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AUSTRALIA 2000

Kevin Hindle  
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*Global Entrepreneurship Monitor Australia 2000*

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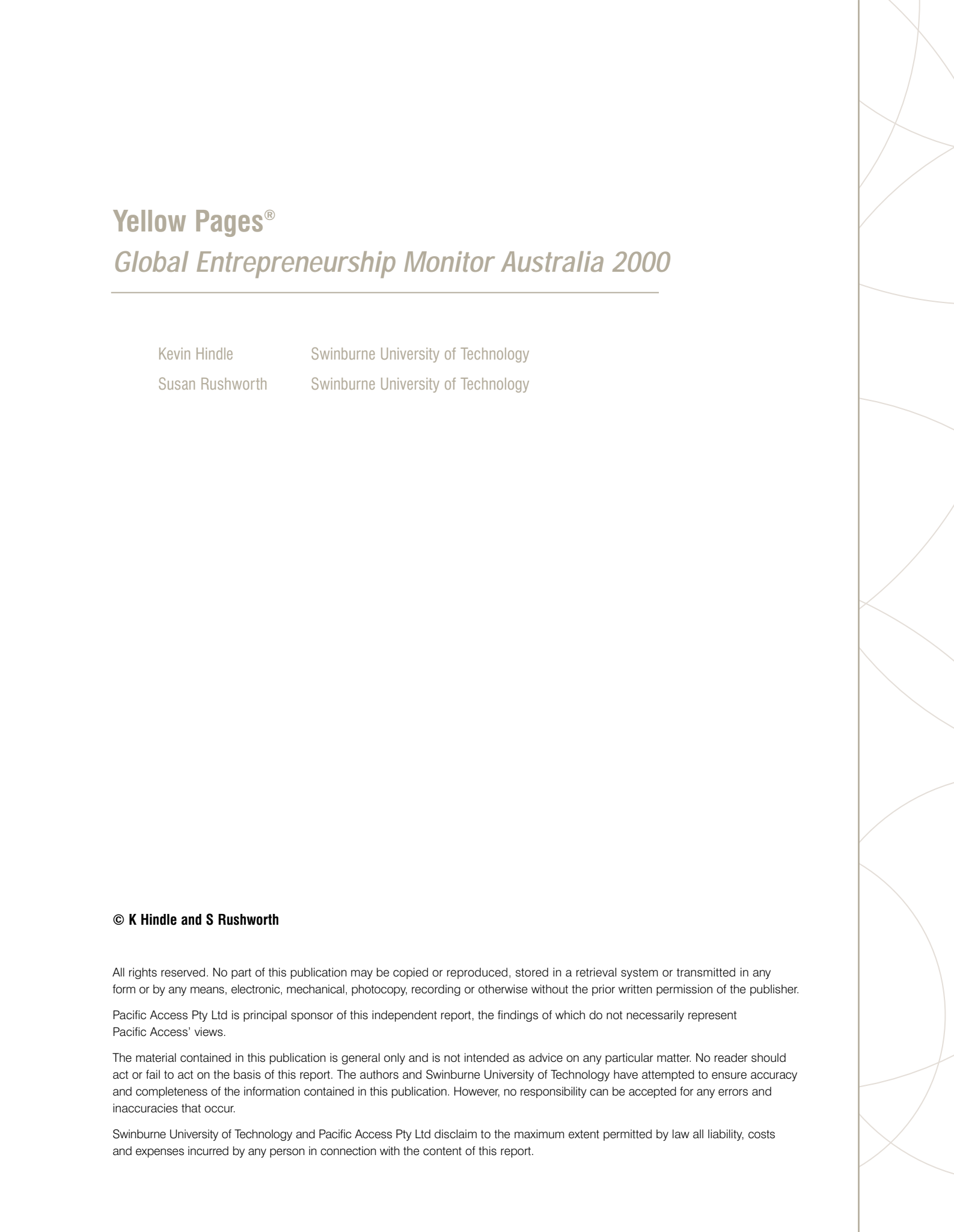
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# TABLE OF CONTENTS

---

<b>PREFACE</b> .....	1
<b>EXECUTIVE SUMMARY</b> .....	2
<b>INTRODUCTION— THE GEM AUSTRALIA PROJECT</b> .....	5
<b>PART 1. HOW ENTREPRENEURIAL IS AUSTRALIA?</b> .....	8
MEASURES OF ENTREPRENEURIAL ACTIVITY .....	8
New venture creation .....	8
Angel investment .....	10
Formal Venture Capital .....	11
Entrepreneurial firms in Australia .....	12
AUSTRALIA'S ENTREPRENEURIAL ACTIVITY SCORECARD .....	13
<b>PART 2. IS ENTREPRENEURSHIP LINKED TO ECONOMIC GROWTH?</b> .....	14
AUSTRALIA'S ECONOMY IN SUMMARY .....	14
Gross Domestic Product (GDP) .....	14
National framework conditions .....	14
Alternative indices .....	16
Economic contribution by industry sector .....	16
Aggregate contribution by the small business sector .....	16
ENTREPRENEURSHIP AND ECONOMIC GROWTH .....	18
The 'alpha country' perspective .....	18
Findings .....	18
Other productive perspectives .....	19
<b>PART 3. WHAT MAKES AUSTRALIA ENTREPRENEURIAL?</b> .....	20
DRIVERS AND PATTERNS OF ENTREPRENEURIAL ACTIVITY .....	20
Demography .....	20
General framework conditions .....	20
Entrepreneurial framework conditions .....	20
Where Australia fits the general pattern .....	21
Where Australia does not fit the general pattern .....	21
What are the implications? .....	22
THE ENTREPRENEURIAL FRAMEWORK IN AUSTRALIA .....	22
Financial Support .....	23
Government Policy .....	24

Government Programs .....	25
Education and Training .....	26
Research and Development Transfer .....	27
Commercial and Professional Infrastructure .....	28
Market Openness .....	29
Access to Physical Infrastructure .....	30
Entrepreneurial opportunity and capacity .....	31
Cultural and social norms .....	31
Business culture .....	33
AUSTRALIA'S ENTREPRENEURIAL FRAMEWORK SCORECARD .....	34

#### **PART 4. WHAT DIRECTIONS SHOULD POLICY TAKE? .....**

KEY DEFINITIONS FOR POLICY MAKERS .....	36
Entrepreneurship is NOT the same as innovation .....	36
Entrepreneurship is NOT the same as small business .....	36
Entrepreneurship is NOT incompatible with big business .....	36
Entrepreneurship is NOT about 'best practice' .....	37
Entrepreneurship is NOT about winning firms .....	37
Entrepreneurship is NOT Christopher Skase .....	37
Entrepreneurship is NOT a solo endeavour .....	38
Entrepreneurship is NOT a panacea .....	38
Entrepreneurship IS a discipline .....	38
A working definition of entrepreneurship .....	38
Start-up is not the same as success .....	39
THE KEY ISSUES .....	39
Education .....	39
Limited supply of capital .....	40
Regulatory and Taxation Burden .....	40
Short-term outlook .....	40
Culture .....	41
ACHIEVING A POLICY FOCUS .....	41
IMPLICATIONS FOR POLICY DEVELOPMENT .....	42
Government .....	42
The education industry .....	43
The venture capital industry .....	43
The banking sector .....	43
Industries and individual firms .....	43
Individual entrepreneurs .....	43
Culture .....	43
BEYOND RESEARCH AND POLICY .....	44
From matrix to mosaic .....	44
Culture, education and heroes .....	45
Towards a Shared Story .....	46

<b>BIBLIOGRAPHY</b> .....	47
---------------------------	----

<b>APPENDICES</b> .....	50
-------------------------	----

1. GEM Australia 2000 Respondents.....	50
--	----

2. The GEM Australia Research Team.....	59
---	----

<b>ACKNOWLEDGMENTS</b> .....	60
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## LIST OF TABLES AND FIGURES

### Tables

Table 1	Australia's Entrepreneurial Activity Scorecard .....	13
---------	--	----

Table 2	GDP measures comparison .....	14
---------	-------------------------------	----

Table 3	World competitiveness index rankings .....	15
---------	--	----

Table 4	Economic contribution by industry sector .....	16
---------	--	----

Table 5	Persons employed by employer size group as percentage of total employment .....	17
---------	---	----

Table 6	Employment generation and destruction by new and continuing businesses .....	17
---------	--	----

Table 7	Australia's Entrepreneurial Environment Scorecard .....	35
---------	---	----

### Figures

Figure 1	The complete GEM conceptual model .....	6
----------	---	---

Figure 2	International comparison of entrepreneurial activity levels .....	9
----------	---	---

Figure 3	Start-up participant demographics .....	10
----------	---	----

Figure 4	Business angel demographics .....	11
----------	-----------------------------------	----

Figure 5	International comparison of venture capital investment .....	12
----------	--	----

Figure 6	Financial Support: international comparison of expert opinion .....	23
----------	---	----

Figure 7	Government policy: international comparison of expert opinion .....	24
----------	---	----

Figure 8	Government programs: international comparison of expert opinion .....	26
----------	---	----

Figure 9	Education and training: international comparison of expert opinion .....	27
----------	--	----

Figure 10	Research and development transfer: international comparison of expert opinion .....	28
-----------	---	----

Figure 11	Commercial infrastructure: international comparison of expert opinion .....	29
-----------	---	----

Figure 12	Market openness: international comparison of expert opinion .....	29
-----------	---	----

Figure 13	Physical infrastructure: international comparison of expert opinion .....	30
-----------	---	----

Figure 14	Cultural norms: international comparison of expert opinion .....	32
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Figure 15	The Australian Entrepreneurship Policy Framework .....	41
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# PREFACE: A BRIEF OVERVIEW OF THE GEM AUSTRALIA PROJECT

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Entrepreneurship is the pacemaker implanted in any nation's economic heart. The electric jolts it gives to the economy are at once staccato and rhythmic. Without the shock of the new, old economies would wheeze, lumber and stall.

For a long time, the national and international importance of entrepreneurship has been suspected but we have not known how to measure entrepreneurship usefully at the national and international levels in a way that provides consistent data and reliable insight.

Now we know.

The Global Entrepreneurship Monitor (GEM) project brings together some of the world's best scholars in entrepreneurship to study the complex relationships between entrepreneurship, economic growth and national prosperity. Twenty-one countries participated in the study this year, including Australia for the first time. Every year, each participating country conducts its own independent investigation: but—and this is the key—every national research team uses exactly the same methods and measures in exactly the same way. This permits direct comparison between nations. Each national team consists of a university-based team with special capacity in entrepreneurship research, and a sponsorship support infrastructure given the substantial costs involved in data collection and analysis. Every year, each country produces a national report and GEM's central coordinating team produces an international GEM Executive Report. This global report summarises the results from all nations and synthesises the most important overall findings from an international perspective.

Kevin Hindle, Director of Entrepreneurship Research at Swinburne University of Technology heads the national team in Australia. The principal national sponsor is Yellow Pages® (owned by online media, search and directories company, Pacific Access®). Financial support was also received from the Department of Communications, Information Technology and the Arts. Acknowledgment of many sources of help received during this year's project is provided at the end of this document.

The GEM project is a monitor: research is conducted and reported every year. This process is building a rich data base for constructive use, now and in the future, by policy makers, researchers and practitioners. Although the Yellow Pages® *Global Entrepreneurship Monitor Australia 2000* (GEM Australia 2000) is a fully self-contained document, it is best read in conjunction with the international executive report.

For readers with limited time, the executive summary presents the main findings of this year's GEM Australia 2000 Report.

## EXECUTIVE SUMMARY

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Three key questions underpin the Global Entrepreneurship Monitor (GEM) research:

- Does the level of entrepreneurial activity vary between countries and, if so, to what extent?
- Does the level of entrepreneurial activity affect a country's rate of economic growth and prosperity?
- What makes a country entrepreneurial?

The key findings for the Yellow Pages® *GEM Australia 2000* report (GEM Australia 2000) are presented in terms of the above three questions.

### How entrepreneurial is Australia?

Australia is among the most entrepreneurial of the 21 countries in the GEM 2000 study. Australia ranked:

- **Fifth** in new firm participation, with 3.3 percent of the population owning all or part of a business established since 1997.
- **Fourth** in overall entrepreneurial activity, an index combining start-up and new firm activity.
- **Fourth** in female participation in business start-ups, a factor correlated with high entrepreneurial activity.
- **Third** in start-up activity, with just over eight percent of the population involved in starting a business at any one time.
- **Second** in company-sponsored start-ups, with 1.4 percent of the population working on starting a business for their employer in which they would have an ownership stake.

Yet the news is not all good. Australia's venture capital industry is under-developed compared with other GEM countries. In terms of venture capital invested as a percentage of Gross Domestic Product (GDP), Australia ranked 15th out of 19 countries on classic venture capital investment, which excludes buy-out/buy-in activity. The United States' (USA's) percentage of GDP invested was more than seven times that of Australia.

On investment in the IT industry, Australia ranked 16th out of 17 countries. The USA's percentage of GDP invested in IT firms was 24 times that of Australia.

### Is entrepreneurship linked with economic growth?

The *GEM 2000 Executive Report* demonstrates that high levels of entrepreneurial activity are strongly correlated with high economic growth. The correlation was just under 0.7 for countries with similar economic backgrounds (a sub-group consisting of 16 countries, which included Australia). High levels of new firm participation were even more strongly correlated with economic growth (over 0.8).

### What makes a country entrepreneurial?

A number of factors were linked with high entrepreneurial activity. Some are susceptible to intervention; others are not. It is not clear in all cases whether the factors are contributors to entrepreneurial activity or outcomes of this activity.

The following factors were associated with high levels of entrepreneurial activity. Australia's ranking in comparison to the other GEM countries for each factor is shown in brackets.

- **Projected population growth 2000-2025**  
(Australia's rank: **second**).
- **Enrolment in post-secondary education**  
(Australia's rank: **third**).
- **Participation of women in entrepreneurial activity:**  
This correlation was extremely strong (0.8).  
(Australia's rank: **fourth** on participation in start-ups, but only **13th** on participation in new firms.)
- **Lower taxation:** Three measures of taxation are included - tax revenue as a percentage of GDP; average corporate tax rate; and highest marginal personal income tax rate. Lower levels of taxation were associated with higher entrepreneurial activity. (Australia's rank was **sixth** on total tax revenue as a percentage of GDP. The other two rankings are outdated by tax reforms introduced this year).
- **Percentage of population aged 25-44**  
(Australia's rank: **seventh**).
- **Access to capital:** Three measures are included - business angel participation and importance of risk capital to new and growing ventures; and amount of venture capital investment. (Australia's rank: **10th** on angel participation; **first** in importance of risk capital, but only **15th** on venture capital investment).

Certain factors were found to be linked to low levels of entrepreneurial activity. That is, their absence was more strongly linked with lack of entrepreneurial activity than their presence with high levels of entrepreneurial activity. Surprisingly, in view of its high entrepreneurial activity ranking, Australia rated poorly on these.

On ability to perceive business opportunities, Australia ranked **13th**. On capacity to take advantage of business opportunities, Australia ranked **15th**. On respect for entrepreneurs, Australia ranked **ninth**. This is an indication that Australia does not value its entrepreneurs highly enough.

## Key issues

Key issues arising from the findings and the feedback from the 44 Australian experts who were interviewed as part of the GEM Australia 2000 research centred on five areas:

### 1. Education

Issues were wide ranging. They covered: maintaining the standard of general education, introducing business awareness and entrepreneurial concepts throughout schools, and expanding and upgrading education in the specific skills of entrepreneurship.

### 2. Lack of capital

Seed and early stage capital was perceived as the greatest problem, but lack of patient capital and an overly-conservative banking sector were also raised as major issues.

### 3. Regulation and taxation burden

The sheer compliance burden on new and growing ventures imposed by Australia's complex company and taxation laws was seen as an obstacle to entrepreneurial activity.

### 4. Short-term outlook

A recurrent theme was lack of long-term vision, strategy and planning.

### 5. Culture

Australia's culture was seen as anti-entrepreneurial in terms of attitude to entrepreneurs, fear of failure and preference for speculation rather than investment. Lack of positive image of entrepreneurs was widely attributed to media focus on the 'bad news' stories.



## Implications for policy development

### Government

Government's role is to provide capacity for other stakeholders to fulfil their potential. This includes: education, so that individuals are exposed to entrepreneurial concepts and can acquire the specific skills they need; a regulatory environment that is as simple as possible to use; a taxation system that rewards entrepreneurial endeavour and encourages long-term investment; programs that stimulate investment in the entrepreneurial sector; and initiatives that pay tribute to entrepreneurs and publicise them as positive role models. All of this needs to be undertaken with a long-term viewpoint.

### Education sector

Schools and universities must take up the challenge of nurturing entrepreneurial spirit, as well as providing the fundamental skills entrepreneurs need. Private education providers need to grasp the opportunities offered by the evident gaps in entrepreneurial skills education.

### Finance industry

The venture capital industry needs to work to address the equity gap for early stage ventures. Lack of early stage capital limits the number of ventures which achieve the growth to need expansion capital. Therefore, it is in the interest of the industry to find ways to fill this equity gap, whether with formal or informal venture capital.

### Industry in general

Industries cannot rely on governments to lead the way in developing industry policy. It is up to industry bodies and firms within industries to organise themselves to work towards a common strategy which is in the interests of the whole industry. Presented with a coherent industry strategy, government can develop policy to provide the necessary capacity.

## Conclusion

The news for Australia is encouraging, but there is no room for complacency. Australians start a lot of businesses, but survival and growth rates are too low. On several key drivers of entrepreneurial activity, Australia's performance is poor.

Last year's *Global Entrepreneurship Monitor* found that in countries with high levels of entrepreneurial activity, entrepreneurship was an integral and accepted feature of economic and personal life. The findings of the Yellow Pages® *Global Entrepreneurship Monitor Australia 2000* suggest that Australia, despite its high rating in total entrepreneurial activity, has not yet achieved a high enough level of cultural acceptance of entrepreneurship.

The way forward is not the sole responsibility of any single stakeholder. The question becomes what will make Australia *more* entrepreneurial? The answer is people. Every Australian has at least a small part to play in enriching not just our wallets, but our culture, by making us a more entrepreneurial nation.

# INTRODUCTION — THE GEM AUSTRALIA PROJECT

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## Design and intent of the GEM project

GEM means both a set of projects and a set of documents.

The *Global Entrepreneurship Monitor* (GEM) refers to both a set of linked, international research projects and a set of documents that reports project results. Each year, a number of countries (10 last year, 21 this year and growing) perform related entrepreneurship research using identical methods. They each produce an independent report (GEM Australia, GEM USA, GEM Japan et cetera) which explores in considerable detail the nature, extent and effects of entrepreneurship within their individual country, including selected comparisons with other nations. Additionally, one international, coordinating document (the *GEM Executive Report*) is produced. It summarises each nation's findings and discusses them at the level of international generality.

GEM was conceived in September 1997 as a joint research initiative by Babson College (USA) and London Business School. It went 'into the field' for the first time last year. The central aim was, and is, to bring together the world's best scholars in entrepreneurship to study the complex relationship between entrepreneurship and economic growth. From the outset, the project was designed to be a long-term multinational enterprise. In order to obtain reliable, comparable data, GEM originally focused on the G7 countries (Canada, France, Germany, Italy, Japan, United Kingdom (UK) and USA), with three additional countries (Denmark, Finland and Israel) added because of the availability of scholars in these countries with particularly relevant expertise.

GEM 2000 extends coverage to 21 countries in total. The additions are Argentina, Australia, Belgium, Brazil, India, Ireland, Norway, Singapore, Spain, South Korea and Sweden. Eventually, it is envisaged 40 to 50 countries will be included.

## GEM explores three fundamental questions

- Does the level of entrepreneurial activity vary between countries, and, if so, to what extent?
- Does the level of entrepreneurial activity affect a country's rate of economic growth and prosperity?
- What makes a country entrepreneurial?

## GEM employs three fundamental methods

- An adult population survey randomly sampling 2000 typical adults.
- Face-to-face interviews with at least 36 experts called 'key informants' on various aspects of entrepreneurship (at least three experts in each of the nine entrepreneurial framework conditions described below and a minimum of 36 in total).
- 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.

