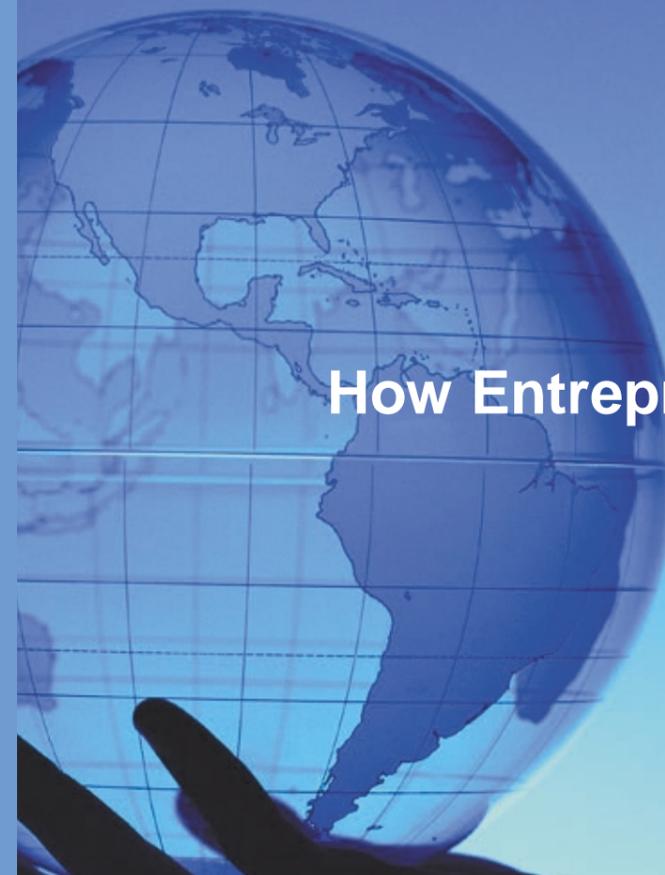




The Global Entrepreneurship Monitor 2002

The Irish Report



How Entrepreneurial is Ireland?

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Dublin, January 2003

Executive Summary

Ireland participated in the Global Entrepreneurship Monitor (GEM) for the third time in 2002. The GEM Irish team gratefully acknowledges continued sponsorship from Enterprise Ireland, which made participation possible.

GEM is a research programme run jointly by London Business School and Babson College in the USA. The research also involves a consortium of teams from each of the countries involved in the study. The number of countries participating in GEM is growing each year and, having started with just 10 countries in 1999, the numbers of participating countries increased to 37¹ in 2002.

Section 1 of the Irish GEM Report sets out the results of the adult population survey that was conducted in June 2002. This survey assesses the level of entrepreneurial activity among the general adult population in Ireland, together with their related views and opinions.

The headline results of this survey indicate that there are 208,000 Irish adults who are actively engaged in the process of starting a business or who own a business (partly or fully) that was started since 1999. This number represents one in eleven (9%) of the adult population. Of this 115,500 or 5% are currently actively planning to start a new business, while a further 92,5000 or 4% currently partly or fully own and operate a business started since 1999.

The GEM 2002 Global Executive Report ranks Ireland the 12th most entrepreneurially active country out of 37 countries, based on the rate

of current entrepreneurial activity among its adult population². Accordingly, the rate of entrepreneurial activity in Ireland is well ahead of that in most other European countries and, among the more developed economies, one of the highest in the world.

An average decline of 25% in the entrepreneurial activity among the adult population was recorded across the GEM countries that participated in both the 2001 and 2002 studies. A similar level of decline in entrepreneurial activity was evident in Ireland in 2002 compared to the previous year. GEM attributes this decline in entrepreneurial activity to a decline in the rate of national economic growth across virtually all countries from 2001 to 2002. Despite the decline in entrepreneurship activity levels that GEM notes in 2002, the relative standing of the countries remains quite stable.

Despite the generally perceived slowdown in the economy, the results of the adult population survey for Ireland indicate that two in every five Irish adults (39%) believe that there are good opportunities to start a new business in the next six months.

Sections 2 and 3 set out the views and opinions of a wide range of experts and entrepreneurs on the relative attractiveness of Ireland as a location for entrepreneurial activity. Section 2 outlines the results of the analysis of the questionnaires completed by them, and Section 3 sets out the results of the face-to-face interviews carried out in May and June 2002.

¹ The 37 countries participating in GEM in 2002 are as follows: Argentina, Australia, Belgium, Brazil, Canada, **Chile, China, Croatia**, Denmark, Finland, France, Germany, **Hong Kong**, Hungary, **Iceland**, India, Ireland, Israel, Italy, Japan, Mexico, Netherlands, Norway, New Zealand, Poland, Russia, Singapore, **Slovenia**, South Africa, South Korea, Spain, Sweden, **Switzerland, Thailand, Taiwan**, UK, and USA. Those participating for the first time are marked in bold.

² The Total Entrepreneurship Activity (TEA) ranking is the sum of (i) those individuals involved in the start-up process (nascent entrepreneurs) and (ii) individuals active as owner-managers of firms less than 42 months old (new firm entrepreneurs). The very small percentage (5%), which qualified for both, is counted only once.

Ireland, despite its relatively small size, now has the third highest number of experts and entrepreneurs involved in the research across the 37 GEM countries. As the number of experts and entrepreneurs participating each year increases, this creates a “snowball” effect of more expertise, knowledge and experience underpinning the research. The GEM national team very much appreciates the continuing participation of these key informants in the study, the results of which are greatly enhanced through their ongoing participation and support.

