find, and is free to use, detailed data on six components comprising the pattern of national entrepreneurial activity: participation, motivation, innovation propensity, growth orientation, finance and entrepreneurial capacity. The data apply to three stages of owner-operated businesses: *start-ups* (firms aged three months or less), *young firms* (aged from three to 42 months) and *established firms* (aged more than 42 months). GEM findings are particularly useful with respect to early stage owner-operated businesses (start-ups and young firms). Prior to the advent of GEM research this component of the Small and Medium Enterprise (SME) market suffered from a dearth of research. I believe that the current document, *Westpac GEM Australia: A Study of Australian Entrepreneurship in 2004*, is the most trenchant and challenging in the five-year history of this important project. There is simply no getting around our national need to confront the fact that, currently, Australia's entrepreneurial performance and support environment are simply not as strong as they need to be to meet the long-term challenges of international competition in the present century.

At Westpac, we agree with the GEM research team in our desire for the revelations of the GEM data to be a positive inspiration for Australia's business community. Very slight changes in perception, attitude and behaviour could pay big dividends, particularly as they relate to the Australian SME sector's resistance to innovation and growth orientation. It will not take much effort to produce marked improvement in the entrepreneurial flair and value of many enterprises, but it will have to be a highly focused effort and the GEM research indicates the areas where the focus must be. Education and sensible government policies will help a lot, but ultimately it will be Australia's own business people who must drive or block the emergence of a more entrepreneurial Australia. At Westpac, we are actively developing a range of products and services specifically targeted to helping dynamic, early-stage businesses because, in common with the GEM research team, we believe that even a small enhancement in the dynamism, innovation propensity and growth orientation of Australia's SME sector could provide substantial and multiple benefits to business owners, their customers and the community at large.

I commend this report to every Australian interested in building a more dynamic and prosperous Australia.



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Executive Summary

DOMINANT THEMES IN 2004

GEM provides a rich, complex database fraught with issues that might easily be called 'key'. Selectively choosing just a few for discussion of their implications is a judgment call that is forced by constraints of researcher time and documentary space. We have selected the following as the key issues whose implications should predominate in the thinking of four constituencies: the general public, the research community, policy makers and business practitioners.

There are eight key issues emerging from GEM Australia research covering the calendar year 2004.

- **HIGH VOLUME, LOW QUALITY NEW VENTURING.** Australia consistently displays relatively high rates of business participation, especially in the start-up phase, but growth intentions (through both export and technology) and incorporation of innovation are low despite a high claimed level of opportunity motivation.
- **GETTING WORSE? 2004** shows an undesirable increase in necessity motivation and the ratio indicator between necessity and opportunity has declined to below the level of 2002. This may indicate that, while the quantity of our new venture participation is increasing, it is possible that the quality of our early-stage venturing – already low – may be declining.
- **MISUNDERSTANDING OF 'INNOVATION'.** The major frame of reference on 'innovation' for the Australian business community seems to focus more on differentiation from competitors than newness to customers or the incorporation of new technology. This particular problem is part of a far wider misunderstanding about the complex nature of innovation and its relationship to entrepreneurship. This issue can be addressed through a focused, national educational effort.
- **A FINANCIAL MARKET GAP.** The financial markets do not appear to cater for home-grown new ventures that have genuinely high growth potential. The angel market seems to be in decline and, although the classic venture capital market shows signs of reversing a declining trend, net financial market dynamics with respect to new venturing will probably have a negative affect on the ability of new, high growth potential ventures to receive sufficient start-up and growth capital for survival. Accordingly, the nation must develop and maintain a financial support environment conducive to the creation and growth of high-quality start-up and young businesses.
- **LOW PRIORITY, FRAGMENTED GOVERNMENT POLICY.** In the previous four years of GEM Australia reports the longitudinal data are consistent with the views expressed by the calendar 2004 expert key informants. Governments, state and federal, just do not understand entrepreneurship and cannot prioritise it adequately as a policy issue. What passes for 'entrepreneurship policy' is accordingly diffused, fragmented, ill directed and ineffective. In the past, GEM Australia has been guilty of placing too much emphasis on the too few positive aspects of entrepreneurship policy in Australia. The time has come to place the emphasis where it belongs: on the negative. Current and projected entrepreneurship policy in Australia is too little, too ill focused and too ill informed to serve the nation adequately.
- **EDUCATIONAL FAILURE.** The nation must develop education and training programs with a specific emphasis on increasing entrepreneurship in the curricula of our key educational institutions from kindergarten to university.
- **MIDDLE OF THE ROAD COMPLACENCY.** Most of the factors contributing to national entrepreneurship that expert key informants perceive to either bolster or inhibit Australia's entrepreneurial performance neither lead nor lag other nations when compared with international expert opinion. This makes it possible to take one of two attitudes: justification of mediocrity or commitment to improvement. We might say, "Well, on balance, as an entrepreneurial nation Australia is really no worse than anyone else" and rest on rather thin and patchy laurels. This sums up the current aggregate national attitude to entrepreneurship. Or, we realise that our 'middle of the international road' status provides no grounds for complacency and treat the fact that most countries display a good deal of sub-optimal entrepreneurial performance as an opportunity rather than a brake.
- **INADEQUATE ENTREPRENEURIAL CAPACITY.** In aggregate, the nation simply lacks the entrepreneurial capacity to create globally competitive, high-emplying businesses and is doing very little to address the deficiency. Key constituencies, including both business practitioners and policy makers, don't seem to understand the crucial differences between the traditional skills and training needed to assist small businesses with the basic tasks of managerial competence as distinct from the radical skills and training needed to create and develop genuinely innovative high-growth-potential businesses.