## GEM employs one theoretical model

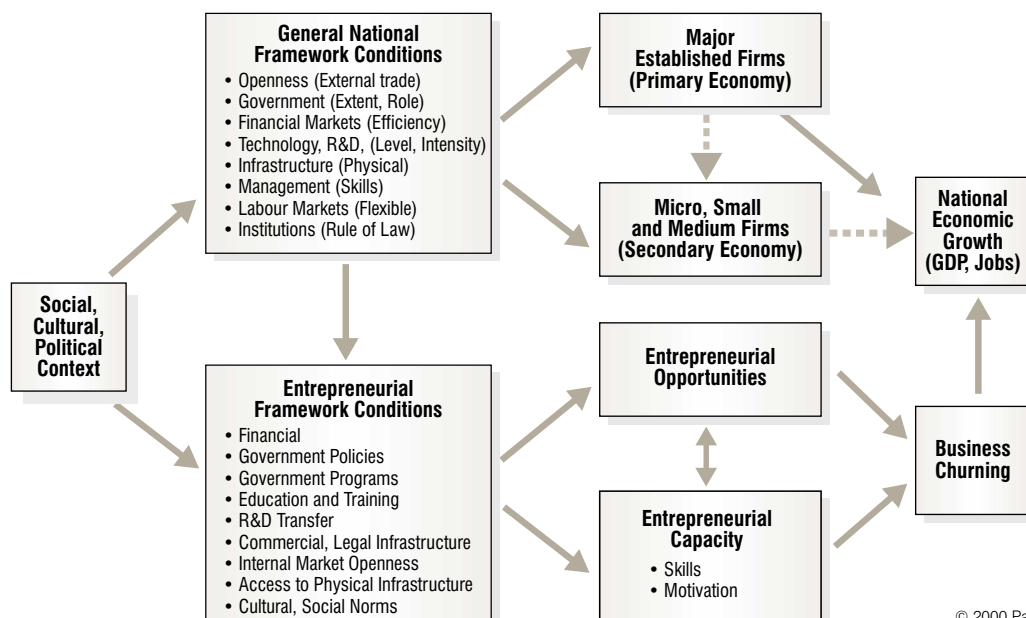
Most studies of economic performance focus on the 'primary economy' of large, established firms and industries, and the 'secondary economy' of small and medium enterprises. The focus is on established enterprise. This combination could be thought of as the status sector of the economy. Emerging enterprise, start-ups and new firms—the entrepreneurial sector—are missing.

The GEM model adds them in. The GEM project seeks to examine the strength and influence of the entrepreneurial sector of the economy; that is, new firm creation and growth. Both sectors are influenced by the general national context—factors such as tax regime, extent of government intervention and advancement of technology etc.

But in addition to this, there is a set of factors that specifically influences the entrepreneurial sector. These are termed the Entrepreneurial Framework Conditions. The GEM conceptual model identifies these as: financial support, government policy, government programs, education and training, research and development transfer, commercial and professional infrastructure, market openness, access to physical infrastructure, and cultural and social norms. The precise definitions of these framework conditions are explained later in the report where the 'health' of the framework conditions in Australia is discussed. These nine conditions combined with the existence of new venture opportunities (plus perception of their existence, which may not be the same thing), plus the capacity and motivation of the population to capitalise on such opportunities, influence the rate of new firm creation and growth.

The international *GEM 2000 Executive Report* (Reynolds et al 2000) describes the model in greater detail. Figure 1 illustrates this.

**Figure 1—The complete GEM conceptual model**



## Last year's GEM findings

The 1999 research demonstrated significant differences in entrepreneurial activity among the ten participating nations. Entrepreneurial activity, measured by efforts to start a new company, varied from a low of 1.4 percent of adults in Finland to a high of 8.4 percent in the USA, a six-fold difference. Last year, the USA, Canada and Israel were the only countries where entrepreneurial activity was an integral and accepted feature of economic and personal life.

This year Australia joins the project.

## Format of the GEM Australia 2000 report

The rest of the document is set out in four major parts and a suite of appendices. Parts one through three address the three key questions of the GEM research design.

### Part One: How entrepreneurial is Australia?

The results of the adult population survey provide several measures of participation in various types of entrepreneurial activity. This information is supplemented by an international comparison of venture capital investment activity, a special feature of GEM 2000. A summary scorecard of Australia's entrepreneurial activity is presented.

**Part Two: Is entrepreneurship linked to economic growth?**

Before answering this question, a brief summary of Australia's economy and economic performance is presented. This is followed by information provided by the GEM 2000 international team, correlating entrepreneurial activity measures with recognised indicators of economic performance across the 21 GEM 2000 participating countries.

**Part Three. What makes Australia entrepreneurial?**

Drivers of entrepreneurial activity identified by the GEM 2000 international team are presented, followed by an analysis of how Australia fits the general pattern. The 'health' of the entrepreneurial framework conditions in Australia is discussed in detail, based on information from the Australian key informant interviews. This is taken from the surveys they completed and from comparison of the survey results for Australia with results of the same survey in the other 20 GEM countries.

**Part Four. What directions should policy take?**

Before discussing implications for policy, some key definitional issues relating to the understanding of entrepreneurship in Australia are tackled. The findings from the three research methods of GEM Australia 2000 are drawn together to identify the key issues.

A framework for policy development is presented and implications for various policy stakeholders are tabled using this framework. The report concludes by emphasising that building an entrepreneurial culture in a country is a complex matter that must be appreciated in its full breadth and embraced by all stakeholders.

**The Appendices**

Include photographs and brief biographical notes of the 44 distinguished Australians who volunteered their valuable time and knowledge as key informants to contribute to entrepreneurship research in Australia.

# PART ONE: HOW ENTREPRENEURIAL IS AUSTRALIA?

## Measures of entrepreneurial activity

All quantitative studies are constrained by what can be measured within reasonable cost. The method employed by GEM is a telephone survey of approximately 2000 typical adults in each of the 21 GEM countries, carried out as part of an existing omnibus survey. In Australia, the survey was conducted by AC Nielsen in June 2000 and 2089 respondents were surveyed.

The key indicators of entrepreneurial activity measured by the survey are:

- participation in new business start-ups (paying wages no longer than 3 months);
- participation (as part or full owner) in new firms (less than 42 months old at time of survey, i.e. established in 1997 or later); and
- participation in business angel investment (otherwise known as informal venture capital).

The first two of these dimensions has been combined in the GEM 2000 Global Executive Report to form an index of Total Entrepreneurial Activity (TEA). This index does not correspond directly to the sum of the start-up and new firm participation rates because individuals involved in both activities are counted only once.

### New venture creation

To measure participation in new venture creation, the questions asked were:

1. You are, alone or with others, currently trying to start a new business, including any type of self-employment; and
2. You are, alone or with others, trying to start a new business or a new venture with your employer—an effort that is part of your normal work.

A response of 'Yes' to either of the above led to three supplementary questions to determine whether the venture was a genuine start-up.

These were:

- a) Over the past twelve months, have you done anything to help start this new business, such as looking for equipment or a location, organising a start-up team, working on a business plan, beginning to save money, or any other activity that would help launch a business?
- b) Will you personally own all, part, or none of this business?
- c) Has the new business paid any full-time salaries or wages, including your own, for more than three months?

'Yes' responses to both a) and b) and a 'No' response to c) were required for the respondent to be classified as a genuine start-up participant; i.e. they had to be active in the business and expect to own at least part of it. 'Yes' to a), b) and c) indicated a potential new firm participant. These respondents were asked when the firm first paid wages. If they did so in 1997 or later, the respondent was classified as a new firm participant.

Respondents answering 'Yes' to question 1 were classified as independent start-up participants and those answering 'Yes' to question 2 were classified as firm-sponsored start-up participants. (Those responding 'Yes' to both were randomly assigned to one group or the other in the ratio of unambiguous 'independent' to 'firm-sponsored start-ups').

The news for Australia appears to be good. With just over 8 percent of the adult population participating in start-ups at time of survey, we rank third out of the 21 GEM countries. On participation

in new firms, we rank fifth with a participation rate of 3.3 percent, giving us an overall ranking of fourth out of 21 on Total Entrepreneurial Activity (TEA).

Figure 2 illustrates the rankings.

Of the 148 respondents who were involved in genuine start-ups, the 95 who were prepared to disclose their estimates of the number of staff they would employ in five years' time, showed they would (if accurate) account for a total of 2,163 jobs. If extended to the general population, this would account for more than 13 million jobs! Such a mechanistic extrapolation is obviously ludicrous. Job projections are likely to be over-estimates and, since business failure rates are very high (an issue to be elaborated on elsewhere), most will never eventuate. But ludicrous things are provocative. And the provocative point here is the potent illustration of the potential power of NEW business to create NEW jobs.

Entrepreneurship is the mother of employment.

Start-ups were categorised according to the number of employees expected in five years time, with 50+ being considered a high growth start-up. In Australia, seven percent of start-ups fell into this category, ranking us fourth, equal with Ireland and just ahead of the USA.

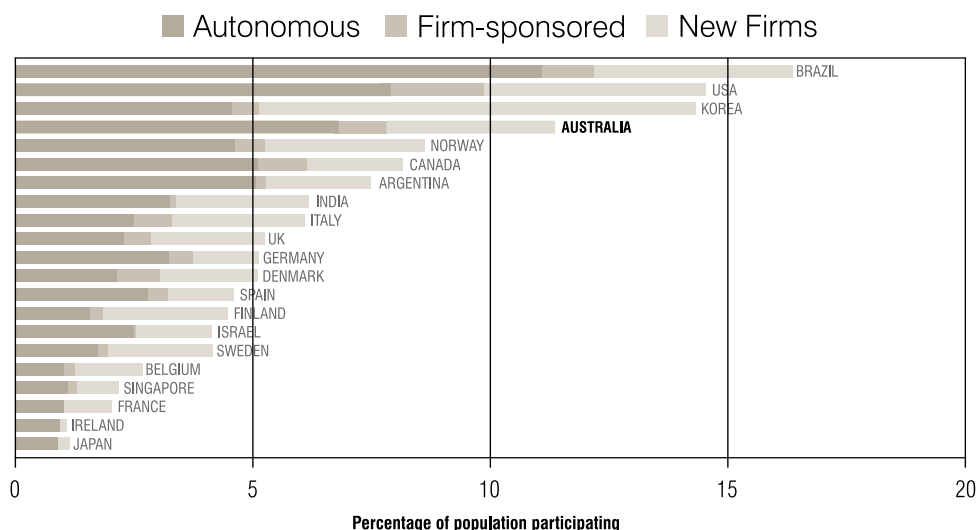
The Scandinavian countries topped the high growth rankings, with Sweden (17 percent), Finland (12 percent) and Denmark (8 percent) taking the top three places. Belgium, France,

India, Italy, Japan and Singapore did not record any high growth start-ups at all. However, these figures are projections, not fact, and 50 employees is still relatively small. The figures should not be seen as an indication of the probability of a country producing a Microsoft or a Cisco or, indeed, a Nokia.

Examination of the new firm participation rate is a good illustration of the failure of most start-ups to come to profitable fruition. This is an issue that will receive more detailed examination later in this report. In most GEM countries, the start-up participation rate exceeds the new firm participation rate by about 2:1. This would seem paradoxical since the time window in the GEM methodology for capturing a start-up is only three months, whereas for a new firm it is 39 months! The difference is that new firms are only counted if they are paying wages. Start-ups include many businesses that have not yet paid wages and many of them never will.

Perhaps the predicted jobs' growth from new firms is a better indicator of the potential contribution of the entrepreneurial sector. Of the 74 respondents who identified themselves as part or full owners of firms established within the last 42 months, only 35 were prepared to disclose how many employees they had now, and expected to have, in five years' time. These companies predicted a job growth of 62 percent on average, around 10 percent job growth per annum. In absolute figures, the 35 new firm participants expected to create (net) 480 new

Figure 2 - International comparison of entrepreneurial activity levels



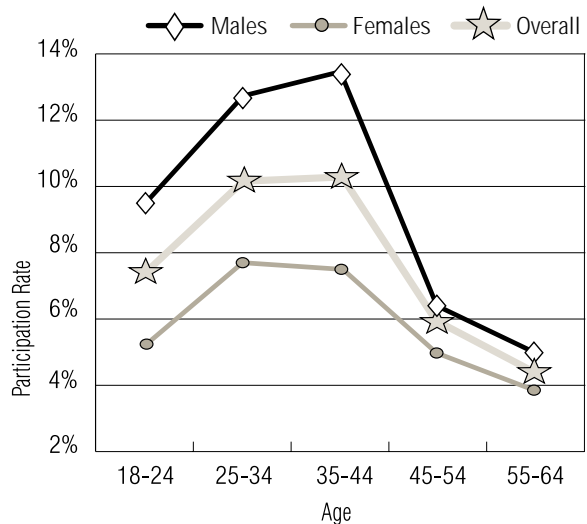
jobs over five years. Extrapolated to the general population, this amounts to just over three million jobs over five years. As with start-ups, such estimates should be treated with extreme caution—for example, only two respondents expected to reduce their workforce in five years, whereas ABS statistics (Pattinson and Tozer 1997) suggest more than a quarter of them will be out of business altogether in five years time.

The GEM survey distinguishes between 'autonomous' (meaning independent) start-ups and 'firm-sponsored' start-ups; i.e. start-ups which are undertaken as part of the person's job. To qualify as a firm-sponsored start-up, the participant must expect to own a portion of the company. This would eliminate many corporate spin-offs, which remain wholly-owned by the corporate parent. As Figure 2 clearly shows, independent start-ups far outnumber firm-sponsored start-ups in every GEM country. Yet, Australia's participation rate in firm-sponsored start-ups is the second highest of the GEM countries (USA is highest). Care should be taken in interpreting this—we are talking small numbers—about 30 people in the sample of 2000 for Australia.

Figure 3 illustrates the break-down of participation in start-ups by age and gender. It shows clearly that participation of males is much higher than that of females across all age ranges, and the peak of entrepreneurial activity occurs between the ages of 25 and 44. This pattern is consistent with the other GEM countries. Over all age ranges, the proportion of female to male participation for Australia was 62 percent, the fourth highest across all GEM 2000 countries.

It is noticeable that the rate of participation decreases sharply between the 35–44 and 45–54 age ranges, especially for males. In the last two age ranges, female participation dropping far less sharply, approaches male participation quite closely. Australia, like most developed countries, has an aging population. Increased participation from the 45+ age group is important if we are to maintain our level of entrepreneurial activity. Since unemployment levels increase sharply above the age of 52 (ABS 2000c), encouraging entrepreneurial activity within that age group should have a beneficial effect on unemployment rates.

Figure 3—Start-up participant demographics



### Angel investment

Business angels are an important source of risk capital for new ventures. It is extremely difficult to obtain comparative data on angel activity across different countries because of differences in research design, and the additional complications of currency conversion and allowing for inflation when comparing studies from different years (Hindle and Rushworth, 1999). The GEM survey obtains only basic information about business angels, but the data is directly comparable, something which has never before been achieved.

Respondents in the adult population survey were asked whether they had, in the past three years, personally provided funds for a new business start-up that was not their own (this excluded buying shares in a publicly traded stock or mutual fund). If so, they were asked:

- How much money they had provided?
- What sort of business it was?
- What their relationship to the investee was?

The participation rate for Australia was 2.6 percent, giving us a ranking of 10 within the GEM countries. USA (7.0 percent), Korea (5.5 percent) and Norway (5.1 percent) led the way, with India (0.9 percent), Ireland (1.1 percent) and Belgium (1.2 percent) at the bottom of the list.

Figure 4 illustrates the demographics of the Australian angel sub-sample. Women may be less inclined to get involved in start-ups, but they are just as likely to be business angels as men are. It is also noticeable that the 65+ age group contributed more business angels than the 35-44 or 55-64 age group. There was no distinct pattern in the types of businesses in which Australian angels invested, but the vast majority had invested in the business of a close relative, with the next most common relationship being friend or work colleague. Only one had no prior relationship with their investee.

This profile is a useful complement to the major published study of Australian angels (Hindle and Wenban, 1999) whose non-random sample of 36 Australian business angels included no females and no-one over the age of 65. It should be noted, though, that Hindle and Wenban's definition of business angels excluded those who had invested in the business of one of their immediate family. This would exclude the majority of the business angels identified in the GEM study.

The 51 Australian respondents who identified themselves as business angels had invested \$2.3 million between them over the past three years. With 11 declining to disclose how much they invested, the average investment per angel was almost \$60,000, varying from \$500 to \$600,000. If this pattern of investment could be safely extrapolated to the general population,

then business angels would have accounted for over \$13 billion in risk capital or more than \$4 billion per year. This compares with about \$240 million in early stage formal venture capital investments in 1999, which was a record year for venture capital investment activity in Australia (see below). Such an estimate is not statistically valid—but does have suggestive power. It suggests that angel finance represents by anything up to a full order of magnitude, a larger contribution to early stage venture finance than does the formal venture capital industry.

### Formal Venture Capital

Both the *Australian Venture Capital Journal* (web site [www.vcjjournal.com.au](http://www.vcjjournal.com.au)), the prominent journal of the Australian venture capital industry, and the Australian Venture Capital Association Limited (AVCAL—web site [www.avcal.com.au](http://www.avcal.com.au)), its peak body, reported a record year for venture capital in Australia in 1999. According to the *Australian Venture Capital Journal*, 1999 investment activity was double that of 1998, both in terms of dollars invested and number of investments made (AVCJ, March 2000: 6).

A special study on venture capital was undertaken as part of GEM 2000, the full details of which are contained in the GEM 2000 Executive Report (Reynolds et al, 2000). This study allows the rapid growth of the Australian venture capital industry to be examined in the international context. Data on venture capital investments was gathered from 19 of the 21 GEM countries, converted to US dollars and expressed both as a percentage of national GDP (also converted to \$US) and per capita. Data for Australia was obtained both from the Australian Venture Capital Journal 1999 investment activity survey (AVCJ, March 2000) and the AVCAL 1999 Yearbook (AVCAL, 2000).

Figure 5 shows the international comparison in terms of investment as a percentage of GDP. The message is inescapable. Although the Australian venture capital industry is growing fast, it is growing from a low base in comparison with many other GEM participant nations. For 'classic' venture capital, which excludes buy-out/buy-in financing, Australia ranked 15th out of the 19 countries for which data was available. On investment in IT across all stages

Figure 4—Business angel demographics

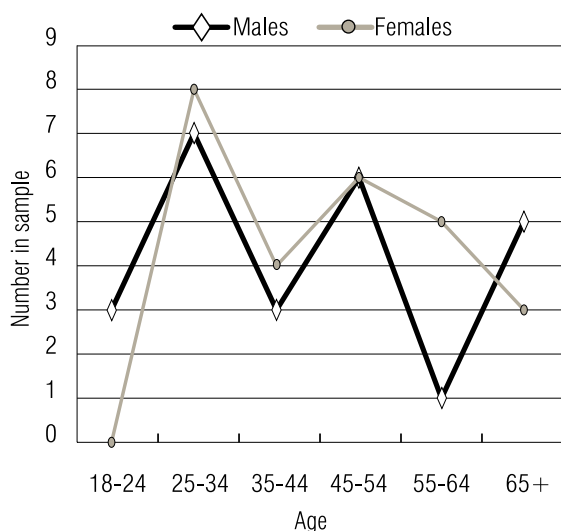
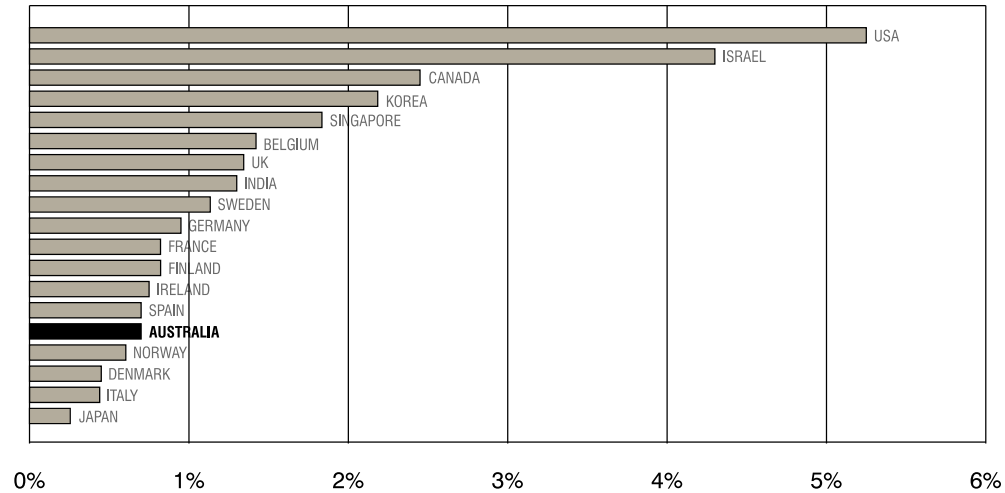




Figure 5—International comparison of venture capital investment



of growth, Australia ranked 16th out of the 17 countries for which data was available. Even in total dollars invested (converted to \$US), Australia only ranked 13th out of 19 countries.

Surveys of the Australian venture capital industry reveal that the bulk of funding is allocated to expansion and buy-out/buy-in activities. These two sectors alone account for over 70 percent of Australian VC investments in 1999 (AVCJ, March 2000: 6). Supply of capital for early stage ventures was acknowledged by several of our experts to be improving, thanks in part to initiatives like the IIFs (Innovation Investment Funds) and also to increased competition within the industry forcing venture capital firms to consider earlier stage deals. But AVCAL's 1999 Yearbook (AVCAL, 2000) notes that 'firms are increasingly creating more and larger funds which are focused on expansion stage investments', indicating that later stage investments are likely to remain the bread and butter of the industry for some time to come.

### Entrepreneurial firms in Australia

The GEM research takes a snapshot each year of start-up activity and participation in young firms. What it does not do is track which start-ups and new firms grow. Some research has been carried out in Australia on this subject.

In a recent paper *Small in not necessarily beautiful*, Rachel Parker found that it was only a very small number of small businesses that made a significant

contribution to net job creation and innovation and utilised progressive work practices (Parker 2000: 247). She illustrated this convincingly by referring to established ABS data.