MAJOR OBSERVATIONS

This year (following methodological recommendations articulated in a paper by Hindle [2005]) we have adopted a formally structured matrix approach to presentation, analysis and discussion of the annual data produced by the GEM project. The equation analogy (applicable to each stage of the entrepreneurial process – i.e. start-ups, young businesses and established businesses) argues that:

TOTAL ENTREPRENEURIAL ACTIVITY = PARTICIPATION + MOTIVATION + INNOVATION + GROWTH + FINANCE + CAPACITY.

1. **PARTICIPATION.** Australia continues to experience high levels of business ownership in all three stages: *start-ups* (businesses aged three months or less); *young* businesses (businesses aged more than three but no more than 42 months) and *established* private businesses. When compared to the 34 participating nations in the 2004 GEM cycle, Australia ranks seventh on overall business ownership participation. Combined early stage activity (i.e. the percentage of a nation's working age adults involved as proprietors in either start-ups or young businesses, but not double counting those involved in both) is measured by the PEP Index (Percentage of Early-stage Participation).¹ Australia has an early-stage business participation rate of 13.4% and, in comparison with the composite three-stage participation rankings, slips one place to eighth in the list of all 34 countries. When comparison focuses on the 20 developed GEM countries, Australia is ranked third.
2. **MOTIVATION.** Early-stage Australian business participation continues to be highly dominated by those seeking to pursue opportunity (10.7% of the population participating) rather than entering business ownership out of a necessity motivation (2.5% participating).
3. **INNOVATION.** GEM allows us to look at three aspects of innovative propensity: product/service novelty, competitor differentiation and use of technology. On all three measures Australian enterprise performs poorly. In aggregate, the businesses created by our entrepreneurs are not innovative.
4. **GROWTH.** Many definitions of and approaches to entrepreneurship (stretching back to David Birch's characterisation of abnormally high-growth-potential ventures as 'gazelles') stress the importance of commitment to high growth as a distinguishing feature of a truly entrepreneurial venture. GEM provides two measures of growth orientation: *the intent of owners to grow their businesses* and *export orientation*. As indicated

by these measures, in aggregate, the businesses created by our entrepreneurs are not growth oriented.

5. **FINANCE.** Formal and informal capital markets are adequate for the sub-\$50,000 early-stage requirements of 'me-too', non-innovative, low-growth oriented start-ups and young firms. However, the capital markets are not adequately able to fund the capital requirements of Australia's (all too rare) high-innovation, high-growth-potential early-stage ventures (gazelles).
6. **ENTREPRENEURIAL CAPACITY.** Finally, there can be no pretence that 'total' or 'national' entrepreneurial activity has been even summarily covered without addressing this issue. Simply stated, *entrepreneurial capacity* is the ability of the people involved in a new venture to do what is required to make it an entrepreneurial success through application of the knowledge and skills those people possess. Entrepreneurial capacity comprises the collective characteristics, experience, knowledge and skills embodied in a firm's human and capital resources.

EXPLANATIONS

The factors most strongly associated with entrepreneurial participation are: belief you have the skills to start a business, knowing someone who started a business in the last two years and perceiving good business opportunities in the next six months.