Parker is not the only researcher to reach this conclusion. Richard McMahon, in an elegant study, following the recommendations of Hanks et al (1993) used cluster analysis to investigate selected data from Australia's Business Longitudinal Survey. He identified three relatively stable development pathways: low growth (traditional or lifestyle businesses), moderate growth (so-called 'capped growth SMEs) and high growth (the entrepreneurial SMEs).

McMahon's tables show two overwhelming facts about entrepreneurial ventures:

- they are an extreme minority of firms, ranging between 4.4 percent and 7 percent of firms in the five years of McMahon's study; and
- they dominate the provision of employment growth (high pathway firms had an average employment level of 123 people—nearly seven and a half times greater than the mean employment level of low growth firms, and nearly twice as great as firms on the moderate growth pathway).

Although the data used by McMahon was limited to manufacturing firms, his growth classifications are likely to be representative of other industries.

## Australia's entrepreneurial activity scorecard

Table 1 provides a summary of Australia's entrepreneurial activity performance. It shows at a glance how Australia ranks on GEM's various measures of entrepreneurial activity. Australia's score is shown in comparison with the median scores for the group of all countries, and the scores for countries which scored both the highest and lowest for the particular attribute. Countries are identified by their internationally recognised two-character abbreviations, a full list of which can be found at the end of the Bibliography section of this report.

**Table 1 – Australia's Entrepreneurial Activity Scorecard**

ITEM	Australia		All GEM countries		
	Rank	Score	Median	High Score (Cntry*)	Low Score (Cntry*)
<b>Entrepreneurial Activity Indicators</b> (Source: adult pop'n survey; Scale: Pct of pop'n participating)					
Start-ups overall	3	8.07%	2.55%	12.26% (BR)	0.90% (JP)
Independent start-ups	3	6.69%	3.18%	11.06% (BR)	0.90% (JP)
Company-sponsored start-ups	2	1.38%	0.49%	1.95% (US)	0.00% (JP+)
High-growth (50+ staff, % of start-ups)	4	7%	4%	17% (SE)	0% (JP+)
Med-growth (15+ staff, % of start-ups)	10	13%	11%	37% (FI)	0% (JP+)
New businesses (< 42 months old)	5	3.29%	2.16%	8.97% (KR)	0.30% (IE)
Infant businesses (< 18 months old)	5	1.55%	1.00%	4.89% (KR)	0.00% (JP)
Total Entrepreneurial Activity	4	10.93%	4.73%	16.04% (BR)	1.25% (IE)
Female to male particip'n in start-ups	4	62%	41%	69% (CA)	15% (FI)
Female to male particip'n in new firms	13	35%	47%	160% (ES)	0% (IE+)
Pct. of pop'n business angels last 3 years	10	2.60%	2.46%	6.97% (US)	0.85% (IN)
<b>Risk Capital Investment Indicators</b>					
Classic Venture Capital (US\$ per person)	14	\$ 15.04	\$ 20.57	\$166.68 (US)	\$0.60 (IN)
Classic Venture Capital (pct of GDP)	15	0.74%	0.97%	5.27% (US)	0.22% (JP)
VC investment in IT (US\$ per person)	14	\$ 3.39	\$ 14.19	\$129.38 (US)	\$0.18 (IN)
VC investment in IT (pct of GDP)	16	0.17%	0.62%	4.09% (US)	0.09% (DK)

\* See bibliography for list country codes. + indicates more than one country with this score

## PART 2: IS ENTREPRENEURSHIP LINKED TO ECONOMIC GROWTH?

### Australia's economy in summary

Before examining links to economic growth, it is appropriate to provide a brief overview of Australia's economy and economic performance relative to the other GEM 2000 participant countries.

#### Gross Domestic Product (GDP)

The traditional macro economic performance measure for a nation is Gross Domestic Product (GDP). Table 2 shows Australia's ranking relative to the other GEM countries in terms of 1999 total GDP (expressed in \$US for comparison), GDP per capita, GDP growth and projected GDP growth for 2000.

Among the GEM countries, Australia is closest to Korea in terms of size of economy measured by total GDP. On GDP per capita which is a better measure of national prosperity, Australia is closest to Italy and Canada. Relative to GEM countries, Australia's GDP per capita ranking of 15th represents a decline from 11th place in 1996, but is predicted to recover to 14th in 2000 and 2001.

Australia is among the top performers on GDP growth, ranking fifth among GEM countries ahead of both Canada (sixth) and the USA (seventh). Over the last few years, Australia has been consistently

among the top third of GEM nations in terms of GDP growth, but towards the bottom of the middle third in terms of GDP per capita.

#### National framework conditions

The GEM conceptual model looks at drivers of entrepreneurship, the 'entrepreneurial framework conditions', alongside the factors that drive the 'primary economy' - the established business sector. It refers to these as General National Framework Conditions. They are, in fact, the eight 'factors of competitiveness' used in the World Economic Forum's (WEF) annual *Global Competitiveness Report*. They are categories of indicators that are considered by the WEF to define a nation's international competitiveness. It is worth examining Australia's ranking relative to the other 20 GEM participant countries on each of these factors. These are summarised in Table 3. In the 1999 report, Australia was ranked 12 out of the 59 countries covered, but ranks seventh among the 21 GEM 2000 nations.

In each year's *Global Competitiveness Report*, a 'competitiveness balance sheet' for each country is included, which outlines the 'assets' and 'liabilities' i.e. the indicators which contribute

Table 2 – GDP measures comparison

Measure	Australia		Highest		Lowest	
	Rank	Value	Country	Value	Country	Value
Total GDP 1999 (US\$ billions)	12	395	USA	9,256	Singapore	85
GDP per capita 1999	15	20,696	Japan	33,934	India	450
GDP growth 1999	5	4.4%	Korea	10.7%	Argentina	-3.1%
Projected growth 2000	8	3.9%	Ireland	7.4%	Japan	0.9%

(Source: IMF, 2000)

**Table 3 – World competitiveness index rankings**

Factor	Australia	Highest	Lowest
Openness	6	Singapore	India
Government	10	Singapore	Italy
Finance	7	UK	Brazil
Infrastructure	4	USA	India
Technology	6	USA	Argentina
Management	11	USA	India
Labour	10	Singapore	India
Institutions	8	Finland	Argentina
<b>OVERALL</b>	7	Singapore	India

(Source: WEF 1999)

to or detract from the overall score on each factor. It is not the purpose of this report to replicate data which can be found in other documents where it is explained and interpreted in far more depth. But it is worth noting a few of the positives and negatives that underpin Australia's 'balance sheet' in the *Global Competitiveness Report 1999*, from which the above table is drawn (WEF 1999).

On **Government**, we scored well on independence of civil servants from political parties and good fiscal control, but poorly on administrative regulations and tax burden.

On **Finance**, we scored well on our broad spectrum of widely available financial services, but poorly on gross domestic savings and lack of competition among our domestic banks.

On **Infrastructure**, we rated very highly on our telecommunications and computing infrastructure, but less well on our transport infrastructure, especially rail.

On **Technology**, we scored well on our use of technology, but a little below average on the quality of our scientists and engineers and, surprisingly in view of our excellent communications infrastructure, we scored low on use of the internet among businesses.

**Labour** was the only factor on which we were seen as having far more liabilities than assets, most of these relating to lack of workforce flexibility. Offsetting this was recognition of the high level of education of the workforce.

Although not strictly economic data, population profile has an influence on economic output. Australia's population is growing fairly fast relative to other GEM countries (ranks seventh). The percentage of migrants in the population is the second highest of all 21 countries, exceeded only by Israel. With Canada and Singapore, these four countries form a cluster with significantly higher migrant populations than the remaining GEM countries. In terms of age distribution of the working age population (18-64), Australia is in the middle. Japan's population is the most skewed towards the older end of the distribution and Brazil's most skewed towards the youngest.

In examining GEM national rankings across a wide range of variables, it is striking how often Australia's ranking is very close to Canada's. On the various measures of the General National Framework Conditions, the only one on which the two countries are clearly different is levels of taxation - substantially lower in Canada.

For the 21 GEM countries, the correlation between the WEF's Global Competitiveness Index (GCI) ratings and GDP per capita is very strong (above 0.75,  $p=0.000$ ). But there is no correlation whatsoever between GCI and GDP growth. The GCI is an excellent measure of the contribution of the status sector, but it is a very poor indicator of growth. Hence there is need for the multiple measures of the contribution of the entrepreneurial sector which GEM provides.

### Alternative indices

GDP has been criticised as a blunt instrument for measuring national prosperity because it is simply the sum of expenditure and does not articulate the social value of that expenditure. Several alternate indices are being worked on, including the Genuine Progress Indicator. This attempts to adjust GDP by adding in the economic contributions of unpaid household labour and subtracting those of crime, pollution and other negative activities. Unfortunately, the GPI is not yet measured on a regular basis in a consistent way across a sufficiently wide range of countries to be useful as a measure of Australia's international ranking.

A more advanced indicator is the Environmental Sustainability Index (ESI), which is being developed by a task force of the World Economic Forum. Although the index is still under development, pilot stage rankings have been published which include all 21 GEM countries. Australia ranks equal sixth with France and Denmark. Norway, Sweden and Finland top the rankings and India (last), Singapore and Korea are at the bottom of the table.

There is a moderate correlation between the ESI and the overall Global Competitiveness Index for the 21 GEM countries. This becomes a strong correlation (0.772,  $p=0.000$ ) if Singapore is excluded.

### Economic contribution by industry sector

Table 4, taken from the Australian Bureau of Statistics' web-based report *Australia Now—A Statistical Profile* (ABS 2000a), shows the contribution to Australia's GDP and employment by industry sector. If all the service sectors are combined, they account for 31 percent of GDP and 35.3 percent of employment. The traditional sectors of Mining and Agriculture only account for 7.2 percent of GDP and 5.9 percent of employment. Manufacturing still makes a strong contribution at 13.2 percent of GDP and 12.8 percent of employment.

### Aggregate contribution by the small business sector

The usual definition of small business in Australia is that used by the Australian Bureau of Statistics (ABS). It defines a small business as one with less than 20 employees for non-manufacturing businesses and less than 100 employees for manufacturing businesses. This is smaller than the definition used in many other countries, but even within that definition, the small business sector is small only in terms of the size of its companies, not its overall contribution.

Small businesses account for 95 percent of all businesses in Australia. The small business sector's contribution to employment in Australia has increased over the last 15 years as demonstrated by Table 5.

**Table 4 – Economic contribution by industry sector**

ANZSIC division	Sector 1,000s	Contribution to GDP		Contribution to total employment	
		\$m	%	jobs	%
A	Agriculture, Forestry, Fishing and Hunting	17525	3.4	417	4.9
B	Mining	25092	4.8	87	1.0
C	Manufacturing	69004	13.2	1095	12.8
D	Electricity, Gas, Water	14272	2.7	66	0.8
E	Construction	29973	5.7	619	7.2
F	Wholesale Trade	29432	5.6	528	6.2
G	Retail Trade	30314	5.8	1243	14.5
H	Transport & Storage	33081	6.3	396	4.6
I	Communication	16182	3.1	146	1.7
J	Finance, Property & Business Services**	89842	18.2	1246	14.6
K	Public Administration & Defence	49046	9.5	938	11.0
L	Community Services	32514	6.2	820	9.6
M	Recreation, Personal & Other Services*	34643	6.6	956	11.1

\* Combined data for Cultural and recreational services; Personal & other services; Accommodation, cafes, restaurants

\*\* Combined data for Finance & insurance; property & business services

**Table 5 – Persons employed by employer size group as percentage of total employment**

Employer size	1984	1997	Change (%)
1-9	22.7	26.0	14.5
10-19	11.7	11.8	0.9
20-49	13.3	13.0	-2.3
50-99	8.7	9.6	10.3
<b>Totals 1–99</b>	<b>56.4</b>	<b>60.4</b>	<b>7.0</b>
100+	43.6	39.6	-9.2

(Source: ABS 1997a)

ABS figures (ABS, 1999: 7) summarised in Table 6 show how the small business sector contributes to job creation and destruction. Small businesses accounted for the majority of jobs created but the gap had narrowed since a comparable study in 1995–96. They had an equal share with large businesses in the number of jobs destroyed. In the small business sector, the majority of jobs created come from new businesses and the majority destroyed from businesses that had ceased trading. The opposite is true of the large business sector: most jobs are created and destroyed by continuing businesses.

The proportion of jobs destroyed to jobs created is substantially lower for the small business sector (52 percent) than for the remainder of businesses (58 percent), indicating the small business sector makes a greater overall contribution to job growth.

But we will see in Part Four of this report that the issue of job growth within the small business sector is a thorny one for policy makers because only a small minority of firms— the entrepreneurial, high-growth firms — contribute the majority of jobs and economic growth.

It is not the role of GEM Australia 2000 to present a detailed picture of the small business sector, as this is already performed by a number of other publications. The ABS publishes a wide range of statistical reports on the small business sector, including a number of important longitudinal studies, while the Yellow Pages® *Small Business Index*, published quarterly, provides a useful summary of expectations, attitudes and concerns of the small business sector in Australia.

**Table 6 – Employment generation and destruction by new and continuing businesses**

**1997–1998**

	Small businesses	Percentage of total	Other businesses	Percentage of total
<b>Employment generation</b>				
New businesses	322,000	57.8	234,000	42.2
Continuing businesses	185,000	46.7	210,000	53.3
Total	508,000	53.4	444,000	46.6
<b>Employment destruction</b>				
Ceased businesses	135,000	64.6	74,000	35.4
Continuing businesses	130,000	40.9	188,000	59.1
Total	265,000	50.3	261,000	49.7
Net employment change	243,000	57.2	183,000	42.8

## Entrepreneurship and economic growth

### The 'alpha country' perspective

An entity as complex as a country makes it difficult to identify linkages that will be valid across the whole group. The presence of outliers can hide a significant relationship, but at the same time, outliers cannot be discarded without justifiable reason. An alternative approach is to cluster cases (in this case countries) into subsets and examine the characteristics of each subset. In both approaches, while due attention should be given to statistically valid correlations, a great deal can be learned from identifying patterns among clusters of countries such as characteristics which are common to all countries in a particular cluster. These patterns yield preliminary insights which it may be possible to confirm in later years when more countries are involved in GEM. But even now they provide a useful stimulus for debate or a framework for additional research.

The international GEM 2000 team used a combination of excluding outliers and clustering countries to interpret the GEM 2000 data. It identified five outlier countries on the basis of significant differences in economic backgrounds from the rest of the group.

The two grounds for exclusion were:

- 1 An economy dependent on external trade, i.e. sum of imports and exports exceeds GDP. This eliminated Singapore, Belgium Ireland.
- 2 An economy dominated by agriculture (because this generates intense pockets of regional activity). This was assessed by the percentage of the adult male population employed in the agriculture sector. It eliminated India and Brazil which had four times and two times the proportion of the next closest country.

The remaining 16 countries were labelled, for convenience, the Alpha group and divided into clusters of High, Medium and Low entrepreneurial activity, based on the Total Entrepreneurial Activity (TEA) index described earlier, as follows:

**High:** Argentina, Australia, Canada, Korea, Norway, USA

**Medium:** Denmark, Germany, Finland, Israel, Italy, Spain, Sweden, UK

**Low:** France, Japan

### Findings

It must be emphasised that the findings, although subjected to all due academic rigour, are based on what is, after all, a small sample - 21 cases, or rather 16 with only Alpha countries included. This does not make them meaningless, it simply means that they are suggestive rather than definitive. More years of study and more countries in the sample will give the opportunity to reach a greater degree of confidence in emerging relationships. In the meantime, the factors outlined below are those for which definite relationships were observed, and as such form a useful framework against which to assess any country.

The *GEM 2000 Executive Report* (Reynolds et al 2000) is where the detail of the big picture of linkages between entrepreneurial activity and economic growth is discussed. Briefly, the linkage pattern discovered for the 10 GEM 1999 participant countries was confirmed and reinforced for the 21 GEM 2000 countries, especially for the Alpha group of countries (see below).

Specifically (for the Alpha group):

- There was a strong correlation between the Total Entrepreneurial Activity (TEA) index and projected GDP growth for 2000 (0.692,  $p=0.003$ ); and
- There was an even stronger correlation between the new firm participation rate and projected GDP growth for 2000 (0.812,  $=0.000$ ).

Australia with fourth highest TEA rating and fifth highest projected economic growth comports strongly with the general pattern.

There is no specific discussion of linkages between entrepreneurial activity and jobs growth in the *GEM 2000 Executive Report*. The *GEM 1999 Executive Report* (Reynolds et al 1999) found a moderate correlation between level of start-up activity and employment rates (unemployment rate subtracted from 100%), but it was not statistically significant. There is no correlation between employment rates and the TEA index for the GEM 2000 participant countries.

If we look only at the countries with high TEA ratings, that is Argentina, Australia, Brazil, Canada, Korea, Norway and the USA, we find that most of them are above average performers on employment also. Argentina, however, is a notable exception with the lowest employment rate of all GEM countries and the lowest projected increase in employment. Thus, while high entrepreneurial activity might seem in general to be associated with above average employment rates, clearly many other factors are in operation.

### **Other productive perspectives**

It is no easy task to identify an appropriate way to examine linkages among a sample that is at the same time as small (only 21 cases) and diverse as the GEM participant countries. The approach adopted by the GEM executive team is the appropriate perspective from an international point of view. But the great thing about the GEM data is its ability to provide for exploration of multiple perspectives. Over the years, this latent capacity of the data set will permit an increasing number of 'spin-off' investigations to be generated and to prosper beyond the circumscribed boundaries of the national reports. We confine ourselves here to a single illustration.

We found that when a group of countries we called the 'small and smart' group (Finland, Ireland, Israel, Singapore and Sweden) – characterised by relatively small populations combined with their high

levels of education—was excluded from analysis, the correlation between 'rank by total entrepreneurial activity' (the GEM 2000 composite 'TEA' index) and 'rank by projected real GDP growth for the year 2000' (source: IMF 2000) was correlated significantly at the 0.01 level ( $r = 0.664$ ;  $p < 0.005$ ).

This suggests it might be worth investigating more fully whether a high level of general education could be masking the need for specialist education in entrepreneurship. This year, many of Australia's key informants held strong opinions about this issue.

In another area altogether, our tentative 'beta' analysis suggests that attracting foreign investment which creates 'branch offices' may tend towards stifling entrepreneurship and innovation in a country, rather than encouraging it. These are suppositions: not probabilities. But good research programs generate good questions, not simplistic answers. By this standard, GEM is a productive initiative. It may well produce the odd blind alley, but GEM gives us many roads to travel. GEM makes it possible to investigate—and to accept or reject—hundreds of relationships potentially capable of shining some bright light into spaces previously inaccessible to productive inquiry. The options it offers for exploring the nature of entrepreneurship and its linkages with many other vital elements of the economy will expand with time and are only limited by the intelligent curiosity of the investigator.



## PART THREE: WHAT MAKES AUSTRALIA ENTREPRENEURIAL?

### Drivers and patterns of entrepreneurial activity

Factors influencing entrepreneurial activity, as measured by the total entrepreneurial activity (TEA) index, were sought not only among the entrepreneurial framework conditions, but also among the general national framework conditions and, beyond that, the general demography of countries. The findings are described briefly under these three headings: demography; general framework conditions; and entrepreneurial framework conditions. The findings apply to the Alpha group of countries and analysis is reported by the three clusters of High, Medium and Low entrepreneurial activity. Australia, as previously noted, is in the High cluster.

#### Demography

**Projected population growth:** Countries with high TEA ratings also had high rates of projected population growth. The difference in projected growth rates between High and Medium countries was particularly striking.

**Age structure of population:** Across the GEM countries, participation in entrepreneurship was highest in the 25–44 age group. The High TEA countries had a higher percentage of their population in this age group than the Medium TEA countries, who in turn had a higher proportion than the low TEA countries.

Higher TEA was associated with a higher proportion of migrants in the population, but the differences were not significant.

#### General framework conditions

**Participation of women:** Where the rate of women involved in entrepreneurial activity was higher, so was the overall TEA for the country. This correlation was extremely strong (0.8).

**Enrolment in post-secondary education:** Higher enrolment levels in post-secondary were strongly correlated (0.64) with higher TEA ratings.

**Educational attainment:** 40 percent of entrepreneurially active respondents had post-secondary school experience, with almost 33 percent having a degree, underlining the important role of post-secondary education in stimulating entrepreneurship.

**Lower taxation:** Across three different measures of taxation - tax revenue as a percentage of GDP; average corporate tax rate; and highest marginal personal income tax rate—lower levels of taxation were associated with higher TEA ratings.

**Labour market flexibility:** Based on the World Competitiveness Report index of labour market flexibility, higher TEA was associated with greater flexibility.

**Income inequality:** Higher TEA countries had a wider income difference between the poorest 10 percent and the richest 10 percent of the population. However, whether income inequality stimulates more people to entrepreneurial activity or whether entrepreneurial activity leads to accumulation of wealth was not clear.

#### Entrepreneurial framework conditions

Summary indices were computed from the five (sometimes six) questions in the experts' survey covering each of the nine entrepreneurial framework conditions and the three additional frameworks of opportunity perception, entrepreneurial capacity and entrepreneurial motivation. The following factors were found to be associated with high entrepreneurial activity:

**Perception of opportunities:** There was little difference in perception of business opportunities between the High and Medium clusters, but a significant difference between Medium and Low. Low perception

of good business opportunities was associated with low TEA ratings. The correlation between perception of opportunity was strong in 1999 for the original 10 GEM countries, and still holds very strongly (0.93) for those same 10 countries.