The explanation of our low national propensity for innovative and high-growth oriented venturing lies fundamentally in the domains of *cultural and social norms* and *education* (which is the domain most responsible for affecting and changing cultural and social norms). GEM data indicate that the education and training that is misperceived as 'entrepreneurship education' is not even effective at the lower level of providing basic business skills. In a nutshell, we are a non-entrepreneurial nation because we have a predominantly non-entrepreneurial culture and our education system is failing to change the culture and the attendant entrepreneurial capacity of Australians.

IMPLICATIONS

AS A NATION, DO WE CONFRONT OR IGNORE OUR NATIONAL ENTREPRENEURIAL MEOCRITY?

Essentially, Australia has to face a very unpalatable fact. Although Australia has high participation rates in business ownership when compared to other developed nations, this is not a component of entrepreneurial activity in which we can take any real joy because the low entrepreneurial *quality*

¹ This used to be called – and by many GEM countries and the global executive team is still called – the 'TEA Index' (for 'Total Entrepreneurial Activity'). The Index does not remotely approach proxy status for the full complex of variables that make up the total of entrepreneurial activity in a given country in a given year. Accordingly, GEM Australia (following Hindle 2005) names the index for what it actually measures: the percentage of the population participating in early stage business venturing. This measure is a necessary component but not a sufficient indicator when one seeks to evaluate the entrepreneurial status and behaviour of a nation.



of our new venturing activity and our new venturing environment are more important than the relatively high quantity of owner-operated businesses. When the other components of entrepreneurship are factored in (motivation, growth-orientation, innovation, financing and entrepreneurial capacity), Australia's national entrepreneurial performance is mediocre. In aggregate, our educational institutions and policy-making apparatus are not helping to raise the standards. Our media and national commentary machinery are not voicing concern or sending a sufficient volume of relevant messages. There is no national sense of urgency about these problems. In summary, when it comes to entrepreneurship, we are a nation of quiet under-achievers. And we're happy with that. This may be a short-term recipe for long-term national failure.

IMPLICATIONS FOR THE GENERAL PUBLIC

Deep-seated cultural inertial factors can only be overcome through the education system, and the general public simply will not scream for more entrepreneurship education. If entrepreneurial inertia and apathy are not to prevail, entrepreneurship education itself needs high-profile champions to articulate and fight for the cause.

IMPLICATIONS FOR THE RESEARCH COMMUNITY

One recommendation is made:

Research Recommendation. The GEM Australia research team recommends the financing and conduct of a study into the current status and effectiveness of entrepreneurship education in Australia.

This is a call to social scientists in general and entrepreneurship researchers in particular to apply for an ARC (Australian Research Council) large grant to conduct a critical evaluation of Australian entrepreneurship education in a national and international context.

IMPLICATIONS FOR THE POLICY MAKING COMMUNITY

FINANCE. To halt the decline in the angel market, policy measures will need to be implemented and in Australia perhaps a combination of savings and investment incentives with off-set tax concessions might help to induce more angel investment.

ENTREPRENEURIAL CAPACITY. In a nutshell we are nationally inadequate at turning good ideas into good businesses. This is a legitimate issue for public funding. One recommendation is made:

Policy Recommendation. The GEM Australia research team recommends the financing and conduct of a feasibility study for the establishment of an Australian Institute for the Study of Entrepreneurial Capacity (AISEC) with the objective of

facilitating and enhancing Australia's development of innovative growth-oriented new ventures.

One of our 2004 GEM Australia expert key informants suggested that the most suitable model for an 'Australian Institute of Entrepreneurship' might be the Australian Institute of Sport, even if the former has to live on a much smaller budget. We do not recommend the immediate establishment of such an Institute. We simply recommended a feasibility study to explore the most suitable structure and possible funding sources for such an Institute, having regard to Australia's national, state and regional potential to benefit immensely from enhanced entrepreneurial capacity. We spend billions on creating new knowledge and virtually nothing on studying the best ways to convert this into sustainable value through the creation of high value-adding businesses.

ACTION FOCUS

In each annual Westpac *GEM Australia Report*, we try to add direct value to the Small and Medium Enterprise (SME) community by offering entrepreneurial individuals and firms (and their advisors) an action focus, in the form of very practical operational guidelines about how to handle an issue directly relevant to the day-to-day specifics of running an entrepreneurial business. This year, we offer some practical guidelines on how to build value into a business so that when it comes time to sell it, the best price can be realised.

CONCLUSION

Entrepreneurship is fundamentally important to a nation's prosperity, growth and development. It is the most important dynamic driver of the economy and the well-spring of future employment. For all Australia's 'have-a-go' attitude and despite the existence of sporadic examples of excellent entrepreneurial performance, our aggregate national entrepreneurial performance is at best mediocre. A bad situation shows some early signs of getting worse and our attitude to our plight is complacent. This report highlights the challenges and pleads for leadership from policy-makers, researchers, business leaders and particularly educational leaders to arrest the early signs of entrepreneurial decline and provide the platform for a growth and innovation-oriented business community capable of delivering sustainable value to future generations of Australians.



Introduction

The GEM Australia Project

PROJECT OVERVIEW

The concepts leading to the Global Entrepreneurship Monitor (GEM) project were initiated in September 1997. The aim was to develop an international consortium to bring together specialist scholars to study the complex relationship between entrepreneurship and economic prosperity at national and international level. From the outset, the project was designed to be a long-term multinational enterprise, with a growing number of partner research institutions and teams.

GEM was launched in 1999 with teams representing 10 countries and has expanded rapidly since then. Participant countries (by year of joining) are shown in Table 1.

Table 1 – GEM Participant Countries (Accumulated)

Year	Countries
1999	Canada, Denmark, Finland, France, Germany, Israel, Italy, Japan, UK, USA
2000	Argentina, Australia, Belgium, Brazil, India, Ireland, Norway, Singapore, Spain, South Korea, Sweden
2001	Hungary, Mexico, Netherlands, New Zealand, Poland, Portugal, Russia, South Africa
2002	Chile, China, Croatia, Hong Kong, Iceland, Slovenia, Switzerland, Taiwan, Thailand
2004	Greece, Uganda, Venezuela
2004	Ecuador, Jordan, Peru

GEM is both a set of linked, international research projects and a set of documents that report project results. Each nationally based research team produces an independent, national report (*GEM Australia*, *GEM USA*, *GEM Japan* etc.) which explores in detail the nature, extent and effects of entrepreneurship within the individual country, including selected comparisons with other nations. At the international level, a coordinating team (currently based at the London Business School) oversees data quality control and produces the *Global Entrepreneurship Monitor Executive Report*. This aggregate document presents major findings across all participating countries and describes any emerging patterns that have global as distinct from merely national significance. In both the national and executive GEM reports there is an avowed intent to influence public policy by providing an evidential basis for policy and program development by agencies who would otherwise

lack a source of data and argument devoted exclusively to entrepreneurship issues.

The funding for GEM research depends entirely upon the ability of each national research team to find a sponsor. Some countries have single sponsors, some a combination of several sponsors. Some sponsors come from the private sector, some from the public sector and some from the non-profit sector. Sponsors obviously seek goodwill benefits through supporting dispassionate, public-domain research. However, GEM sponsors are and must be totally dispassionate with respect to the *conduct* and *findings* of the research. Data collection, analysis and inference from each national GEM project are conducted and controlled by the professional researchers in each national team acting as social scientists committed to the search for truth in the public interest.

The GEM Australia project, conducted under the direction of Professor Kevin Hindle at the Australian Graduate School of Entrepreneurship at Swinburne University of Technology, would not be possible without the generous sponsorship and commitment of Westpac Banking Corporation. The GEM Australia team, the Australian Graduate School of Entrepreneurship and Swinburne University of Technology wish to state as a matter of public record that we believe the Australian nation should be grateful to Westpac Banking Corporation for the public spirit it displays in providing the means to produce data and analysis that is of substantial and obvious benefit to the nation. The resulting report is provided freely to every interested party (through the website gemaustralia.com.au) and could simply not be provided without Westpac's vital support.

RESEARCH OBJECTIVES AND THEORETICAL FRAMEWORK

The GEM program focuses on three main objectives:

- To measure differences in the level of entrepreneurial activity between countries
- To uncover factors leading to appropriate levels of entrepreneurship
- To suggest policies that may enhance the national level of entrepreneurial activity.

These objectives are explored in the context of a theoretical model illustrated in Figure 1. Before the advent of the GEM project, most studies of economic performance focused on *established* enterprise – the *status* sector of the economy. The value of emerging (as distinct from established) enterprise was missing from most attempts to measure economic performance.