**Entrepreneurial capacity:** Low ratings for entrepreneurial capacity were associated with Low TEA ratings. Again, there was little difference between the High TEA and Medium TEA clusters.

**Respect for entrepreneurs:** The social legitimacy of entrepreneurship is measured by the Cultural and Social Norms framework questions. Once again, there was little difference between the scores for the High and Medium TEA clusters, but a significant difference between Medium and Low.

Taken together, these three links suggest that skill in opportunity recognition, capacity to act on opportunities and respect for entrepreneurship as a career option are necessary conditions to stimulate entrepreneurial activity, but are not sufficient to drive it to high levels in a society.

**Financial support:** On three measures—business angel participation; amount of venture capital investment; and importance of risk capital to new and growing ventures—high TEA ratings were strongly associated with better access to finance.

The above pattern of findings holds true in general across the GEM nations—or rather, across the Alpha group of GEM nations. That is, in general a country with a high level of entrepreneurial activity is likely to exhibit the characteristics described above. But any country in particular will exhibit some variation. It is useful to look at how Australia performs against the drivers of entrepreneurial activity suggested above.

### **Where Australia fits the general pattern**

Australia has the fourth highest level of entrepreneurial activity among the 21 GEM nations and the third highest among the Alpha group of nations. It might be expected to fit the general pattern of findings well. And, indeed, on many factors it does:

**Projected population growth:** Australia's is seventh (fifth of the Alpha group).

**Age structure of population:** With 51 percent of the workforce in the 25–44 age group, Australia's percentage is the seventh highest (fourth of the Alpha group).

**Participation of women:** With a ratio of female to male start-up participants of 62 percent, Australia is fourth highest. But the ratio of female to male new firm participants is only 35 percent, ranking 13th.

**Enrolment in post-secondary education:** Australia's enrolment ratio is the third highest of the GEM countries.

**Lower overall taxation:** Australia's tax revenues as a percentage of GDP are the sixth lowest among the GEM countries.

**Income inequality:** Whether we regard this as something to be proud of or not, Australia certainly fits the model here. We have the third highest ratio of income of richest 10 percent to poorest 10 percent (behind Brazil and the USA).

### **Where Australia does not fit the general pattern**

On some factors, Australia's performance is contrary to trends evident in the overall pattern of relationships.

**Higher taxation:** Across two of the three measures of taxation—average corporate tax rate and highest marginal personal income tax rate—Australia ranked poorly. 11 countries had lower corporate tax rates (though differences are not extreme) and Australia's highest marginal personal income tax rate was above that of 14 other countries.

This was, of course, prior to the new taxation rates which came into effect on July 1st 2000. These would improve our ranking. It will be interesting to see if our entrepreneurial activity rating also improves next year.

**Low labour market flexibility:** Australia ranked only 10th on labour market flexibility in the Global Competitiveness Report.

**Perception of opportunities:** Australia ranked 13th.

**Entrepreneurial capacity:** Australia ranked 15th.

**Respect for entrepreneurs:** Australia ranked ninth.

**Business angel participation:** Australia ranked 10th

**Venture capital investment:** Australia ranked 15th out of 19 countries on investment in classic venture capital and 16th out of 17 on venture capital investment in IT.

The Australian team found one strong correlation in the Entrepreneurial Capacity dimension particularly interesting. It was between level of agreement with the statement 'in my country, many people have experience of starting a new business' and the TEA index. The correlation was moderate for the full 21 country sample, but very strong (0.731,  $p=0.001$ ) for the Alpha group of countries.

At first sight, this might seem both trivial and a case of effect rather than cause. It is intuitively obvious that higher levels of entrepreneurial activity mean that more people have experience of start-ups. However, what it might mean is that people with experience of start-ups, not necessarily as the founder and not necessarily with a significant ownership stake, might be stimulated to go on to do their own start-up. David Gold, founder of dstore and Kerri-Lee Sinclair, co-founder of AgentArts, had both previously held senior roles in LookSmart, one of Australia's most successful entrepreneurial ventures.

This speculation is of interest to Australia, because on a scale of 1 to 5, our experts gave an average of 2.17 – indicating that overall, they did not agree that many Australians had experience of starting a business.

### **What are the implications?**

Australia was the fourth most entrepreneurially active country among the GEM 2000 nations. And yet, we ranked poorly on some of the factors linked with entrepreneurial activity. It is reasonable to suppose that if we can improve our performance on some of these factors, we can lift our entrepreneurial activity even further or, perhaps, make it more effective. Australia ranked third on start-up activity but only fifth on new firm participation. That is still a good performance, but it would be better if the rankings were the other way around. New firm participation was more strongly correlated with economic growth than start-up activity. The GEM indication—that Australians start a lot of companies, but do not keep them alive for very long—is strongly vindicated by ABS data on failure rates. The implications will be discussed in Part Four.

Clearly, not all the factors associated with entrepreneurial activity can be influenced by direct policy intervention and it is doubtful whether some of them are even causal. Income diversity, for example, could well be an effect.

Where there does appear to be a causal relationship and the factor can be influenced by direct action, Australia can strive to maintain or improve its performance. For instance, since enrolment levels in tertiary education are strongly linked to entrepreneurial activity, we should strive maintain at least our high ranking in general tertiary educational enrolment.

Where factors appear to be causal but cannot be influenced by direct action—for example, there is little that can be done to change the age structure of the population—then we can monitor those factors closely and prepare for the consequences. Since entrepreneurial activity is strongly associated with the under-45 age group, what implication does that have for an aging demographic?

The policy implications of the GEM findings will be discussed in detail later in this report.

## **The entrepreneurial framework in Australia**

The factors for which relationships can be reasonably demonstrated to be statistically significant, at least at the indicative level, have been outlined above. But lack of a statistically valid relationship does not mean that all nine of the entrepreneurial framework conditions, identified in the GEM conceptual model, plus the additional frameworks of opportunity and capacity, are not important influencers of entrepreneurial activity.

The GEM research design examines the state of each of the entrepreneurial frameworks in each participant country by means of depth interviews with selected experts, each chosen for their knowledge of a specific framework, but able to comment on the others as well. The interviews are supplemented by a detailed questionnaire. A minimum of three experts for each framework condition and a minimum of 36 in total are interviewed. In Australia, a total of 44 experts (otherwise known as 'key informants')

was interviewed. The GEM research team thanks these distinguished Australians who recognised the importance of the study by making time in their busy schedules to take part in the research. A full list of interviewees, together with a brief biography of each, is included in Appendix 1.

The interviews and surveys provided three sources of data:

- Qualitative data from the depth interviews. This included the experts' nomination of the top three issues (in order of importance) impeding entrepreneurial activity in Australia.
- Quantitative data from the detailed questionnaire.
- Comparison of responses to the same questionnaire with those of approximately 750 experts from the other 20 participant countries.

Questions were framed in terms of a statement with which respondents were asked to rate their agreement on a scale of 1 (completely false) to 5 (completely true). For the purposes of illustrating comparisons between Australian scores and those of other nations in graph format, the results have been converted to a scale of -2 to +2 so that a score of 3 (neither true nor false) is represented as zero. This makes it easy to distinguish visually between negative and positive. For each question, the charts in the following sections show, in order: the average score for Australia; the overall average for all GEM countries; and the highest and lowest scores. Highest and lowest are labelled with the relevant country using the internationally recognised

two-character abbreviations (see Bibliography for an abbreviation list). Some questions, phrased as 'reversals' in the original questionnaire, have been rephrased and scores reversed for comparison charts.

The illustrations of issues raised for each framework come from the experts' depth interviews. These comments make no claim to be statistically representative - that is not the purpose of the depth interviews. They add nuance to the structured findings of the survey and provide for issues to be raised which are not covered by the survey or even by the framework conditions. Where a direct quote is made, it was chosen because it illustrates a key point made by a several of the respondents—it is not an isolated opinion of one person alone.

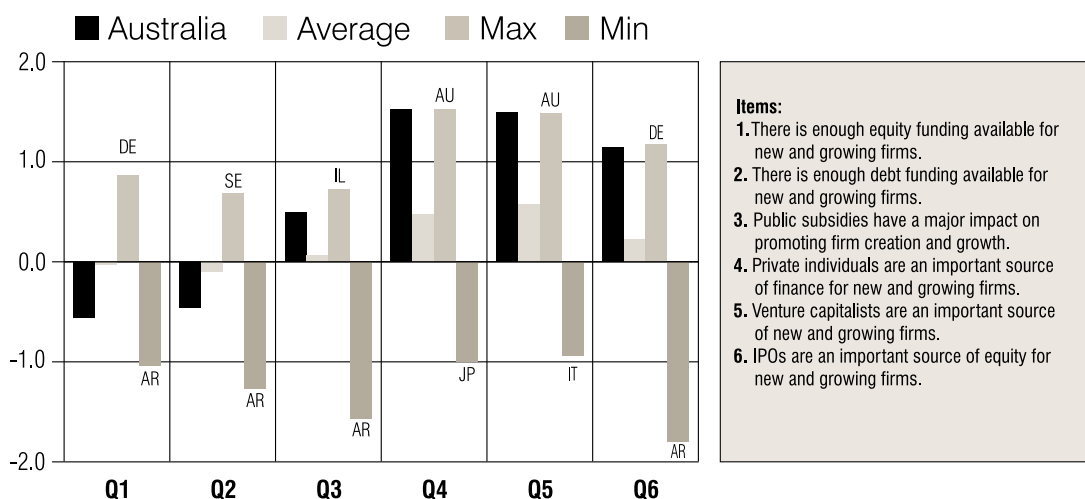
The framework conditions are presented in the order in which they appear in the GEM conceptual model.

### Financial Support

The Financial Support framework condition deals with the availability of financial resources (equity and debt) for new and growing firms including grants, collateral and subsidies.

Figure 6 summarises the responses in an international context. In general, Australians are less satisfied with supply of capital than the average and are a great deal more conscious of the importance of sources of risk capital.

**Figure 6—Financial Support: international comparison of expert opinion**



This is supported by the depth interviews. The issue most mentioned under the Financial Support framework was lack of capital (21 of 44) and, in particular, lack of seed and early stage capital (17 of 44). The perception of lack of capital is supported by the international comparisons on venture capital investment, provided in the GEM Global Executive report, which were discussed earlier in this report.

Lack of patient capital was also raised as a problem, with the time from investment to exit becoming ever shorter, presenting a particular problem for sectors with longer development times such as bio-technology. The banking sector was seen as too conservative, with a continuing emphasis on tangible 'bricks and mortar' assets. This causes a particular problem for Australia's 'new economy' businesses, where assets are much more likely to be knowledge-based. Lack of expertise in valuing new businesses in general, and 'new economy' businesses in particular, was a frequently mentioned frustration.

Availability of finance is one side of the problem. Justification for handing over the capital is another. There was a general acknowledgment that many Australian would-be-entrepreneurs lacked skills to put together a robust business plan that valued their business realistically and showed how much money was needed when and for what. The concept of multiple rounds of financing was felt to be particularly poorly understood in Australia, putting Australian entrepreneurs at a distinct

disadvantage when they are seeking US venture capital finance, as their US competitors understand it very well indeed.

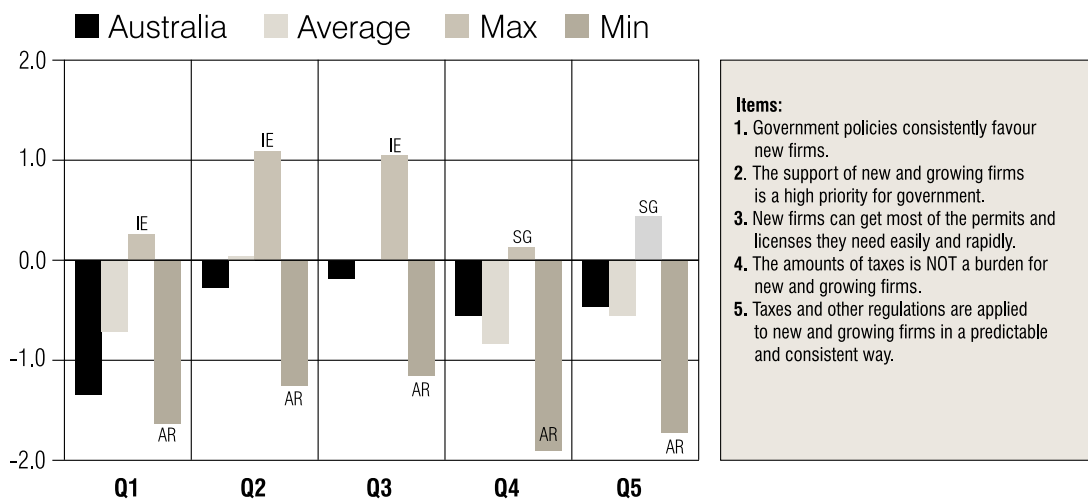
There was criticism of finance providers beyond availability of capital. It was felt that the Australian venture capital industry was less developed in terms of offering 'more than money': genuine partnership with the investee venture (as opposed to arms-length financial backing); ability to offer expertise in specific industry sectors; and help in sourcing resources such as legal advice, intellectual property protection or hiring the right staff. It was generally felt this was a symptom of the relative youth of the venture capital industry in Australia, that the situation was improving and would continue to do so over the next few years.

### Government Policy

The Government Policy framework deals with the extent to which government policies reflected in taxes, regulations, procurement or the application thereof are either size-neutral or encourage new and growing firms.

Figure 7 summarises the responses in an international context. On average, all GEM countries expressed dissatisfaction with their national governments' role in providing a favourable environment for entrepreneurship. Australia's level of satisfaction is below average in terms of government support of new enterprises but, perhaps surprisingly to many Australians,

Figure 7—Government Policy: international comparison of expert opinion



experts in most other GEM countries were more concerned about levels of taxation than were Australian experts.

Satisfaction with taxation levels should be seen in the light of recent taxation reforms, particularly reductions in levels of Capital Gains Tax (CGT) for investments held for more than 12 months. These reforms were widely welcomed as a major step in the right direction and many experts noted that prior to these reforms, levels of taxation would have been their nomination for single biggest impediment to entrepreneurial activity. Some respondents felt that the CGT reductions did not go far enough, in particular, in terms of providing incentive for long-term investment.

Other Government Policy issues included:

- **Regulatory and compliance burden:** This related to accounting (including taxation) and legal compliance requirements which were felt to be unnecessarily complex. This was a major issue for all the respondents who had been actively involved in starting a business in recent years.
- **Short term outlook:** This embraced lack of vision for the country, and lack of support for strategic investment in key areas such as industry policy, infrastructure, education and R&D.
- **Government structure:** 'Over-government' —State and Federal—was often cited as a factor behind Australia's complex legal and regulatory environment. Short terms of office and an adversarial political culture were seen as impediments to developing and implementing long-term strategies.
- **Government role:** Views on the level of intervention required from government varied, but there was general agreement that government has an essential role to play in creating a favourable environment for entrepreneurship to flourish. Key roles identified were: developing and maintaining infrastructure; investing in basic R&D; and setting sensible and practical regulations to prevent unscrupulous behaviour and maintain a reasonable social safety net.
- **Immigration:** Australia's immigration policy was criticised for complexity, inflexibility and lack of ability to process applications in a timely fashion. This was seen as an impediment to bringing

highly skilled people into the country and to overseas entrepreneurs wishing to set up businesses in Australia. Lack of dual citizenship recognition, makes it difficult for Australian ex-patriates, who have taken on foreign citizenship for employment reasons, to bring their valuable international experience back to Australia.

### Government Programs

The Government Programs framework deals with the presence of programs and initiatives to directly assist new and growing firms at all levels of government (federal, state, local).

Figure 8 summarises the responses in an international context. Overall, GEM countries were less than satisfied with government programs and Australians tended to be less satisfied than the GEM average.

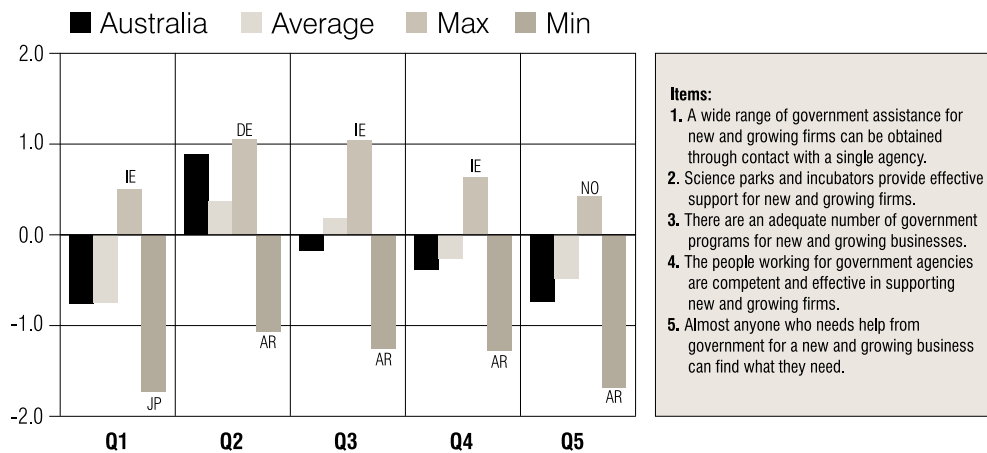
It is worth noting that Ireland top-scored in three out of five categories (and was second and sixth in the other two). The details behind this vote of satisfaction are not available at time of writing, but the GEM Ireland 2000 report, yet to be published, should provide some insight.

The general feeling expressed in depth interviews was that Australian government at all levels was genuinely concerned about promoting entrepreneurial activity, but effectiveness was limited by: lack of coordination between different government departments and between states; lack of relevant skills of government staff administering the programs; and lack of an effective program evaluation process.

Programs attracting positive comment included COMET (COMmercialising Emerging Technologies), IIF (Innovation Investment Fund), BITS (Building on IT Strengths), NEIS (New Enterprise Incentive Scheme), CDEP (Community Development Enterprise Program) and Enterprise Workshop. It is worthy of note that the last of these has been running for nearly 20 years (though it no longer runs in all states).

Stability of programs was seen as a problem, with too many programs being discontinued before their effectiveness could be judged.

Figure 8—Government Programs: international comparison of expert opinion



Programs were seen to change based on political caprice rather than rational evaluation. This occurred not only on change of government, but also after portfolio reshuffles within the party in power.

Among the entrepreneurs at whom these programs are aimed, the overwhelming comment on government programs was that it was too hard to find out what was available and whether it applied to your business; too time-consuming to apply; and, even if application were successful, delivery was too slow for today's fast-moving business environment. While acknowledging that specific programs were often well-documented on relevant government web sites, entrepreneurs said they simply did not have the time to go 'surfing' to see what might be available.

### Education and Training

The Education and Training framework deals with the extent to which training in creating or managing small, new or growing business is incorporated within the educational and training systems at all levels.

Figure 9 summarises the responses in an international context. The immediately noticeable message is that all GEM countries were less than satisfied with the quality of both general and entrepreneurship education in their respective nations. Only in business and management education did any country rate education standards as satisfactory. This category, however, got a low score in Australia, indicating that our business and

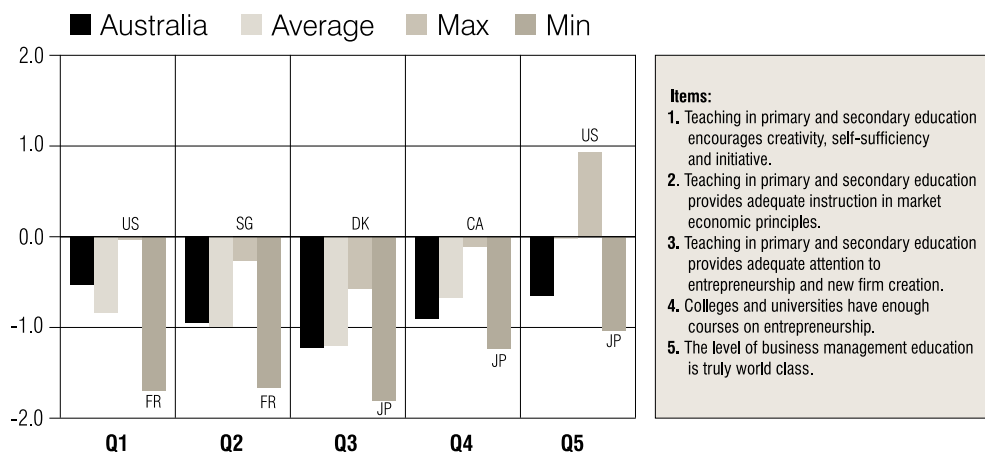
management education is perceived as lagging well behind world best practice.

In terms of both frequency of mention and urgency attached, education was the single most important issue for the Australian key informants as a whole and the dominant concerns related to education in schools. 12 of the 44 respondents included issues related to primary and secondary education in their top three issues and six of these as their number one issue—twice as many as for any other single issue.