GEM focuses its attention on a set of factors that specifically and variously influence the entrepreneurial





sector. These are termed the 'Entrepreneurial Framework Conditions' and are the basis of questions employed in both a national population survey (minimum of 2,000 respondents) and a combination of structured and unstructured interviews with experts (known as 'key informants') subjectively selected on the basis of their knowledge and credibility with respect to the various entrepreneurial framework conditions. The set of framework conditions are detailed and explained in Appendix 3.

In the GEM research model, the framework conditions are considered to be the main determinants of a nation's *entrepreneurial environment*. They achieve their influence in combination with *entrepreneurial opportunity* and *entrepreneurial capacity*. These factors – environment, opportunity and capacity (which includes both the *skills* and the *motivation* to capitalise on opportunity) – act together. Their combination determines the rate of business *activity*: birth, death and growth (business churning), which in turn contribute to economic growth and prosperity.

GEM'S RESEARCH METHODS

Three main data collection methods are used:

- An adult population survey, randomly sampling a *minimum* of 2,000 typical adults.
- Face-to-face 'open-ended' interviews with at least 36 experts (called 'key informants') on various aspects of entrepreneurship. These experts also complete a detailed, structured questionnaire
- The use of selected national economic data, measured in standard units, from credible international sources including the Organisation for Economic Cooperation and Development (OECD) and the World Bank

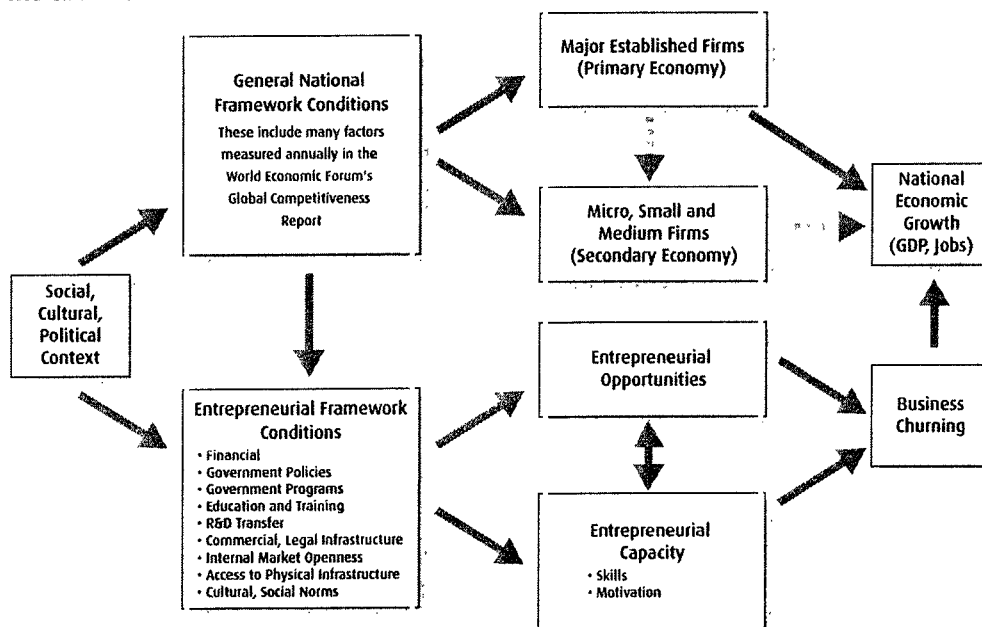
Appendix 3 of this report contains a detailed explanation of the methods employed to collect data for GEM Australia and the forms of secondary sources used.

SUMMARY OF PREVIOUS YEARS' FINDINGS

The body of GEM research in the five years 1999 to 2004 has found that entrepreneurial activity does vary significantly between countries.

Australia has been a consistent 'high-ranker' in early-stage business participation with rankings always at least in the top 40% of participating countries. Rankings have varied from a high of third of 29 in 2001 to fifteenth of 37 countries in 2002, a year when all participating countries

Figure 1 – The GEM Theoretical Model





declined severely due to a downturn in economic conditions and world social harmony (closely associated with the '9/11' terrorist attack on the United States). Apart from 2002, Australia has been among the top 10 countries, last year (2004) achieving eighth of 30 countries. However, a high volume of early-stage participation is not enough for Australia to qualify as an entrepreneurial country.

Even at its height, Australia's entrepreneurial participation reflected a country where a lot of small businesses were started rather than a country that produced world class companies. Australian experts have consistently identified culture, education, government support and financial support as areas impeding entrepreneurial performance.