The main concerns were that:

- School education does not encourage creativity, independence and a questioning approach to life. Instead conformity is preferred and diversity is undervalued.
- Schools and universities prepare students to be good employees. General business principles are not widely taught. Exposure to entrepreneurial concepts is virtually unknown.
- Most teachers have no experience of the business world and are therefore ill-equipped to promote business awareness among their pupils. Teachers' pay is too low to attract people to transfer into education from the business world.
- Education overall is chronically under-funded. This will eventually undermine Australia's ability to compete in a global marketplace. It also makes it very difficult to introduce curriculum changes to promote understanding of business and entrepreneurship.

Figure 9—Education and Training: international comparison of expert opinion



The standard of general education in Australia today was, however, felt to be very high.

Two respondents who had experienced education in other countries commented that Australia did not value its education system highly enough. It was even suggested that Australia should actively promote its tertiary education in overseas markets as the escalating cost of education in North America might make Australia an attractive alternative.

Regarding specific education for entrepreneurship, views were less clear-cut. Exposure to the possibility of starting a business was felt to be important and most preferred to see it integrated into the general curriculum than taught as a distinct subject. Several respondents felt that entrepreneurial drive was often latent or directed towards non-work activities, but could be triggered by exposure to entrepreneurial role models. Once the interest in entrepreneurship had been established, there was felt to be a great need for specific programs, ranging from 'enormously practical' short courses on an as-needs basis to full-blown post-graduate programs focused on entrepreneurship.

Practical skills entrepreneurs were widely deemed to lack included:

- Basic accounting skills so as to be able to understand, if not personally prepare, financial projections.
- Understanding of the importance of marketing and ability to sell.
- Recognition that they do not have the skills to start a venture alone and willingness to seek partners who have the skills they lack.

### Research and Development Transfer

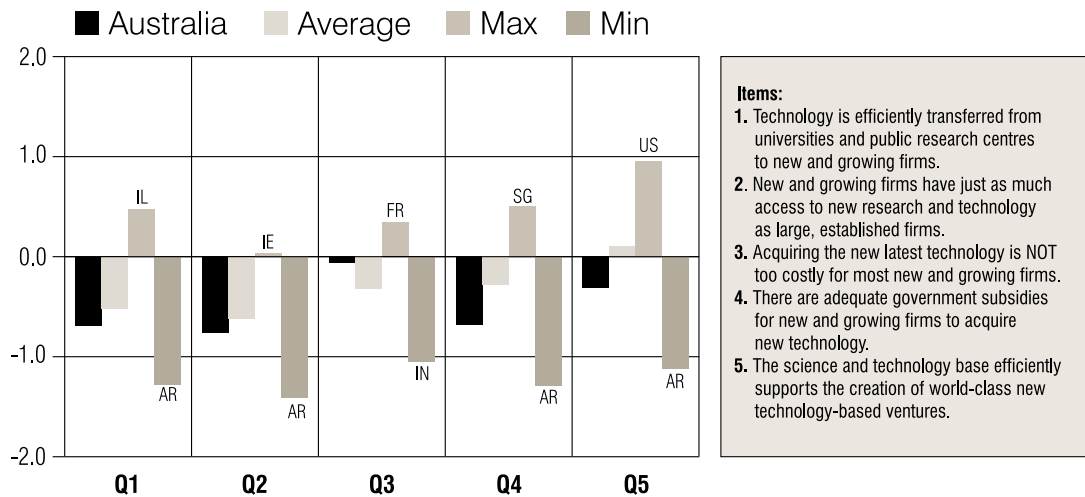
The Research and Development (R&D) Transfer framework deals with the extent to which national research and development will lead to new commercial opportunities and whether or not these are available for new, small and growing firms.

Figure 10 summarises the responses in an international context. On average GEM countries were dissatisfied with the effectiveness of R&D transfer. In the main, Australians were less satisfied than the average. This comes as no particular surprise as studies and reports too numerous to mention have continually lamented that Australia has great ability to generate ideas, but lacks ability to commercialise them. This was one of the main issues leading to the first National Innovation Summit in February 2000. The Innovation Summit Implementation Group in their final report found that 'many of Australia's companies "innovate in the dark", wasting time and money, sometimes unaware that assistance is available' and that '[Australia's] national focus on innovation remains highly fragmented, frequently operating at a sub-optimal scale with too few linkages and little active coordination' (ISIG 2000).

The dominant message from the GEM Australia experts was of a gulf of understanding between the originators of most of the ideas—the universities and publicly funded research institutions—and the commercial world. Views of the severity of this gulf ranged from outright hostility between the two camps through lack of mutual respect to goodwill undermined by lack of a common mindset.



Figure 10—Research and Development Transfer: international comparison of expert opinion



Researchers were criticised less for not possessing commercialisation skills than for not valuing such skills. Lack of respect for marketing skills was the most common complaint—the dreaded ‘inventor syndrome’ where the focus is on the beauty of the product, rather than whether anyone will ever buy it or how much they will be prepared to pay. University research centres were criticised for preparing their research students only for a career in research when reality dictates that this option is available only to a small percentage. The remainder are usually not equipped with commercial skills of any kind.

Technology parks and incubators were felt to have a useful role to play, but many respondents felt more clustering was needed for them to be most effective. Those who had direct experience of incubators had found the best ones focused on generating interaction between the resident companies, rather than just providing office space.

A general criticism of the Australian research community was lack of willingness to share ideas. Contrast was drawn with Silicon Valley where ideas are freely exchanged in cafes and bars, and alliances are generated by serendipitous encounters stimulated by open discussion of current research.

Low investment in R&D by the private sector in Australia is a well-documented problem. Expenditure on R&D as a percentage of GDP

is the usual measure of R&D investment. Using this measure, Australia’s public sector (government and higher education) investment in R&D is fifth highest in the OECD, but our business sector R&D is only 12th highest, leaving us with an overall ranking of 11th (ABS 2000b). Comment on this issue prompted inclusion of an additional framework condition in the Australian team’s report of results to the GEM coordinating team – Business Culture. This is discussed in more details under Cultural and Social Norms below.

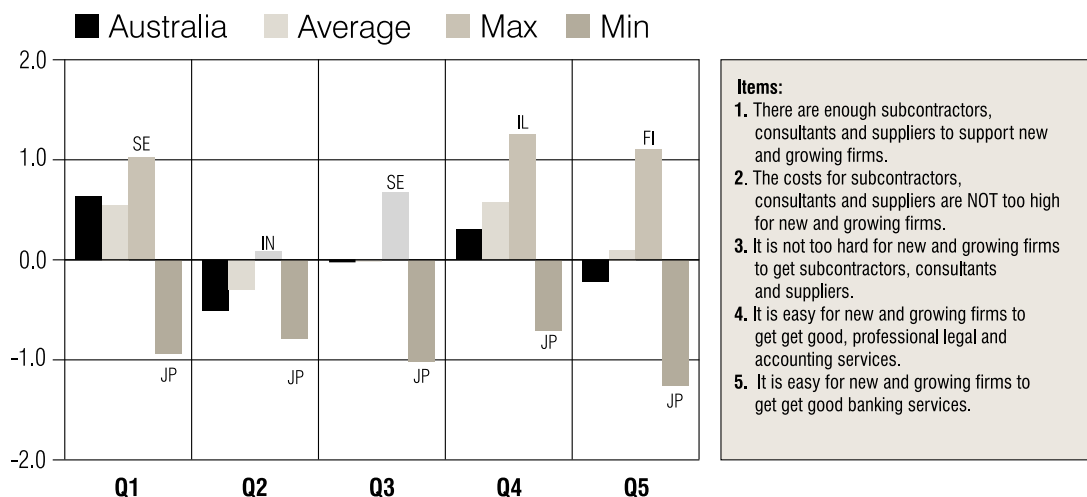
### Commercial and Professional Infrastructure

The Commercial and Professional Infrastructure framework deals with the presence of commercial, accounting and other legal services and institutions that encourage and support the emergence of new, small or growing businesses.

Figure 11 summarises the responses in an international context. There are no particularly striking messages for Australia.

In general, the Australian experts had few problems with the quality of the commercial and professional sector. There were some concerns about lack of experience of many consultants with the entrepreneurial sector, especially if an overseas presence was involved. The professions were felt to be on a learning curve which inevitably involved a lag behind their counterparts in the USA, in particular.

Figure 11—Commercial Infrastructure: international comparison of expert opinion



The cost of professional advice was, however, a cause for concern for many. Most felt that the smaller and more affordable firms lacked the necessary expertise. But more importantly, they lacked credibility with the providers of capital. This leads to a Catch 22 situation—without ‘big name’ advisers, it is hard to attract risk capital, but without capital, it is hard to afford the advisers you need to have credibility. Developing personal networks of influential contacts was seen as the way out of this dilemma.

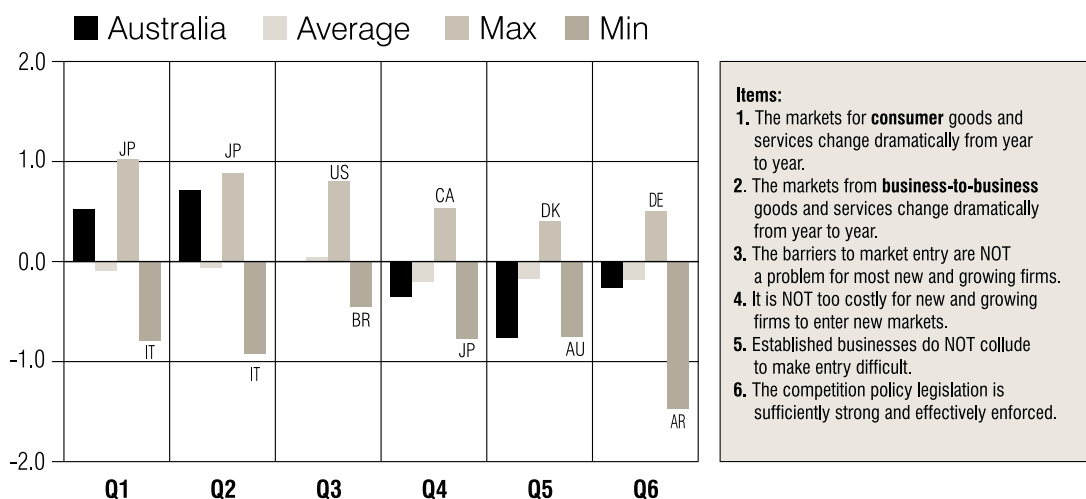
**Market Openness**

The Market Openness framework deals with the extent to which commercial arrangements undergo constant change and redeployment as new and

growing firms compete and replace existing suppliers, subcontractors and consultants.

Figure 12 summarises the responses in an international context. A clear message is apparent. Australia’s markets are considered relatively dynamic, but barriers to entry are perceived as a problem. In particular, power of incumbents to collude and prevent new entrants is seen as a more significant problem in Australia than in any other GEM country. No doubt this is due in some part to the relative smallness of our domestic market. But since nine of the GEM countries are smaller than Australia in terms of GDP and eight are smaller in terms of population, size cannot be the sole determining factor.

Figure 12—Market Openness: international comparison of expert opinion



Virtually all key informants identified sectors which lacked market openness. Most commonly mentioned was telecommunications, principally because of its importance to the knowledge economy, though there was acknowledgment of rapid and continuing improvement. Other sectors mentioned were banking, retail, airlines, ports and the media. Sources of potential future problems foreseen included international monopolies, and the tendency towards mergers and acquisitions creating fewer and bigger players.

Although key informants agreed competition was beneficial to stimulating sector growth, they felt it was often not viewed in this way. As one commented 'companies think competition is a good thing—except in their own industry'. Too many large companies were seen as resorting to getting even bigger as a defence against competition. A perception that it is necessary to dominate your domestic market before entering overseas markets was seen as an inhibitor to building export trade.

**Access to Physical Infrastructure**

The Physical Infrastructure framework deals with ease of access to available physical resources—communication, utilities, transportation, land or space—at a price that does not discriminate against new, small or growing firms.

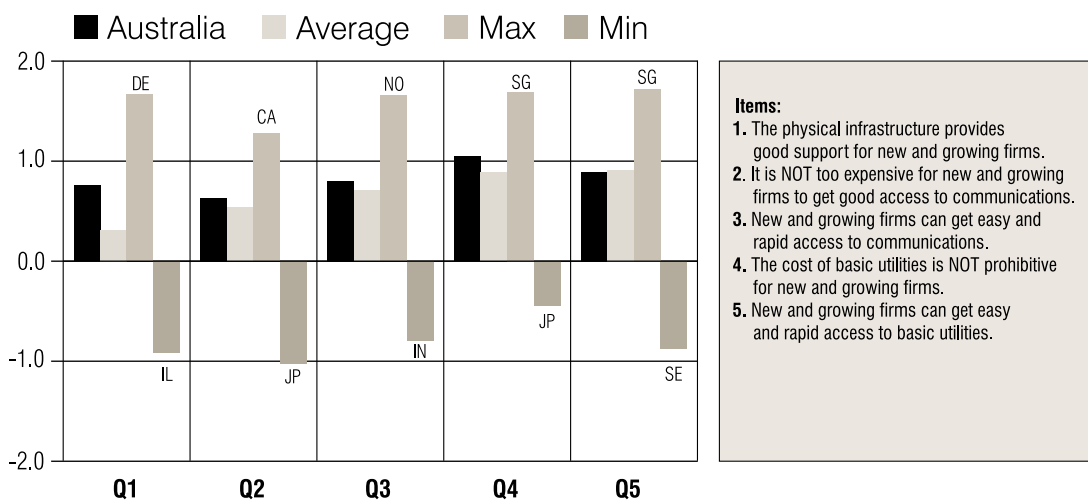
Figure 13 summarises the responses in an international context. In general, GEM countries were well satisfied with access to physical

infrastructure and Australians were more satisfied than the average. In fact, many of the Australian experts felt that access to physical infrastructure was a non-issue in Australia. The active entrepreneurs among them, however, had a different perspective. They reported substantial frustration over apparently simple issues such as getting telephone and electricity connected and establishing accounts with suppliers. Office space was reported as an even more significant issue. For the rapidly growing company, committing to a minimum two-year lease means either paying for unutilised space at the beginning (when money is usually particularly tight) or outgrowing your premises before the lease is up. Good business incubators can ease this burden substantially.

There was also concern from some respondents about quality of infrastructure outside metropolitan Australia. Telecommunications coverage is less extensive and more expensive; electricity supplies are less reliable; and transport infrastructure is lacking. Overall, transport was considered the least satisfactory area of infrastructure, with air, water and interstate rail being the chief causes for concern.

If physical infrastructure is taken to include the environment, then supply of water and preservation of land quality were also seen as areas for substantial concern.

**Figure 13—Physical Infrastructure: international comparison of expert opinion**



### Entrepreneurial opportunity and capacity

The entrepreneurial framework conditions provide the environment, but the twin issues of ability to recognise opportunities and the capacity to act on them remain. The latter of these is in itself a composite issue: skill—the ability to commercialise an opportunity; and motivation—the drive to do so. These three factors were also covered in the key informant survey.

In terms of **opportunity perception**, Australia was not substantially different from the GEM average. Our experts were a little more pessimistic about general ability to identify opportunities and about being able to obtain the necessary information to assess them. But they were more optimistic about existence of opportunities, feeling strongly that opportunities for starting businesses have improved considerably in the last five years and that there are more opportunities around than people able to take advantage of them.

Which leads to the next factor: **entrepreneurial capacity**. Here the optimism disappears, but Australia is not alone in this respect. On average, GEM countries felt that the capacity of the general population to start and grow businesses was lacking, with the USA being a notable exception. Australia, though, is more pessimistic than the GEM average. This reinforces the importance attached to general education which exposes students to entrepreneurial concepts and specific education in entrepreneurial skills.

**Entrepreneurial motivation** is not just about 'drive', but also embraces the perception people have about what it means to be an entrepreneur. International comparison tells an interesting story. Australian experts consider entrepreneurship an appropriate means to attaining wealth and do not feel that the population in general considers it a last resort alternative to unemployment (above the GEM average in both cases). However, when it comes to the perception of entrepreneurs, a different picture emerges.

In Australia, entrepreneurship is not seen as a desirable career choice, entrepreneurs are not accorded a high level of status and respect, and although our experts agreed there was some degree of media coverage of successful

entrepreneurs, it was below the GEM average and way behind the top-ranked country in this category, Israel. In fact, Israel and the USA, which ranked second and first, respectively, in entrepreneurial activity in the GEM 1999 study, led the field in entrepreneurial motivation in 2000. GEM 1999 found that in the top three countries in entrepreneurial activity (Canada was the third), 'entrepreneurial activity is an integral and accepted feature of economic and personal life' (Reynolds et al 1999). This is a far cry from the situation our experts perceived in Australia.

### Cultural and social norms

The Cultural and Social Norms framework has been left till last for two reasons:

1. it pervades all the other frameworks; and
2. it is unique among the frameworks in being covered by both the key informant survey and the adult population survey.

Six questions with Yes/No responses were included in both adult population and key informant surveys. In addition, the key informant surveys included six further questions on Cultural and Social Norms requiring answers on a 5-point scale as described earlier. As with the other entrepreneurial framework conditions, the responses for these 5-point scale questions have been standardised to a scale of -2 to +2 for graphical representation.

### Contrast between general population and key experts

50 percent of the Australian adult population sample personally knew someone who had started a business. However, in general, this familiarity did not inspire great confidence in their ability to do the same themselves. Only 29 percent thought there would be good opportunities for starting a business in the next six months and 36 percent said that fear of failure would deter them from trying to start a business. By contrast, the key informants were more optimistic. Perhaps this was due in some part to greater familiarity with entrepreneurs, since 90 percent of them personally knew someone who had started a business. 91 percent saw good opportunities for starting a business in the next six months and only 10 percent said they would be deterred by fear of failure.

Australians seemed to have somewhat contradictory attitudes towards entrepreneurs. On the one hand, 83 percent respected those who started a business, but 78 percent felt there was a lot of resentment towards those who made a lot of money from it. 74 percent felt most people in Australia would prefer everyone to have a similar standard of living. The key experts were less conflicted in their attitudes. Every one of them respected those who started a business and only 28 percent thought there was significant resentment of those who made a lot of money from doing so.

The two populations are not statistically comparable, but the striking difference in responses does indicate that familiarity with the entrepreneurs and entrepreneurship seems to generate greater approval of entrepreneurship and less suspicion of potential negative consequences. This points strongly to the potential value of role models.

**Contrast with other countries**

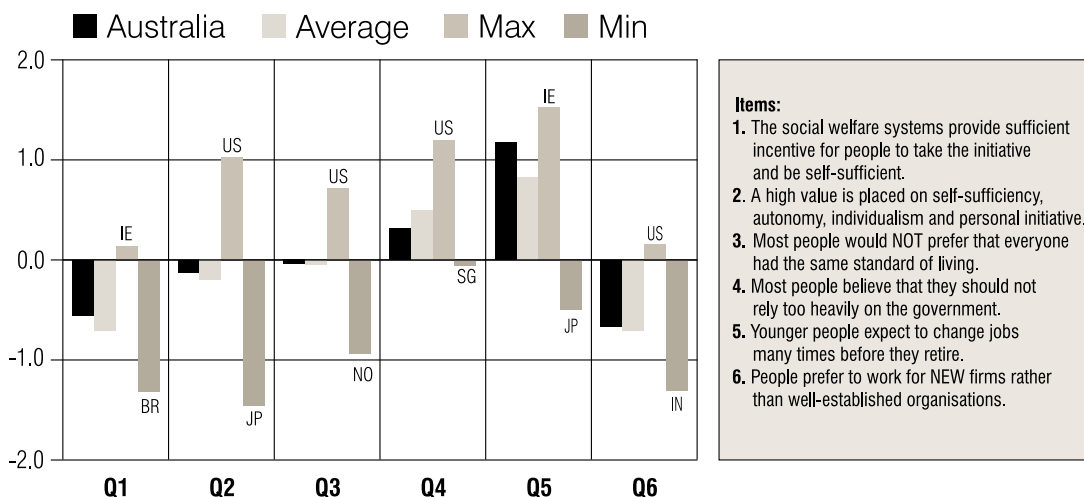
Comparison with the other GEM countries reveals that Australians in general show less confidence about entrepreneurial opportunities. Although Australia ranked sixth in percentage of the population who personally knew someone who had started a business, just outscoring the USA (the Scandinavian countries dominated the top five here), we ranked 15th in perception of good business opportunities in the next six months. Norway, Sweden, Canada and the USA were most optimistic about future business opportunities. Australians were more likely than the GEM average

to be deterred by fear of failure, ranking 12th. Americans, Canadians and Norwegians were least deterred by the prospect of failure. Japanese, French, Germans and, surprisingly in view of their high level of entrepreneurial activity (see below), Koreans were most likely to let fear of failure prevent them starting a business.

International comparison also reveals that Australians' apparently schizophrenic attitude towards entrepreneurs—'we admire your for starting a business but don't make too much money from it because we'd prefer that everyone had a similar standard of living'—is not at all unusual. On average, across all 21 GEM participant countries, although 79 percent of people respected those who started a business, 83 percent thought there was resentment of those who made a lot of money from it and 59 percent felt most people in their country would prefer everyone had a similar standard of living. In fact, high levels of perceived resentment of successful entrepreneurs was a constant in all countries except Brazil, fitting into a range between 74 percent and 95 percent.

The key expert survey included six additional questions which were rated on the 5-point scale explained earlier. These dealt with the extent to which self-sufficiency was valued and preference for the new versus the status quo. Figure 14 illustrates the results in the international context. Australia does not differ greatly from the GEM average on any question.

**Figure 14—Cultural Norms: international comparison of expert opinion**



When the Australian experts talked about cultural and social norms as an influencing factor, however, the issues in the survey were not the ones which concerned them most. They saw cultural norms as an extremely important influence on the level of entrepreneurial activity, but the issues they identified as impeding entrepreneurial activity in Australia were:

- **Preference for speculation:** Australians prefer speculative investments and short-term returns to educated long-term investment - illustrated by reference to Australians' love of gambling and, more recently, the high proportion of individual Australians owning shares.
- **Intolerance of failure:** Failure in business is still seen by many as a black mark and the value of the learning gained from failure not recognised - consequently many people fear that if their business fails then their future employment prospects will be badly damaged.
- **Lack of status for self-employment:** Many people do not see starting a business as a 'respectable' career option.
- **Lack of understanding of entrepreneurship:** Many people still associate entrepreneurship with a few high profile unscrupulous characters of the late 1980s or they think that it is the preserve of a select few, very specially gifted people.
- **Lack of entrepreneurial role models:** The contrast between our abundance of sporting heroes and our almost total lack of entrepreneurial heroes was frequently drawn. This is a major factor in misunderstanding of entrepreneurship.
- **Negative and inaccurate media portrayal:** Media prefers to focus on the 'villains' - those non-entrepreneurs who create personal wealth by shuffling money with no added value, rather than the entrepreneurial 'heroes' who create businesses that add value all round - better value products/services and job creation.
- **'Tall poppy' syndrome:** This is the enjoyment of seeing high flyers brought down to earth again. The media was seen as contributing to this by showing a preference for the 'bad news' stories.
- **'She'll be right' attitude:** The upside of this is Australian's are tolerant and adaptable. The downside is they don't feel the need to try so hard. As one respondent said, 'She'll be right stops you from making it happen'.

However, our experts did think that Australian culture had many positives for entrepreneurial activity:

- willingness to 'have a go' and respect for others who do so;
- a well-deserved reputation for creativity;
- an informal culture which is in tune with the business culture of the 'new economy';
- resilience and an ability to adapt to change quickly;
- diversity, brought by our significant immigrant population;
- increasing self-reliance and reducing reliance on the state, especially among the younger generation;
- a 'fair go' attitude which curbs the excesses of those motivated by greed, rather than desire to add value and have impact.

### **Business culture**

Business or corporate culture overlaps to some extent with R&D Transfer, and with Cultural and Social Norms. It came up as an issue in depth interviews often enough for it to merit separate mention.

The Australian experts did not find Australian big businesses very entrepreneurial. It was noted that many of the biggest companies operating in Australia are branches of multinationals, based elsewhere. These companies were felt to have a 'branch office mentality', which meant that entrepreneurial and innovative activity was not part of their brief. As for Australia's home-grown big companies, they were felt to be conservative in their reaction to the competitive market in which find themselves today, taking refuge in size as their main defence mechanism, through mergers and acquisitions.

Specific problems noted were:

- unwillingness to work together as an industry— a parallel with the research community's unwillingness to share ideas;
- fear of entrepreneurship or, at best, lack of understanding of how to manage it alongside the status quo;
- a short-term returns focus with emphasis on reducing costs rather than adding value;
- a preference for investing in technology rather than people.

Business culture was seen as separate from the culture of society in general. It was noted that—in many companies—employees who might be quite entrepreneurial in their non-working lives did not feel they had ‘permission’ to use their entrepreneurial flair at work. As one expert put it, ‘it’s almost as if employees are expected to put their brains on the hook with their coats when they arrive at work’. Former Shell executive, Arie de Geus in his book *The Living Company* talks about this phenomenon and asserts a need for ‘tolerance’ within a company, which includes giving employees a degree of freedom about what they do and how they do it (de Geus, 1997: chapter 8). He argues that although this leads to some waste, it is the ‘offshoots’ of the corporate organism that allow it to survive when it is faced by sudden change in its environment. He points out that entrepreneurial flair, if not allowed an outlet in the workplace, will be directed to other activities and this represents a wasted opportunity for the company. The comments of the Australian experts indicate this tolerance is missing from Australian corporate culture.

### **Australia’s entrepreneurial framework scorecard**

As the Australian Entrepreneurial Activity Scorecard depicted in Table 1 showed at a glance how Australia ranked on GEM’s key indicators of entrepreneurial activity, so the Australian Entrepreneurial Framework Scorecard depicted in Table 7 shows how the Australian environment ranks in terms of conduciveness to entrepreneurial activity. As before, Australia’s score is shown in comparison with the median scores for the group of all countries, and the scores for countries which scored both the highest and lowest for the particular attribute.

Table 7—Australia's Entrepreneurial Environment Scorecard

ITEM	Australia		Median	All GEM countries	
	Rank	Score		High	Low
				Score (Cntry*)	Score (Cntry*)
<b>Entrepreneurship Environment Ratings</b> (Source: Key informant surveys; Scale: 1=Low to 5=High)					
Availability of capital	16	2.48	3.03	3.66 (SE)	1.91 (AR)
Importance of risk capital	1	4.38	3.44	4.38 (AU)	2.00 (AR)
Government policy support	18	2.43	2.82	3.84 (IE)	1.58 (AR)
Low regulation and taxation burden	6	2.60	2.40	3.56 (SG)	1.32 (AR)
Government program effectiveness	12	2.81	2.84	3.64 (IE)	1.64 (AR)
Education and training effectiveness	11	2.21	2.21	2.91 (CA)	1.52 (JP)
R&D Transfer effectiveness	15	2.45	2.73	3.25 (IE)	1.71 (AR)
Commercial and professional infrastructure	16	3.19	3.49	3.93 (IL)	2.01 (JP)
Rapidity of change in markets	3	3.61	2.79	3.95 (JP)	2.14 (IT)
Low barriers to market entry	14	2.61	2.78	3.36 (CA)	2.31 (AR)
Ease of access to physical infrastructure	9	3.76	3.64	4.56 (SG)	2.73 (IN)
Cultural value placed on independence	9	2.64	2.57	3.45 (US)	1.91 (JP)
Perception of business opportunities	13	3.34	3.37	4.19 (US)	2.64 (AR)
Capacity to act on business opportunities	15	2.36	2.57	3.23 (US)	1.81 (JP)
Motivation to act on business opportunities	14	3.33	3.39	4.50 (IL)	2.67 (AR)
<b>Entrepreneurship Expert Attitude Ratings</b> (Source: Key informant surveys; Rating: Pct answering "Yes")					
Know someone who started a business	16	90%	96%	100% (CA+)	71% (IT)
Respect those who start a business	1=	100%	97%	100% (AU+)	68% (JP)
Do not resent successful entrepreneurs	12	72%	75%	97% (IL)	10% (FR)
Perceive good business opportunities now	9	91%	88%	100% (US)	55% (KR)
Fear of failure is not a deterrent	3	90%	75%	93% (DE)	52% (JP)
Disparity in living standards acceptable	11	50%	51%	82% (US)	3% (SP)
<b>Entrepreneurship Population Attitude Ratings</b> (Source: Adult pop'n survey; Rating: Pct answering "Yes")					
Know someone who started a business	6	50%	41%	58% (NO)	18% (JP)
Respect those who start a business	11	83%	83%	99% (ES)	31% (JP)
Do not resent successful entrepreneurs	5	22%	17%	49% (ES)	5% (BR)
Perceive good business opportunities now	15	29%	37%	58% (NO)	5% (JP)
Fear of failure is not a deterrent	12	64%	64%	79% (US)	40% (JP)
Disparity in living standards acceptable	15	26%	40%	58% (FI)	16% (BR)
<b>Other drivers of entrepreneurial activity</b>					
Enrolment in tertiary education	3	80%	50%	90% (CA)	7% (IN)
Projected population growth	2	21.4%	11.1%	107.5% (SG)	-5.7% (IT)
Percentage of population aged 25-44	7	51.4%	50.3%	61.3% (SG)	43.4% (JP)

\* See bibliography for list country codes. + indicates more than one country with this score



## PART FOUR: WHAT DIRECTIONS SHOULD POLICY TAKE?

### Key definitions for policy makers

#### Entrepreneurship is NOT the same as innovation

A definition of innovation, which is useful primarily for distinguishing the word from entrepreneurship and bringing clarity to a hazy policy debate is the following:

*'An innovation is an authentic novelty with the latent capacity to be the basis for changing prevailing relationships.'*

(Hindle and Mitchell 2000).

In an examination of programs, policy statements and legislation all directed at fostering entrepreneurship, within just one agency of one department of the federal government, Hindle and Mitchell stopped counting when they reached one hundred occurrences of the word 'innovation'. In the same volume of documentation, the word 'entrepreneurship' appeared less than five times and three of those betrayed a possible misunderstanding of its meaning (Hindle and Mitchell 2000). Yet the policies being described, explained or legislated were not really about fostering innovation (the innovation had already been done). They were about fostering the implementation of innovation—which is as good a three-word definition of 'entrepreneurship' as you will ever get.

Many innovations remain latent. Without the action of converting a good idea into a commercial reality, innovation has no impact. It is entrepreneurs who supply this part of the action.

#### Entrepreneurship is NOT the same as small business

As already discussed, the entrepreneurial businesses—the ones that achieve rapid

growth and make disproportionate contributions to Australia's employment growth and tax revenues are a small minority—between four and seven percent of all small businesses (McMahon 2000). The authors of *GEM Australia 2000* want to emphasise with the utmost force, our overwhelming conviction that there is nothing bad and much good about a well managed lifestyle business, so long as it creates value for its customers and joy for its owners. The great value of the SME sector lies in its variety. For many people, growth is an option they choose not to take. It is their right and their privilege. Well managed, small scale ventures are a cultural and economic necessity, and just as deserving of policy initiatives and government support as any other sector of the nation.

But policy aimed at the majority of small businesses, which do not have high growth aspirations, is unlikely to be of much assistance to the entrepreneurial firms. Therefore, it cannot be assumed that because a government has developed a small business policy, that it has, in the process, addressed the needs of the minority of entrepreneurial businesses within that sector.

Entrepreneurship needs to be a distinct element of national policy.

#### Entrepreneurship is NOT incompatible with big business

Until very recently, it may have been arguable that the corporate sector in Australia, 'the big end of town', could not have cared less about entrepreneurship. It is not true now. There is substantial innovation, creativity and respect for entrepreneurship at the big end of town. One example of this is the work commissioned by the Australian Services Network, the peak body of Australia's service companies and professional

firms, as a contribution to this year's National Innovation Summit (Uren et al 2000). This was the only submission to the recent economic National Innovation Summit that emphasised the importance of entrepreneurship.

Next year's Babson-Kauffman conference, *Frontiers of Entrepreneurship Research* (the world's leading entrepreneurship research conference) has chosen corporate entrepreneurship as its theme.

### **Entrepreneurship is NOT about 'best practice'**

It has been argued that 'best practice' and 'innovation' may well be incompatible corporate strategies (Hindle 2000a). In a recent press article, Ian Dennis, managing director of Whitehorse Strategic Group, argued that they may be incompatible as policy criteria.

*'Federal and State Governments have, either by design or omission, failed to stop the gradual reduction of Australian IT technological sovereignty for more than 50 years since Pearcey designed and built Australia's first computer. Governments have been aided in this process by expensive non-Australian advisers and consultants, while studiously ignoring the advice of Australian IT professional or industry bodies, on the claim that it is "world's best practice". Well, the strategy may have been "best practice" for the world but, unfortunately, it appears, not for Australia. We are now categorised as, at best an IT user economy ...'*  
(Dennis 2000b: 11).

Best practice often means copying: it is an old and often wrong strategy. Innovation means originality. Strategically, it is new and necessary, but not sufficient. Entrepreneurship means implementing originality. It is mandatory.

### **Entrepreneurship policy is NOT about picking winning firms**

Since only a small minority of businesses will achieve substantial growth, it is tempting to try to identify those businesses before they grow and develop policy to assist them.

Easier said than done. In 1991, Turok asked the question—Which small firms grow? He tried to answer it with an empirical study of 166 firms among a population of small firms in West Lothian, a large district between Edinburgh and Glasgow in

the United Kingdom (Turok 1991). He failed to find any simple, useful indicators of which firms would go on to achieve substantial growth.

Fortunately, policy makers and those who help to provide them with guidance do not have to do the picking. There is a whole industry, which exists solely to pick the growth-venture winners. It is called venture capital. Many of the policy-makers' problems may possibly be resolved by focussing direct programs on the general act of enriching the entrepreneurial environment—particularly the financial environment and, more particularly, the venture capital environment—than by attempts at direct intervention at the firm level.

It is heartening to see the Australian Government already constructively engaged in what might be called 'helping the pickers'. Several of our GEM key informants, in depth interview, singled out the Innovation Investment Fund (IIF) scheme as a constructive initiative especially beneficial for stimulating early stage investment.

### **Entrepreneurship is NOT Christopher Skase**

Our key informants were unanimous in condemning the Australian media for its consistent association of entrepreneurship with negative stereotypes of people who fail to fit the description of ethical entrepreneurs. This negative association in media is immensely frustrating and perpetuates ignorance. As an example, in a recent press article dedicated to defining the true attributes of genuine and ethical entrepreneurs, the sub-editor could not refrain from decorating the text with a photograph of Christopher Skase, the classic example of what a true entrepreneur is not (Hindle 1999a). Even if the sub-editor's intent had been to contrast Skase's undesirable attributes with the true attributes of ethical entrepreneurs being presented in the text, the question must be asked: why was his tarnished image used at all? Why not use a picture of a positive role model or a graphic symbolising action and hope? Or nothing at all. Using the Skase photograph risked reinforcing the association of entrepreneurship with negative images to those who only read the heading—'Here's a guide to identifying a real entrepreneur'—and never read the text.

Unfortunately many important players in the game of Australian economic policy

and practice do entertain negative connotations of the word. It is a policy duty to promote the correct, positive definition of ethical entrepreneurship at a national level.

### **Entrepreneurship is NOT a solo endeavour**

The old theme of 'the lone crusader versus the world' always was a myth and is now a dangerous one. So-called 'independent' entrepreneurship means 'different from corporate' entrepreneurship not 'going it alone'. The first thing venture capitalists look at when an entrepreneur seeks funding is the quality of the management team.

In terms of policy, team building requires the building of exciting communities of skills. This often means avoiding the temptation to 'spread the programs evenly', thus diffusing effort over wide geographic areas and losing the capacity to build critical mass. Policy makers in this country need always to remember: it is Silicon Valley not Silicon Nation. You can walk down Sandhill Road. You do not need long aeroplane flights to shop your idea.

### **Entrepreneurship is NOT a panacea**

Entrepreneurship is not the sole answer to achieving economic growth. Entrepreneurship can be a very inefficient process. Silicon Valley authority, Robert X. Cringely, suffers no romantic notions about either entrepreneurship or venture capital and is very critical of the wastage involved in the start-win-or-crash nature of the game (Cringely 1992: passim and especially page 314). Wennekers and Thurik (2000) argue cogently that the economy needs a sensible balance of what McMahon (2000) would call the low growth, capped growth and high-growth firms.

Moreover, being an entrepreneur is seldom a 'job for life'. The whole process is transitional. Yesterday's start-up team member of a dynamic, growth company may be today's technical director of a division of the large corporation that did the buy-out. That is good. That is success.

But the hard fact remains. On the critical issue of employment, entrepreneurship policy is far more important than small business policy and probably almost every other traditional policy heading usually associated with the attempt to ensure citizens have

real, viable, valuable jobs. Unless policy makers have the courage to face that fact, and therefore make policy in the name of entrepreneurship, they will be shirking the issue.

### **Entrepreneurship IS a discipline**

It is not well known in Australia that Entrepreneurship (with a capital 'E') has been for fourteen years a formal, academic discipline in its own right. In the United States Academy of Management, an interest group on entrepreneurship was formed in 1974. In 1987, it achieved the status of a division within the academy. Entrepreneurship is thus a distinct, established field of management science, possessing the same status as such other established managerial disciplines as Marketing, Organisational Behaviour and Finance.

It is lamentable that Entrepreneurship has not yet received official recognition as a stream within the Australian and New Zealand Academy of Management (ANZAM) and the number of papers on entrepreneurship topics at each annual ANZAM conference remains depressingly low.

It is not legitimate for non-specialists to comment on, for argument's sake, physics if they have never heard of the theory of relativity. Is it any more legitimate for commentators, and policy-makers and their advisers, no matter how well motivated, to enter the entrepreneurship debate without having read the relevant literature at the leading edge of world research in a vibrant and well-established scholarly field? We think not. There is a lot of knowledge already in the Entrepreneurship scholarship box. Australia should use it.

### **A working definition of entrepreneurship**

For the policy maker seeking a sharp focus on what entrepreneurship offers to the employment process, the following definition (Hindle 1999a) may help.

*'Entrepreneurship is the creation and management of a new organisation designed to pursue a unique, innovative opportunity and achieve rapid, profitable growth.'*

In a practical sense, entrepreneurship has six key ingredients.

First, entrepreneurs are active: they make something happen. Second, entrepreneurs practice

innovation: they make something new happen by changing the prevailing parameters of production, distribution or exchange. Third, entrepreneurs are wealth creating: they make something economically new happen, expanding the total volume of wealth available for distribution. Fourth, entrepreneurs are highly growth oriented: they make something economically new happen very fast, an effect whose most important consequence is a growth in employment. Fifth, entrepreneurs are team players not lone rangers. They make something economically new happen very fast by building an organisation and sharing rewards.

And finally, entrepreneurs can't thrive in a sterile environment. Government and business policy-makers must actively contribute to the creation of an environment conducive to entrepreneurship.

Entrepreneurship policy must be conscious, focused and distinct.

### **Start-up is not the same as success**

It is very good news that on the GEM index of Total Entrepreneurial Activity, and in its start-up participation rates, Australia ranks so highly in the world. But, by itself, the news is not good enough. Australia cannot be complacent. Anyone can start a business. It takes a skilled, well-supported entrepreneur to create a genuine growth venture producing socially beneficial wealth. We are proven good starters. What about our index of success?

How many of this year's crop of start-up firms are likely to be the growers, the employment generators, the big winners, the societal contributors? McMahon's research, cited above, has shown us: about 4.5 percent to about 7 percent. And as for the rest? The Australian Bureau of Statistics (Pattinson and Tozer 1997: 13) tells us that 14.3 percent of small firms go out of business within the first two years and 27.4 percent within the first five years. Many will remain non-employing businesses—during 1998-99, these represented 45 percent of all non-agricultural small businesses (ABS 1999). Most will not grow—within five years, 72 percent will either be static or declining in employment (ABS 1997b).

How many of this year's crop of Australian new ventures will become global blockbusters: the Microsofts, Nokias, Ericssons, Siemens, Samsungs, Sonys, whatever, of Australia? If history is any indication, the answer is between zero and one. Datacraft, the star in our firmament, now has several spin-off subsidiaries, one of which, Datacraft Singapore alone dwarfs most Australian companies on market capitalisation.

Of course, from a humble start in Adelaide, News Corporation has grown to be a pretty big outfit – the world's premier media corporation. But it is no longer Australian.

So, we cannot be naively complacent that Australia came fourth whereas Finland, for argument sake, came 15th on this year's GEM Total Entrepreneurial Activity index. All such comparisons are glib and facile. We need to be glad about Australia's great start, but circumspect about our capacity to finish well. The temptation to be satisfied with crude comparisons should be totally resisted. GEM is an aid to insight, not a substitute for it.

### **The key issues**

The key issues for Australia are not just those where we scored less well on various indicators associated with entrepreneurial activity, but also those raised in the depth interviews with the 44 Australian 'key informants'. In many cases, these served to illustrate the problems already indicated by poor scores on the various indicators.

Issues fell into five main categories:

1. Education
2. Limited Supply of Capital
3. Regulation and taxation burden
4. Short-term outlook
5. Culture

#### **Education**

Entrepreneurial capacity, which is an outcome of education, was one of the factors most strongly correlated with entrepreneurial activity and was one on which the Australian experts rated Australia poorly, both overall, and in comparison with experts in other GEM countries. Education was the single biggest issue raised in their interviews. Issues identified were, in summary:

1. **Preparing the ground:** maintaining the standard of general school and university education in Australia—the necessary precursor to acquiring specialist skills—and ensuring it is available to all.
2. **Planting the seed:** fostering entrepreneurial spirit and motivation through encouragement of creativity, and a questioning attitude and exposure to business concepts and entrepreneurial role models.
3. **Nurturing the seedlings:** providing practical, relevant and distinct programs to teach specialist skills that entrepreneurs need: areas such as financial projection, market research and marketing, managing a fast-growing organisation and so forth.

### Limited Supply of Capital

The availability of risk capital for new ventures was strongly associated with entrepreneurial activity. Australia ranked poorly among the GEM countries in venture capital investment. The Australian experts identified lack of capital, especially at the early stages of a venture, as one of the main impediments to entrepreneurial activity in Australia.