FORMAT OF THE GEM AUSTRALIA 2004 REPORT

The philosophy is to present the data first, possible explanations of the data second and implications (for four audiences) third. Continuing the initiative introduced last year, Part Four of the report is an Action Focus intended to be of practical use to entrepreneurs and those who invest in them.

Part One: Observations. This section summarises what the annual data tell us in answer to GEM's principal questions, both in Australia and by comparison with other participant countries. Part One is sub-divided into observations of entrepreneurial activity (with evidence from the GEM adult population survey) and the entrepreneurship support environment (with evidence from key informants who provided both a free-form depth interview and answers to a structured questionnaire).

Part Two: Explanations. This section selects the most significant observations from Part One and seeks to explain them, offering insights from analysis of relationships within the data together with any relevant contextual influences.

Part Three: Implications. This section examines a selection of observations and themes from Part One and Part Two in terms of their implications for four distinct audiences: (1) the Australian general public; (2) entrepreneurship researchers; (3) entrepreneurship policy makers and (4) owners and operators who wish to make their businesses more entrepreneurial.

Part Four: Action Focus. Part Four of GEM Australia is intended to provide something practical for practising entrepreneurs or would-be entrepreneurs. Each year, we select a topic which GEM research indicates as being an especially problematic area for operators in the SME sector and we try to provide some simple, useful, easy-to-implement guidelines that can help solve that problem. This year, we provide a regime for preparing the business for sale. The focus is on maximising the value and return to the entrepreneur for the years of effort while maintaining the profitable and sustainable business entity for new ownership.

The Appendices include photographs and brief biographical notes of the 41 distinguished Australians who contributed to entrepreneurship research by volunteering their valuable time and knowledge to the project as expert key informants.

The full *Westpac GEM Australia Report* for the calendar year 2004 can be found on the GEM Australia website, www.gemaustralia.com.au. Here you will also be able to download past reports, other relevant articles and associated documents. International links can be accessed and useful updates can be regularly found.





Part One

Observations

THE MECHANICS OF THE ADULT POPULATION SURVEY

The Adult Population Survey for the GEM Australia project is the primary source of data used to monitor entrepreneurial activity in the nation. Shortly, we will present a matrix model of precisely what we mean by the complex notion of 'entrepreneurial activity' and show the particular strengths and weaknesses of the GEM survey instrument in collecting data relevant to various aspects of this model. At this stage, we present the essential, general technical details of the survey methodology used for data collection.

The data are collected from a stratified random sample of a minimum of 2,000 respondents drawn from the national population. The sample is randomly selected from the national White Pages telephone directory and is subsequently weighted to reflect the national demographic and gender distribution within the GEM definition of 'working age': adults between the ages of 18 and 64 years. It should be noted that states and territories have been combined in defining the various geographic regions of Australia as follows. The Australian Capital Territory is included in the NSW state region, Tasmania is included in the Victorian state region, and the Northern Territory is included in the South Australian state region. Appendix 3 provides a full outline of the methodology.

A summary of the sample for the year covered by this report, calendar 2004, is shown in Table 2 below.

Table 2 – Weighted and Unweighted Sample Summary

	Unweighted	Weighted
Total	2000	1575
Male	768	794
Female	1223	781
Opportunity-Motivated	159	168
Necessity-Motivated	38	39
Start-up Participants	124	126
Young Firm Participants	86	91
Established Firm Participants	199	152
Business Angel Participants	59	43

The raw number responses are weighted as described previously. This reduced this year's weighted sample size to 1,575, primarily by adjusting for gender bias and excluding respondents above or below working age. The weighted sample is used to form percentages of the total population participating in various types of entrepreneurial activity, while the unweighted sample is used in any statistical analysis techniques in order to maintain integrity among the findings.

A CRUCIAL PERSPECTIVE: THE MATRIX OF ENTREPRENEURIAL ACTIVITY

WHAT'S IN A NAME? NOMENCLATURE AND DESIGN ISSUES IN THE GEM PROJECT

As the GEM project evolves, certain issues of nomenclature are subject to debate among international research teams. This year the GEM Australia team has adopted a new nomenclature for certain indices and variables along with a new coordinating approach to the presentation and interpretation of GEM data. These changes do not affect our ability to make longitudinal comparisons with previous years' findings. Our terminology on certain items differs from the terms used by other GEM research teams. The reasons for this will be of significant interest to researchers and policy makers with a professional interest in entrepreneurship research but need not detain those readers of the report whose interest is of a more general nature.