Key concerns were:

1. **Lack of capital:** short supply of equity capital for early stage ventures and debt capital extremely limited by the banking sector's unwillingness to accept intangible assets, increasingly a feature of 'knowledge economy' businesses, as collateral.
2. **Knowing how to raise capital:** lack of skills of entrepreneurs in raising capital (this relates to specialist education for entrepreneurs discussed above).
3. **Quality of capital:** lack of ability or willingness of suppliers of capital to provide 'more than money' i.e. genuine partnership and help with access to non-financial resources - compared unfavourably with US counterparts.

### Regulation and Taxation burden

The Australian experts highlighted Australia's complex regulatory and taxation burden as a problem for new and growing ventures. Put simply, starting a business is hard enough without having to spend a substantial proportion of time which could be spent working on the business dealing with accountants, lawyers and mountains of paperwork.

This comports with the GEM international team finding of a correlation between the 'government role' competitiveness index as measured by the World Economic Forum's *Global Competitiveness Report* and total entrepreneurial activity. Within this index Australia scored poorly on administrative regulations and taxation burden. Taxation burden has largely been addressed in tax reforms implemented on July 1st 2000. Administrative regulation burden remains.

Specific issues were:

1. complexity of regulation—the sheer volume of regulations to be complied with;
2. too many points of contact—too many different departments to deal with; and
3. inconsistencies between states.

### Short-term outlook

The theme of lack of vision and lack of long-term outlook recurred frequently and cut across several framework conditions. The key areas of concern were:

1. **Lack of investment in 'knowledge capital':** the three main areas under this heading were:
  - Education (discussed above);
  - R&D—including the missing 'E' of the equation: entrepreneurship - needed to turn an innovation into a commercially available product or service;
  - appropriate infrastructure—robust and up-to-date national infrastructure to support distribution of information reliably and at reasonable cost to all Australians.
2. **Lack of incentive for long-term investment:** there is no tax incentive to hold investments for more than one year, and a year is not a long-term investment, even in rapidly moving dot.com space. The R&D tax concession is another long-term investment incentive that needs to be increased.
3. **Lack of horizon for long-term strategy:** there was felt to be a lack of ownership for any long-term vision for Australia's future. This applied to industry as well as government. The frequency of elections and the number of different governments in Australia was felt to be a major contributory factor to this issue.

## Culture

1. **Lack of respect for entrepreneurship:** as well as the negative image of entrepreneurship, starting a business was felt to lack status—working for a major accounting, consulting or law firm commands respect—starting your own business does not.
2. **Fear of the stigma of failure:** starting a business and failing, even having given it your best shot and operated ethically, was seen as damaging to career prospects. Contrast was drawn with the US where having a failed business behind you is almost a badge of honour.
3. **A preference for speculation rather than investment:** Australians' love of gambling was the most frequent illustration drawn. Australians will put 'throwaway' money into very high risk, high return, short-term 'investments' (e.g. gambling) or 'serious' money into very safe, long-term investments. There is little in between, which limits the supply of capital to new ventures.
4. **Lack of ambition:** Australians do not have the drive to build really big businesses. Once a business is providing a comfortable living, they are satisfied and do not feel the need to take it further.

## Achieving a policy focus

Analysis of this year's Australian GEM data, especially the expert depth interviews and questionnaires, in association with established entrepreneurship theory, has suggested an

implementation summary that may be useful to policy-makers and other stakeholders (Hindle 2000b). Figure 15 presents an entrepreneurship policy framework in the form of the five row by five column matrix. The total area of the matrix may be thought of as the nation's 'entrepreneurship opportunity space'. Entrepreneurship is based on the availability, perception and conversion of opportunity. Entrepreneurship is opportunity driven management.

The five rows of the framework represent five levels of stakeholders who have the capacity to influence entrepreneurial activity in a nation. They may also be thought of as the audience for GEM 2000 Australia. They are the 'actors' in the opportunity space. The five columns represent the level at which an entrepreneurial impact (given by an actor) is received.

This is an impact model designed to help stakeholders see where and how they can have impact in the 'entrepreneurial opportunity space'. The word or phrase in each cell of the matrix (the 'cell word') summarises the type of impact each type of stakeholder can have on each type of audience. Each cell word is designed to summarise an 'impact relationship'. For instance, ask the question: 'What impact can entrepreneurial firms provide to individuals at large?' Scanning the matrix gives the answer: 'employment'.

The impact model is a way to bring specific policy problems and issues into sharp focus without losing sight of total context. Thus this simple matrix can be a useful tool. We will use it now.

Figure 15 - The Australian Entrepreneurship Policy Framework

	INDIVIDUALS AT LARGE	FIRMS IN GENERAL	INDUSTRY IN GENERAL	GOVERNMENT SECTOR	SOCIETY AT LARGE
INDIVIDUAL ENTREPRENEURS	Role models	Challenge	Leadership	Taxes	Inspiration
ENTREPRENEURIAL FIRMS	Employment	Role models	Renaissance	Taxes	Applied Innovation
ENTREPRENEURIAL INDUSTRIES	Affiliation	Networks	Role models	Strategy	Feasibility
ENTREPRENEURIAL GOVERNMENTS	Capacity: education	Capacity: Infrastructure	Capacity: Horizon	Capacity: Role models	Value
THE ENTREPRENEURIAL SOCIETY	Motivation	Choice	Challenge	Priorities	Diversity

## Implications for policy development

The beauty of the Entrepreneurship Policy Matrix is that it defines a role for all stakeholders, not just government policy makers. Clearly, government has a vital role to play in creating a supportive environment for entrepreneurship to flourish, but the other stakeholders in an entrepreneurial country must play their part too. The media, being the interpreter of the actions of the various stakeholders, has a part to play throughout the entire matrix.

Suggested policy directions are given for key stakeholders in each key issue area, but all stakeholders are encouraged to identify where they might make a contribution. Where specific suggestions are made, they were contributed by the expert interviewees.

### Government

#### Education

Government's role is to provide the capacity for individuals to acquire the education and skills they need by making available adequate funding to education and ensuring it is appropriately directed. This may include government programs to deliver specialist skills training.

Many of the Australian experts felt that without substantial increases in funding for education, it simply would not be possible for the school and university systems, in particular, to adapt curricula and teaching methods to foster entrepreneurial attitudes and activity.

#### Capital provision

The Government can assist the provision of capital by programs aimed at stimulating investment in early stage ventures (the IIF program received favourable comment in this regard) and programs aimed at directing more of the overall investment funds in Australia towards the entrepreneurial sector.

Our Australian experts had some specific suggestions for improvements:

- A requirement for superannuation funds to invest a minimum percentage of funds under management in risk ventures (as in the US).

- Capital gains tax relief for those who roll over their capital gain into a risk venture within a short period of time, such as 60 days. This creates momentum in the risk capital market.

Several Australian experts made the point that if entrepreneurs were allowed to keep more of the gains they made, they would be more likely to put a portion of those gains at risk in new ventures. Entrepreneurs tend not to retire—they might cease active involvement in running a business, but they often remain involved in entrepreneurial ventures as business angels.

### Regulatory and taxation burden

This is clearly in the purview of government. It is unlikely that governments do not already recognise this problem. It is not easy to change quickly and reforms, as we have seen with the recent introduction of GST, often create as many new regulations as they abolish old ones. All that can really be said is the message is reinforced by the entrepreneurial sector—regulatory complexity is an inhibiting factor.

One action governments may be able to take to mitigate the impact is to reduce the number of points of contact businesses have to deal with.

### Short-term outlook

Government is the major stakeholder in this key issue area. The 'entrepreneurial government' row of the entrepreneurship policy matrix is dominated by the word 'capacity'. Addressing the short-term outlook issue is about providing capacity in the long-term and making this commitment publicly so that other stakeholders can rely on it being there.

Expenditure on education, R&D and information distribution infrastructure should be seen as an investment in the knowledge capital of Australia, not as a cost.

Incentives for long-term investment are needed. Otherwise we are relying on those who recognise that long-term investment is important to exercise philanthropy in favour of personal financial gain.

Again, the Australian experts had specific suggestions:

- A sliding scale of CGT rates reducing the taxation level the longer an investment has been held. Several other countries have implemented this.
- Increasing the R&D tax concession to its former level of 150 percent or higher.

If government initiatives are to be really valuable they should be predominantly bi-partisan, giving following governments of different political persuasion no incentive to change, but only to improve the specific shape and direction of policies that are well-founded in the national interest. An entrepreneurial government will create paradigms, really good examples, which will facilitate a creative combination of consistency and flexibility to its successors.

### **The education industry**

The issues cut right across the spectrum of education—through the public sector of schools and universities to the private sector providers in the specialist and executive education field.

Schools and universities must take up the challenge of nurturing rather than stifling entrepreneurial spirit and providing exposure to and, where necessary, training in basic business principles and specific entrepreneurial skill sets. Private education providers should take on the opportunities offered by the evident gaps in entrepreneurial skills education. And all providers of education should consider how they can work with other providers to act as an industry rather than a collection of individual organisations.

### **The venture capital industry**

It will not be news to the venture capital industry to hear that there is a perceived lack of early stage capital. But it must recognise this as a limiting factor on the number of later stage deals that will be available for them to invest in. It is in the interests of the venture capital industry to look for ways to increase the supply of early stage ventures, by greater involvement of venture capital firms or developing better channels to the private investors—business angels—who currently fill much of the equity gap.

### **The banking sector**

Intangible assets are becoming an ever more significant proportion of companies' balance sheets. The mainstream banking sector needs to respond to the challenge of valuing these intangible assets and developing models for lending against them. If they will not respond to the challenge, others surely will. Many new ventures prefer debt capital to equity and represent a significant market for the banking sector.

### **Industries and individual firms**

Industries cannot rely on government to lead the way in industry strategy. Government must provide the capacity for long-term strategy and planning, but industry needs to take the lead.

Individual firms need to work with others in their industry to create an industry voice and to develop an industry strategy. Industries need to build networks among their constituent firms to facilitate cooperation and development of alliances. They also need to build networks with related industries. An industry presenting an integrated vision and strategy allows government to be more productive in providing appropriate capacity.

### **Individual entrepreneurs**

Individual entrepreneurs can contribute to education by being available to would-be entrepreneurs, by speaking at both formal and informal gatherings, and by providing mentoring. They can contribute to an entrepreneurial culture by becoming role models in two ways. By making their stories available to the media, they have the power to inspire Australian society. By making themselves available to the entrepreneurial community in general, they can inspire other individuals to follow in their footsteps.

### **Culture**

Culture does not change easily. It takes time and it is hard for any isolated stakeholder to have much impact. However, all the 'actors' in the Entrepreneurship Policy Matrix (Figure 15) have a role to play in building an entrepreneurial culture in Australia. The media has the greatest influence of all.



A key way to foster cultural change is by use of role models. There are two types of role models:

#### Inspirational role models

These people fill the 'individual to society' cell of the entrepreneurship policy matrix. They are the people you look up to from a distance, place on a pedestal, worship from afar—they fill you with a sense of awe, or national pride perhaps, as do many of our elite Olympic athletes. Australia needs those sorts of role models in entrepreneurship to build respect for the 'breed'.

#### Relevant role models

Inspirational role models are important, but the role models most likely to motivate entrepreneurial activity are those that make people think 'that could be me—I could do that'. These people fill the 'individual to individual' cell of the entrepreneurship policy matrix.

The variety and diversity of the Australian population demands a variety of role models. The twenty-something, IT whiz-kid launching a new dot.com, operating out of an office with minimal furniture, a few guitars in the corner and a staff of other casually dressed twenty-somethings might be an appealing role model for undergraduate IT or multimedia students, maybe even school students, but is unlikely to inspire a middle-aged office worker. We need entrepreneurial role models in all shapes and sizes, and we need to hear about them regularly. We particularly need role models who are relevant to the population segments who are currently less likely to participate in entrepreneurial activity: the over-45s and females.

#### Stakeholder contribution

Individual entrepreneurs can contribute by being willing to act as role models, by making themselves available to other would-be entrepreneurs and by allowing their stories to be told.

Entrepreneurial firms can act as role models to other firms in much the same way. Government can assist by actively promoting role models. Government can also assist by supporting groups which promote awareness of entrepreneurship and networking among the entrepreneurial community.

But in terms of creating inspirational role models, the media has by far the most important part to play. It has tremendous power to present a positive image of entrepreneurship and can do tremendous damage by clinging to negative and inaccurate stereotypes.

## Beyond research and policy

### From matrix to mosaic

The biggest of the GEM project's big three questions is: 'What makes a country entrepreneurial?' To answer this, we must travel well beyond the boundaries of the GEM model because the answer is not a number or several numbers or even a correlation between them.

The answer is not found in the physical apparatus of black boxes, the political apparatus that makes policy or the natural bounties of the earth—even the earth of a land that 'abounds in nature's gifts'. The answer is not found in a framework, trapped in a table, mapped in a model or fixed in a figure. It is not contained in a researcher's matrix. The answer is roaming free in a living mosaic. It is not singular. It is plural. What makes a country entrepreneurial? The answer is 'people'.

Wennekers and Thurik, two dedicated social scientists, still locked into the researcher's need for measured answers, happen, probably by accident, upon the poetry of the thing. They write:

*'The outcome of these entrepreneurial manifestations at the firm level generally has to do with newness...At the aggregate level of industries, regions and national economies the many individual entrepreneurial actions compose a mosaic of new experiments.'*

(Wennekers and Thurik 1999: 50)

Everything a country needs to know about what entrepreneurship means to its national life is embraced in these few words. 'Compose' is suggestive. There is a pattern in there somewhere, though it plays some pretty ragged music. 'Mosaic' continues the image of pattern but adds the notion of individual importance: every single tile counts. 'Experiments' is vital. Entrepreneurship is about trying as well as succeeding. It is about what

Australians are good at. And now, thanks to GEM, we can see just how good. We are among the top nations in the world on the index of total entrepreneurial activity.

But this provides no grounds for complacency.

### **Culture, education and heroes**

Culture, even in a multi-cultural society, is the shared basis of social action. It takes a long time to build and a long time to change. This year's key informants told us that our culture is not entrepreneurial enough. Can we quickly build an ethos that embraces ethical entrepreneurship as a seminal ingredient of our society? The answer is: not quickly, but quicker than most might think possible. If we change the tense of the key question to 'what will make us entrepreneurial?', the answer is education.

Many key informants in this year's GEM Australia study stressed the importance of education as the best and fastest mechanism of cultural change. Bob Taylor said simply, 'the university is the economy.' Rob Lucas, Treasurer of South Australia, was excited by the possibility of getting entrepreneurship education programs into secondary-school curricula because pilot studies had shown strong evidence of their effectiveness. There is no doubt that attention to entrepreneurial education, at all levels of the education system, is the key to having it better understood and better performed in our society. Policy can't tackle culture directly. Policy can have a major effect on educational directions.

Entrepreneurship education is different from management education. McMullen and Long (1990: 485-495) explain why. The skills are distinct from those taught in a traditional MBA program and the method of delivery needs to be different. The learning needs to be experiential, forcing students to deal with real world complexity rather than neatly packaged case study assignments. Otherwise, graduates will not be confident working in the uncertain, rapidly changing environments they will face. McMullen and Long found that traditional methods of instruction did not sit well alongside more traditional techniques—students in the established mode generally preferred clarity and simplicity and would not tolerate the ambiguity

and complexity of experiential learning unless it was reinforced at the program level. This in turn points to the need to create entire programs aimed at entrepreneurship rather than optional modules in a traditional MBA program. There are some such programs in Australia but not nearly enough.

Another key element essential to developing an entrepreneurial culture is the existence and promotion of role models. Our key informants were unanimous in condemning the Australian media for its consistent association of entrepreneurship with negative stereotypes of people who fail to fit the description of ethical entrepreneurs. We need our media to promote positive role models to replace negative stereotypes and to correct any misunderstandings of entrepreneurship that may still linger. The examples we choose as role models do not have to be heroes to be effective. National stories tend to prefer the word 'hero' to the words 'role model'. It is shorter, sharper and grander to refer to an Olympic gold medallist as a national hero than a national 'role model'—though we do both. The problem with heroes is their distance. Heroes seem so far away; so out of reach. In contrast, 'role model' is just a bit of harmless social scientific jargon for 'good example'. And good examples are close at hand. They are reachable, touchable, usable and the standards they set are attainable. We do not need to make heroes of our entrepreneurs. We do need to use the best of them as good examples.

The woman who builds an international business based on drive, work and applied vision should be at least as admirable an example to us all, as is the woman who can blitz the competition in a swimming pool or run them off their feet on a rubber track. If leaders in the governments, or the media or the businesses of Australia want to start building constructive entrepreneurship policy, let them start with this. Let the policy makers design ways to get good examples of successful Australian entrepreneurship into the national shared story.

It will not be hard. Abundant good examples are there for the taking. Some of them can even serve double duty as heroes. Every Australian knows John Bertrand as an Australian sporting legend: the captain of Australia Two, the first challenger ever to win the America's Cup. But how many

Australians know John Bertrand as a dedicated entrepreneur, building up a team which is, in turn, creating a high-technology, radically innovative, international business? Not many. Not enough. And that is bad policy. This country needs John Bertrand, the entrepreneur as a good example more than it needs John Bertrand, the yachtsman as a hero.

### **Towards a Shared Story**

Patricia Crook is an Australian manufacturing entrepreneur. If they made gold medals for entrepreneurship, she would get one. She has built a business that exports technically complex products to the world. As a key informant in this year's GEM Australia study, she told one of the most powerful stories the interviewer had ever heard.

As a twelve year old girl in early post-war Britain, she informed her father of what she wanted to do in life.

'Dad,' she said 'I want to make things; I don't know what yet; but I just want to make things.'

'Well,' he said 'this isn't the place for you; we'll have to move.'

Patricia's father was a working class man in a class-ridden society of the old world. The horizons of opportunity seemed low; chances for dream realisation seemed circumscribed by birth and circumstance. He felt that a new world would be better for his daughter's future. So, he studied the possibilities and rejected the obvious choice, America, in favour of immigrating to Australia. And he did it for what, in his time and place, were very unusual reasons.

He and his wife were comfortable enough where they were but, if his daughter wanted challenge rather than comfort, he would move. It was rare for a British male of his generation to place the education of a woman at the top of his priority list: let alone her entrepreneurial education. Rarer still were his reasons for choosing Australia. He chose it for its coming transformation: for the very things that most Britons and many contemporary Australian's liked least about a changing nation. He chose it for its pending diversity.

'Patricia,' he said, 'Australia will be like a new Noah's Ark. It will be wonderful. There are people coming from all over the world to build things; to make things. They'll speak many languages. They'll all mix in. There'll be so much you can learn; so much you can do. That's where we're going. You can make things there.'

With stories like these to tell we do not need photos of Christopher Skase.

As a matter of urgency far transcending economics, as part of our cultural heritage, we really ought to understand the story of our true entrepreneurs past, present and future. We should begin to measure the evidence of their work and tell their story much better and far louder than we have ever done. Our children need to hear it. They won't live well without knowing it.

Over the years, the annual GEM Australia reports will try to do part of the telling.

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#### **International Country codes:**

AR = Argentina	AU = Australia	BE = Belgium	BR = Brazil
CA = Canada	DE = Germany	DK = Denmark	ES = Spain
FI = Finland	FR = France	IE = Ireland	IL = Israel
IN = India	IT = Italy	JP = Japan	KR = Korea
NO = Norway	SE = Sweden	SG = Singapore	UK = United Kingdom
US = United States			

# APPENDIX 1: GEM AUSTRALIA 2000 RESPONDENTS

## FINANCIAL SUPPORT



### Paul Kristensen

Paul is the founder of Capital Technologies Pty Ltd, a seed capital and venture management company established in 1986. The company provides advisory and consulting services as well as funding to technology start-ups. Paul was previously executive director of what is now E.R.G. Limited, one of Australia's most successful listed companies and a direct contributor to their early success. Paul has worked in several countries including Switzerland and his native Denmark and has lived in Australia since 1983.



### Alan Cullen

Alan Cullen is a Director and CEO of the Alpha Centauri Group which specialises in the provision of seed capital, sourced from private investors, and corporate advice to new companies in the IT, biotech and environment areas. He is also Executive Chairman of Thinkbank Pty. Ltd., an investor in and developer of new technologies and has been personally engaged in entrepreneurial activity. A former Executive Director of the Australian Bankers' Association, he was one of the founders of the Private Capital Council (the national association for private equity) and is currently its Chairman.



### Chris Golis

Chris Golis is Executive Chairman of Nanyang Management, an Australian Venture Capital (VC) fund manager with over \$84 million under management. With 16 years experience in the Australian VC industry, he has examined over 3000 business proposals and has been responsible for investments in thirty. Successful investments include Australian International School - Singapore, DKS, GMD group, Neverfail Spring Water and Scitec.



### Kerri Lee Sinclair

Kerri Lee Sinclair has direct experience of the venture capital market from the entrepreneur's side of the fence. She and her co-founders have raised over \$2m in venture capital from several US and Australian sources, including the angel syndicate TiNSHED. Their company, AgentArts, an online personalised music referral service, is also in the process of closing a syndicate round of \$16m from a combination of US-based venture capitalists and strategic partners. Prior to launching AgentArts, she was Operations Manager for LookSmart for two years, playing a key role in growing the company from 30 people in Melbourne to over 200 people worldwide.