The full academic argument for the enhanced approach we now adopt can be found in: Hindle, Kevin 2005, 'A Measurement Framework for International Entrepreneurship Policy Research: From Impossible Index to Malleable Matrix' *Journal of Small Business and Entrepreneurship*, forthcoming. Essentially, GEM Australia, following Hindle (2005), has shifted focus from disproportionate over-emphasis on one badly named index to an integrative matrix approach featuring a balance of multiple factors that are all relevant to the presentation of a composite picture of national entrepreneurial activity in any given year. The two major implications are first that, GEM Australia will henceforward cease to use the term 'Total Entrepreneurial Activity' (TEA) Index and will instead use the more descriptively correct term 'Percentage of Early-Stage Participation' (PEP) Index when this metric is discussed. Second, we stress that participation is but one element of 'activity': the terms are not synonymous. So, we have adopted a formally structured matrix approach to presentation, analysis and discussion of the annual data produced by the GEM project.



A MATRIX APPROACH: THREE STAGES AND SIX COMPONENTS

THREE STAGES

The life of a business from gestation, through birth and on to death is a continuum. However, for purposes of abstraction and analysis, researchers and research programs studying business permit themselves the luxury of conceptual division into distinct periods, in the same way as it can be useful (as well as problematic) to divide human life into such seemingly clear but contentious phases as 'infancy', 'childhood', 'adolescence', 'adulthood' and so on. Historically, for purposes of international comparison, the GEM project has featured three stages in the evolution of a new business (start-ups, young firms and established firms) but emphasised only two (start-ups and young firms). We will henceforth deal with all three stages.

GEM starts with an all-embracing definition of entrepreneurship as the act of conceiving, creating and developing a new business. The national population survey questionnaire captures data based on a division of the life the business into stages.

- **START-UPS.** After a set of filtering questions, GEM respondents can be classified as to whether they meet three criteria. (1) Are they, alone or with others, *exploring various possibilities* for creating a new venture? (2) Do they intend to assume partial or complete *ownership* of any possible or proposed new venture? (3) If a new venture has actually commenced operations, has it been paying wages (or equivalent) to any participants in the venture for no more than three months? If the answer to questions (1) and/or (2) and/or (3) is 'yes', then the respondent is classified in the start-up category. Effectively therefore, GEM's start-up category includes both nascent and active entrepreneurs: people engaged in contemplated or actual ventures that have not been operating for more than three months.
- **YOUNG BUSINESSES.** The *young² business* stage embraces businesses still in the hands of at least one of their founders and greater than three but no more than 42 months old.
- **ESTABLISHED BUSINESSES.** GEM's *established business* category embraces businesses still in the hands of at least one of their founders and greater than 42 months old.

SIX COMPONENTS

Hindle (2005) argues that the collection of GEM data can be productively organised under six categorical headings that have credence in the entrepreneurship research literature and take account of the empirical limitations of current GEM empirical data collection procedures. These components (conceptually considered as the rows of a matrix) can be combined with and applied to each of the three stages of business evolution (conceptually considered as the columns of a matrix). The resultant schema can give a systematic and reasonable approximation of national entrepreneurial activity in the year under study. The approach can be summarised first by a notional equation and second by a tabular matrix.

The equation analogy (applicable to each stage of the entrepreneurial process) argues that:

$$\text{TOTAL ENTREPRENEURIAL ACTIVITY} = \text{PARTICIPATION} + \text{MOTIVATION} + \text{INNOVATION} + \text{GROWTH} + \text{FINANCE} + \text{CAPACITY}$$

1. **PARTICIPATION.** It is entirely legitimate to regard the participation rate (the percentage of a population engaged in the various stages of the entrepreneurial process) as a primary and foundational component of national entrepreneurial activity. If no one engages in start-up or the later stage business, then clearly, there is no entrepreneurial activity. But participation is a necessary not a sufficient condition for describing the entrepreneurial activity of a given nation in a given year. There are at least five other components worthy of serious consideration and discussion.
2. **MOTIVATION.** It is not only important to know the quantitative fact *that* people start businesses, it is also helpful to know the qualitative reasons *why* they do so. Accordingly, a second component in building up a picture of total entrepreneurial activity is *motivation*. Unless people are motivated or driven to create a new business they will not do so. GEM research reports the type of motivations driving business creators and owners as being either *necessity based* or *opportunity based*. This year, we have extended the analysis of motivation across all three stages of business involvement to reveal a comparison between them.
3. **INNOVATION.** The third component required for understanding the entrepreneurial (or otherwise) nature of new business creation in a given nation (as compared to other nations) is the *innovative propensity* of the entrepreneurs and the ventures they establish and develop. In many definitions of entrepreneurship (most having close affiliations with the work of Joseph Schumpeter) innovation