### Dr David Wyatt

David Wyatt is an entrepreneur with interests spanning from micro-biology to micro-banking. Presently David is the principal of Novogenesis, a Business Angel, Creativity & New Venture Catalyst company which he founded in 1998. David has a passionate belief in people and confidence in Australia's future believing the nation to be poised on the edge of a renaissance in entrepreneurship.



### **Harry Sorensen AO**

Harry Sorensen has a long history of involvement in Australia's financial and investment sector. He is currently Chairman of New Tel Limited, Add Venture Capital Limited and WA Construction Industry Redundancy Fund Limited. His previous positions include Managing Director of Challenge Bank Ltd, Chancellor of Curtin University of Technology and Chairman of the State Training Board of Western Australia.

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## **GOVERNMENT POLICY**

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### **The Hon. John Button**

John Button has been a major player in government in Australia for many years, retiring in 1993, but remains actively involved in politics and has published several books since retiring from government. He was leader of the Labor Government in the Senate from 1983 to 1993 and held the portfolio of Minister for Trade and Industry for several years. He is a strong proponent of industry strategy. He has been a director of Visions Systems, one of Australia's most successful entrepreneurial startups, since 1994.



### **The Hon. Rob Lucas**

Rob Lucas has been South Australian Treasurer since 1993 and recently took on the Industry and Trade portfolio as well. First elected to the SA Legislative Council in 1982, he has been a Liberal parliamentarian ever since, both in government and in opposition. He has been Leader of the Government Legislative Council since 1993. As a former minister for Education and Children's services, he retains a strong interest in education issues, including entrepreneurship education.



### **Lindsay Tanner**

Lindsay Tanner is the Shadow Minister for Finance and Consumer Affairs and, as a result of his public expenditure responsibilities, is a member of all Shadow Ministry Policy committees. He has been in Federal Parliament since 1988 representing the Australian Labor Party. He has written and published many articles ranging across a broad spectrum of social, labour, transport and economic issues. His most recent book, *Open Australia*, tackles some of the issues Australia faces in the new economy, based on information and services.



### **Kerry Chikarovski**

Kerry Chikarovski is the Leader of the NSW Parliamentary Liberal Party and has been a member of the NSW parliament since 1991, both in government and in opposition. During that time she has held portfolios in Education, Industrial Relations, Environment, Arts, Ethnic Affairs and Women. She is also actively involved in many community projects.





### **Senator Andrew Murray**

Andrew Murray of the Australian Democrats brings to politics a wide experience of life. He was born in England, brought up in Zimbabwe, went to university in South Africa and returned to England on a Rhodes scholarship to Oxford University. He has travelled extensively, and lived and worked in four countries on three continents. His business career includes executive positions in large corporations and owning and managing his own business. He has always been heavily involved in social justice and business issues, which led naturally to a formal involvement in politics. He was elected to the Senate in 1996.

### **The Hon. Peter Costello**

Federal Treasurer, Peter Costello, indicated his strong support for the Global Entrepreneurship Monitor project but was unfortunately unable to find time for an interview in his busy pre-budget schedule. He did, however, complete the detailed questionnaire.

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## **GOVERNMENT PROGRAMS**

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### **Richard Seddon**

Richard Seddon is an executive director of the Australian Industry Group, which operates nationally and internationally and is the major organisation representing industry in Australia. Originally, a commercial lawyer, Richard diversified into consulting and held the position of Australian Investment Commissioner, North America from 1988 to 1993. On his return, he became involved in the Australian Chamber of Manufacturers, where he has held a variety of key roles. He is a firm believer in industry working with government to develop a long-term vision for Australia.



### **Senator Kate Lundy**

Kate Lundy was elected as the Labor Senator for the Australian Capital Territory in March 1996. She started her working life as a labourer in the construction industry and went on to become President of the ACT Trades and Labour Council. She is Shadow Minister for Sport and Youth Affairs and assisting on Information Technology. Kate is passionate about Australia's ability to play a leading role in the information economy and was voted the "Most Computer Literate Politician" by the Australian Computer Society in 1996.



### **Victor Perton, MLA**

Victor Perton was first elected as a Liberal member to the Victorian Parliament in 1988, and is now Shadow Minister for Multimedia and Shadow Minister for Environment and Conservation. Victor has had a longstanding interest in environmental issues. He has also been very active in the practical policy issues of modern information and communications technology - he was the first MP in Australia on the web. Victor is passionate about the issues surrounding regulation and the challenge of finding alternative means to regulate.



### Rod Stolorz

Rod holds a Bachelor of Economics degree from the University of Tasmania and has over 10 years experience in public policy research, analysis and formulation, the last 6 years in business and industry development policy. He currently works in the Tasmanian Government's Department of State Development. His interests include the role of government in business and industry development generally and in fostering and facilitating innovation in particular.



### Lois Peeler

Lois Peeler grew up in Yorta Yorta country in Shepparton. Her early career was wide-ranging and included working in the USA and Europe for several years. More recently, her work has been in community organisations and the public service. She has been a Regional Councillor for ATSIC since its establishment and served 2 terms as Regional Council Chairperson. She has a strong interest in women's issues and is a founding member of Koorie Women Mean Business and a member of the International Women's Federation of Commerce and Industry.

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## EDUCATION AND TRAINING

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### David Karpin AM

David Karpin is well known as a spokesman on education, as the author of the 1995 report "Enterprising Nation: Renewing Australia's Managers to meet the Challenges of the Asia Pacific Century" undertaken as chairman of the Government's Industry Task Force on Leadership and Management Skills. His interest in education and training issues continues. He has a distinguished career in business, including 22 years with RTZ-CRA, where his final role was as Group Executive - Economic Resources. He is now Executive Chairman of Karpin Slaughter Limited, a specialist consulting firm in the Asian and Australian resources and energy industries.



### Gail Geronimos

Gail Geronimos is co-founder and managing director of the Achaeus Institute for Entrepreneurship, which operates in South Africa as well as three states in Australia. It specialises in entrepreneurship education aimed at executives, managers and business owners and its flagship program is the highly respected Enterprise Workshop program. Gail originally began her working life as a research chemist, but always a wide reader, she developed an interest in finance and banking which led to a move into the finance industry and, through her success in business development, to launching Achaeus.



### Brian Paterson

Brian is managing director of Central TAFE in Perth. He was employed from the private sector to act as a change agent in order to strategically direct the College (a \$70m turnover business) in a more business like manner and to make the organisation more market driven and customer focused. Brian's business background is in the financial sector, having worked in insurance and banking. His position prior to joining Central TAFE was Chief Executive Officer of the Credit Union Association of Western Australia.



### **Bronwyn Little**

Bronwyn Little is manager of First Australians Business (FAB), a program to assist young indigenous people initiate, develop and maintain economically viable businesses. The program is a pilot sponsored by ATSIC, DETYA and The Body Shop. Bronwyn started her career in primary school teaching, but retrained in the retail industry, working in a variety of roles before taking on a Community Relations position with The Body Shop, which led to her appointment as FAB manager.



### **Dr. John Breen**

John Breen is the Director of the Small Business Research Unit at Victoria University. He has had a direct involvement in small business development through his role as a managing agent for the New Enterprise Incentive Scheme (NEIS) program, facilitating the development of over 150 small businesses. He has a particular interest in entrepreneurship education, and has recently completed his doctorate on the topic "Assessing the development of enterprise attributes in secondary school students".

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## **RESEARCH AND DEVELOPMENT TRANSFER**

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### **Peter Smith**

Peter Smith is the CEO of the Barton Vale Group which combines consultancy to high technology industries with viticulture and hospitality based around historic Barton Vale House, which forms the head quarters for the family run business. Peter's background is in defence, aerospace and high technology, having held CEO positions with several high-tech companies and served on many influential government and industry committees.



### **Rodger Bouette**

Rodger Bouette has been involved with the development and commercialisation of technology for over 30 years. He is currently Managing Director of Freehills Technology Services, which assists organisations to manage and exploit their intellectual capital. His previous senior roles include director and co-founder of Invetech Operations P/L, CEO of the DSTO and director of the Victorian Innovation Centre. During his career he has covered such diverse fields as biotechnology, defence, health care, agriculture and IT.



### **Bob Taylor**

Bob Taylor is CEO of ITEK, a wholly-owned subsidiary of the University of South Australia, which commercialises ideas by developing business opportunities in partnership with knowledge entrepreneurs. Prior to joining ITEK, Bob led the University's Technology Transfer and Commercialisation team within Techsearch for 20 years. He has been intimately involved in the promotion of the FastTrac entrepreneurship training program in the university and private sectors and played a key role in developing the University's Centre for the Development of Entrepreneurs.



### **Dr. Dieter Punzengrüber**

Dieter Punzengrüber is managing director of Droege and Comp. Australia, and conducted the Australian arm of an international study into innovation in the corporate sector. He trained in electrical engineering, with a doctorate in feedback control theory and worked in the instrumentation, electronics and manufacturing industries before joining Droege and Comp. Originally from Germany, he is now an Australian resident and married to an Australian.



### **Dr Katherine Woodthorpe**

Katherine Woodthorpe is a professional Director who also works as a "venture catalyst", operating in the area of assisting technology-based companies to realise their commercial potential. She advises on commercialisation strategies, raising funds and government assistance programs. She also consults on internet strategies, particularly in relation to how companies can start profiting from the internet. Her many offices include membership of the Review and Selection Panel of the Cooperative Research Centres.

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## **COMMERCIAL AND PROFESSIONAL INFRASTRUCTURE**

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### **Judith King**

Judith King has been Chief Executive of the Australian Services Network, which advises Australia's service industries on competitiveness and globalisation issues, with particular reference to emerging global businesses and the online environment. She holds several directorships of companies in the service sector. Prior to 1985 she lived in Africa and the Middle East, where she worked on projects for multilateral and non-government organisations.



### **Patricia Crook**

Patricia Crook is managing director and co-founder of Dynek P/L, a manufacturer of surgical sutures, established in 1974 and exporting to more than 20 countries worldwide. Patricia is an active member of the business community, being Deputy President and a board member of the South Australia Chamber of Commerce and Industry. She is also a passionate spokesperson for the importance of the manufacturing sector in Australia and lists one of her main interests as "the promotion and development of Australian business to create wealth and jobs".



### **Eve Mahlab AO**

Eve Mahlab graduated in Law and, after practising law for a short period, founded and built what was to become the Mahlab Group of Companies, operating in Sydney and Melbourne in the areas of legal recruitment, publishing and other related services to the professions. She sold the company in 1987 and since then has served on various corporate, government and community boards. She has always been a strong supporter of women in the business world and furthers the cause of entrepreneurship by acting as mentor for several young business people in Australia.



### **Debra Shorter**

Debra Shorter has 20 years experience in advertising and marketing and is considered one of Perth's leading marketing experts. She is Joint Managing Director of The Shorter Group, with responsibility for its overall management, which includes Shorter Marketing, a dedicated planning consultancy providing advanced marketing advice to a broad range of clients. Debra is a member and past president of the Australian Institute of Management and a past member of the Senate of the University of Western Australia and was the inaugural winner of the AIM Award for Excellence in Management for Women.

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## **MARKET OPENNESS**

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### **Professor Trevor Barr**

Trevor Barr is Professor of Media and Telecommunications at Swinburne University of Technology in Melbourne. He has been a researcher and media spokesperson on the field for many years, with a particular focus on technological change and, more recently, the policies surrounding the dramatic shifts in the telecommunications industry. His latest book is "newmedia.com.au: the changing face of Australia's media and telecommunications".



### **Ross Jones**

Ross Jones was appointed as a Commissioner of the Australian Competition and Consumer Commission (ACCC) in June 1999 and has particular responsibility for advising on mergers and acquisitions. His background is in economics and, prior to joining the ACCC he was Senior Lecturer in Economics at the University of Technology, Sydney. He has lectured in industrial organisation and microeconomic policy both in Australia and overseas.



### **Ted Nark**

Ted Nark is managing director of Corporate Express Australia, the largest provider of office products to Australia's major corporations. Its internet ordering facility, Netxpress, is one of the most transacted B2B sites in Australia. American by birth, he has worked in both the USA and Australia and is able to provide a balanced perspective on both countries as places in which to do business and to get an education.



### **Dr Tom McKaskill**

Tom McKaskill started his career as an academic, lecturing in Accounting and Information Systems in Australia and New Zealand, and rounding off his academic career with a PhD from London Business School. Over the next 20 years, first in the UK and later in the USA, he started and sold several software companies, including a company of 160 people headquartered in the UK with subsidiaries in the USA and NZ and distributors in 13 countries. He currently resides in the USA and is working on some internet opportunities.

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## ACCESS TO PHYSICAL INFRASTRUCTURE

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### Dr Leanna Read

Leanna Read is a CEO of the Cooperative Research Centre (CRC) for Tissue Growth and Repair and has a goal for it to become Australia's first self-funding CRC. She is a scientist of significant standing with over 80 published papers and, for the last 10 years has taken a major interest in the translation of basic medical research into commercial application. She played a major role in the February 2000 National Innovation Summit, chairing the working group on Resource Consolidation and Cooperation and continues to be a spokesperson on the need for commercialisation of innovation in Australia.



### Professor Richard Newton

Born and educated in Australia, Richard Newton did his PhD at the University of California, Berkeley and continued there researching and lecturing in electrical engineering. He is now chair of the Department of Electrical Engineering. Since 1988, he has acted as a Venture Partner with the Mayfield Fund, a high-tech venture capital partnership, where he has contributed to both the evaluation and early-stage development of over a dozen new companies and is currently a board member of two of them.



### Phil Scanlan

Phil Scanlan is a serial entrepreneur who has founded many successful businesses and has also won the \$30,000 AIDC award for entrepreneurship. Originally trained as a chartered accountant, Phil entered the IT industry in 1990 when he took an Australian application development tool to the US market. Phil raised over \$10 million worth of contributions and funds to establish Software Engineering Australia – a “not for profit” dedicated to growing Australia's software sector.

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## CULTURAL AND SOCIAL NORMS

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### John Bertrand AM

John Bertrand is co-founder and Vice Chairman of Quokka Sports, a digital sports media company specialising in broadcasting major international sporting events over the internet. Listed on Nasdaq, the company now employs 300 people and has offices in San Francisco, New York and London. Best known to Australians for his sporting career, John won the America's Cup as skipper of Australia II in 1983. An Olympic medallist and World Champion, he has competed in 5 America's Cups and 2 Olympic Games.



### Yvonne Allen

Since 1976 when she established Yvonne Allen and Associates, Human Relations Consultants, Yvonne has won respect for providing ethical and successful introduction services for discerning singles. Having launched her business in the days when starting your own business was considered eccentric, especially for a woman, and having come close to closing down on occasions, Yvonne knows a lot about the highs and lows of entrepreneurship and attitudes to entrepreneurs.



### **Phillip Adams AO AM**

For almost 40 years Phillip Adams has provoked discussion and outrage through his columns in major newspaper and magazines. As a broadcaster, he has interviewed over 6000 of the world's most prominent figures and his radio program "Late Night Live" is broadcast throughout Australia and around the world. He has been an entrepreneur in the film and advertising industry and has consulted to many senior politicians and heads of media empires. He was recently voted one of Australia's 100 National Living Treasures in a poll conducted by the National Trust.



### **David Giang**

David Giang is managing director of Chieu Duong, Australia's only daily Vietnamese newspaper, which was founded by his father after the family fled Vietnam in 1979. David worked on the paper while completing his B.Commerce degree at the University of NSW. Under his direction, circulation has grown to almost 100,000. In 1993, the paper was awarded Best Ethnic Media in the inaugural Ethnic Business Awards. In the same year, David became a Commissioner on the Ethnic Affairs Commission, a position he still holds.



### **Lynette Palmen**

Lynette Palmen is a business leader and entrepreneur dedicated to assisting women to develop opportunities in business, through Women's Network Australia (WNA), which she established in 1991. The organisation has a membership of more than 1200 men and women and consults to small and large business alike on a broad range of issues, but especially on implementing work/life diversity policies to enhance workplace productivity. Lynette is also actively involved in several high profile industry, business and community organisations.



### **Hass Dellal OAM**

Hass Dellal is Executive Director of the Australian Multicultural Foundation, which was established in 1988 with a one-off donation arising from Australia's bicentennial year, with the objective of promoting a strong commitment to Australia as one people drawn from many cultures. Since then it has raised a further \$10m for projects supporting this objective, implemented jointly with the government, education and private sectors. Hass Dellal is also an active member of several community groups.



### **Father Stephen Bliss**

Stephen Bliss is a member of the Franciscan Friars of Australia and is currently Provincial Minister (CEO) of the Franciscans in Australia, New Zealand, Singapore and Malaysia. His educational background includes philosophy and business management as well as theology. The Franciscan Friars are involved in many community projects in the social welfare arena, especially aged care, hospital care and education, usually undertaken as responses to government tenders.

## APPENDIX 2: THE GEM AUSTRALIA RESEARCH TEAM



### Kevin Hindle

The Australian GEM team is headed by Associate Professor Kevin Hindle, Director, Entrepreneurship Research at Swinburne University of Technology. He is a researcher, educator and management consultant, whose variety of expertise and interests embrace many aspects of managing in conditions of uncertainty. His work has focused on entrepreneurial business planning but is multi-disciplinary, including: financial modelling, marketing research, change management, organisational design, and management training. Kevin is the author of several research papers and co-author of Australia's leading textbook on entrepreneurship. He has developed many award and short courses in entrepreneurship and has taught in several countries, including visiting Professorships in Entrepreneurship at Baylor University (Texas) and at INSEAD (Fontainebleau, France).



### Susan Rushworth

Originally graduating in maths, Susan spent many years working in the corporate world as an IT specialist. Looking for a new challenge she enrolled in the Master of Entrepreneurship and Innovation (MEI) at Swinburne University of Technology, graduating as top student. She now combines her understanding of entrepreneurship with her data management skills in the academic start-up which is the Division of Entrepreneurship Research at Swinburne. She also plays a major part in running VentureLink, the Australian network for entrepreneurs and innovators, founded by students and alumni of the MEI program.

### Debbie Kellie

A sociologist by discipline, Deb's area of interest lies in organisation development to assist business growth. She is presently working in the field of entrepreneurial development with FastTrac Australia, a company that focuses on developing the strategic business planning skills of CEO/Entrepreneurs in small to medium enterprises. It was the sociological dimension of entrepreneurship that drew her to involvement in the GEM project. Debbie identified and interviewed key informants from the state of Queensland.

### Swinburne University

Swinburne's motto and mission is 'The Entrepreneurial University'. Its Graduate School of Management is home to Australia's longest-running and largest program of structured entrepreneurship education, the Master of Entrepreneurship and Innovation. Its MBA, DBA and PhD programs are all focused on entrepreneurship. The School's Division of Entrepreneurship Research has a mission to provide Australasia, Oceania and South East Asia with an inclusive centre focused on studies of major importance to regional development and the development of entrepreneurship as a social science. Participation in the GEM project is central to that mission.

### The Principal Sponsor

Pacific Access is one of Australia's top 20 companies, and is a leading Australian online media business. It provides print, voice and online products and services to nearly 400,000 customers nationally. As a national, wholly-owned Telstra subsidiary, Pacific Access manages two of Australia's leading brands, Yellow Pages® and White Pages™, along with the interactive mapping and guidance brand, Whereis™, and one of Australia's premier Internet search engines, GOeureka™. Together, these brands form a unique 'transaction hub' in Australia, providing the directions and means by which people can buy, meet, sell, trade, search and communicate. Australia GEM is one of three major initiatives targeted to assist SMEs in Australia. The Yellow Pages® *Business Index - Small to Medium Enterprises* is an ongoing series of surveys designed to track confidence and behaviour in the small and medium business sector. The Yellow Pages® *Business Ideas Grants* aim to recognise, assist and reward Australia's small business with great ideas.



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- To our venture capitalist, committed co-investor in knowledge capital and industry partner Pacific Access®. The unstinting support of our principal sponsor demonstrates that the critical importance of entrepreneurship research is not lost in corporate Australia. Pacific Access is a true partner for its pioneering courage in supporting an independent team of researchers with a great combination of trust and perseverance. Particular thanks are due to Felicity Hand, Director of Public Affairs, for her unwavering faith in the project.
- To FastTrac® Australia, for providing our co-researcher, Dr Debbie Kellie, who secured and conducted all interviews with Queensland-based key informants.
- To our Swinburne colleague, Sue Peacock, who shouldered the burden of the most onerous administrative components of the project.
- To the community of ethical Australian entrepreneurs who have waited so long for a voice in the land: here is part of your story—at last!

The Yellow Pages® *Global Entrepreneurship Monitor Australia 2000* is only possible thanks to the enormous amount of work done by the GEM 'mission control' team who coordinate the research, supervise the conducting of the adult population survey, collate and clean the data, gather and organise data from secondary sources, and provide the results to each of the GEM national teams in a consolidated data set. The Australian team thanks the team and acknowledges their particular contributions:

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Professor Michael Hay:	Concept originator
Professor Bill Bygrave:	Venture Capital special study
Dr. Erko Autio:	Key informant survey coordination
Paloma Lopez-Garcia:	Secondary data
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