² The GEM Australia team uses the term 'young' for businesses aged three to 42 months whereas the GEM executive report and some other countries use the term 'new' businesses. It has been our experience that many readers of the first two GEM Australia reports found that because a start-up was by definition 'new' in common parlance, the attempt to limit 'newness' to a specific timeframe after creation of the business was confusing. Confusion disappeared when we used the term 'young' instead.



(broadly meaning the act of giving commercial application to any new idea³) is the essential feature that distinguishes a genuinely entrepreneurial venture from 'just another business'. So, if GEM research can give us meaningful data on innovation (and it can and does) it would be a mistake to ignore it when discussing total entrepreneurial activity. As will be discussed shortly, GEM allows us to look at three aspects of innovative propensity: product novelty, competitor differentiation and use of technology.

4. **GROWTH.** A fourth component in building a picture of total entrepreneurial activity should concern the growth orientation of firms. Many definitions of and approaches to entrepreneurship (stretching back to David Birch's characterisation of abnormally high-growth-potential ventures as 'gazelles') stress the importance of commitment to high growth as a distinguishing feature of a truly entrepreneurial venture.

5. **FINANCE.** A fifth critical component of creating and developing an entrepreneurial venture is the ability to finance it. The GEM population survey provides certain information pertinent to this important aspect of national entrepreneurial activity.

6. **ENTREPRENEURIAL CAPACITY.** Finally, there can be no pretence that 'total' or 'national' entrepreneurial activity has been even summarily covered without addressing the issue of *entrepreneurial capacity*. Simply stated, this is the ability of the people involved in a new venture to do what is required to make it an entrepreneurial success. Entrepreneurial capacity therefore comprises the collective characteristics, experience, knowledge and skills embodied in the venture's human and capital resources. GEM data permits some insights into national entrepreneurial capacity.

SYNTHESIS: THE NATIONAL ENTREPRENEURIAL ACTIVITY MATRIX

Combining data of these six components of entrepreneurial behaviour (as matrix rows) across the three stages of business (used as column headings), permits us to build up a comprehensive assessment of national entrepreneurial activity for any nation in any year.

Table 3 summarises the matrix approach and presents The National Entrepreneurial Activity Matrix. The cells with a tick indicate that GEM Australia currently provides data and that a comprehensive discussion will be developed in subsequent sections of this report. A cross indicates current data absence or a relatively low level of data availability at that level.

Table 3 – The National Entrepreneurial Activity Matrix

	Start-up	Young Firms	Established Businesses
Participation Rate	✓	✓	✓
Motivation	✓	✓	✓
Innovation Propensity	✓	✓	✓
Growth Orientation	✓	✓	✓
Financial Support	✓	X	X
Entrepreneurial Capacity	✓	✓	✓

(Source: Hindle 2005)

PARTICIPATION RATES

THE THREE STAGE PERSPECTIVE

Figure 2 is a composite chart comparing international rates of participation for all three stages of business.

Australia continues to experience high levels of business ownership participation in all three stages. When compared to the 34 participating nations in the 2004 GEM cycle, Australia ranks seventh on overall business ownership participation (refer Figure 2). This position, perhaps surprisingly, is above the USA in tenth position, Canada in twelfth and the UK in eighteenth place. New Zealand, in fifth position, is the only high-GDP (Gross Domestic Product) country ahead of Australia. The remaining countries occupying the top positions in aggregate (3-category) business ownership participation as a percentage of the population are Peru at number one, Uganda, Jordan, Ecuador and Brazil. The prevalence of developing nations with low GDP figures ranking highly in business ownership participation is consistent with past years and is mostly attributable to necessity motivation. This aspect is discussed more fully in a subsequent section of the report.

THE EARLY-STAGE FOCUS

Traditionally the GEM study has given special focus to a combined index of start-up and young firm participation which we refer to as the Percentage of Early-Stage Participation (PEP) index. It combines the percentage of the working population participating in start-up and young business involvement (minus people simultaneously involved in both). This early-stage focus has been justified

³See Schumpeter [1911]2004: 57-95