Relative to other countries, the Irish experts and entrepreneurs, who are involved in the GEM research, are very positive in relation to their view of the entrepreneurial framework conditions that prevail in Ireland at present. Their views placed Ireland in the top five, across the 37 participating GEM countries, in the following five of the thirteen key variables, which are considered to have a significant impact on the level of entrepreneurial activity within a country:

- Effective and efficient government programmes;
- Supportive Government policies;
- Availability of professional and commercial infrastructure;
- Ease of access to finance; and
- Lack of regulatory burden.

The experts and entrepreneurs are also very positive in respect of their view of the ability of Irish people to spot a good business opportunity and they credit them with having the motivation to act on it. They were less optimistic, however, about the quality of the population’s ability to successfully act on business opportunities.

The experts and entrepreneurs also outlined what they considered to be the weaknesses in the social, economic and support frameworks in Ireland with regard to the encouragement and support for entrepreneurship.

Included in Section 3 are the wide ranging, practical and thoughtful set of suggestions and

recommendations made by the experts and entrepreneurs, interviewed as part of GEM 2002, with a view to strengthening the social, economic and support frameworks in Ireland. These are worthy of further consideration by policy makers and by all those interested in further strengthening the environment for entrepreneurial activity within Ireland.

Section 4 explores in more detail the topic of financing a new and growing business in the current environment, as issues surrounding the funding of new and growing businesses were mentioned most frequently by the Irish experts and entrepreneurs, when they were asked to identify the weaknesses that exist within the environment that negatively affect entrepreneurship in Ireland at present.

Section 5 sets out the results of the GEM analysis across the 37 participating countries and covers topics such as the general decline in entrepreneurial activity noted this year, the great variation in entrepreneurial activity between countries, the differing motivation for entrepreneurial activity, the various growth expectations that entrepreneurs have for their new enterprises, the gender and age balance of entrepreneurs, the leading national issues around entrepreneurship raised by the experts and entrepreneurs in the participating countries, and the availability of finance to support entrepreneurial endeavour, in particular the availability of informal and VC funding for new enterprises.

Section 6 examines the policy implications for Ireland of the GEM research for 2002. Several of the experts and entrepreneurs spoke of Ireland in terms of its journey on the way to becoming a fully mature entrepreneurial nation. They point out that while great progress has undoubtedly been made, the lack of a strong entrepreneurial tradition has resulted in several “gaps” which they identify as needing to be bridged if Ireland is to further capitalize on the entrepreneurial momentum that has become evident in recent years.

The gaps that were identified by the experts and entrepreneurs interviewed related in particular to the following areas:

- **The availability of finance, particularly early-stage finance**

The experts and entrepreneurs interviewed suggested that fiscal measures could be effectively used to make this type of high-risk investment more attractive to Business Angel Investors, that the Business Expansion Scheme should be revised, and that specific fund(s) should be established to fill the early-stage funding gap.

- **Shortage of managers experienced in growing a new, international business**

The experts and entrepreneurs clearly recognized that this gap was arising because of Ireland's lack of an entrepreneurial tradition and they suggested that it be bridged through a variety of means, including fiscal incentives, so that experienced managers, with world-class sales and marketing experience, might be attracted to strengthen the management team of young Irish companies. It was also recognized that the supports available to potential and new entrepreneurs should be expanded in a systematic way to include mentoring from experienced entrepreneurs and to make available other appropriate sources of advice and training.

- **Weaknesses in the ability of the universities to commercialize R&D**

There was an acceptance among the experts and informants that the commercialization of academic research had never been given a high priority within the colleges in the past and that its transfer to commercial application had never been very effective. This gap in the country's knowledge infrastructure is now much more important, they point out, given the need to capitalize on the very significant investment currently being made in research and innovation.

- **Shortcomings in the contribution of the education system in fostering an enterprise culture**

The experts believe that the educational

system is lagging behind the entrepreneurial reality, that is now a part of modern Ireland, rather than leading the way. They suggest that students should be equipped with the personal skills and characteristics that would open up the possibilities of an entrepreneurial career as an attractive career option; that entrepreneurship be included in the second level business studies curriculum; and that third level colleges should be much more proactive in introducing students from all disciplines to entrepreneurship modules.

- **Gaps in the development of a well-balanced entrepreneurial economy**

In many respects the experts and entrepreneurs accept that it is only now that a certain entrepreneurial momentum has begun to be built up in Ireland and that role models have begun to emerge, that the policy makers can turn their attention to those areas that have been more peripheral to this development. Accordingly, they are suggesting that more attention be focused on encouraging:

- More women entrepreneurs;
- Entrepreneurial activity in a broader range of high technology sectors;
- The development of clusters based on emerging technologies; and
- A greater regional balance, but only when appropriate.

- **Gaps in physical infrastructure**

That the experts and entrepreneurs pointed to major deficiencies in the physical infrastructure will come as no surprise. It is a recurrent theme in this annual assessment as in many other reports. This year, those interviewed highlighted in particular difficulties in internal access and communication and suggested that infrastructural bottlenecks of this nature may thwart the government's avowed policy to develop enterprise within the regions, as such deficiencies will inhibit the

formation and growth of new enterprises in the regions and will negatively affect their competitiveness. They suggested that short-term measures, such as increased internal flights, should be prioritised and that in the longer term all major centres should have appropriate airport facilities.

- **Policy and co-ordination gaps**

The experts and entrepreneurs believe that the government and the development agencies are well disposed to supporting and encouraging an enterprise culture and individual entrepreneurs. They point to a policy and co-ordination gap, however. They believe that there is a need to develop an all-embracing entrepreneurship policy and to better co-ordinate the work of the many agencies and organisations focused on supporting entrepreneurs. At present, they believe that there is duplication and inefficiencies within the system that are both costly and confusing. The experts and entrepreneurs also have suggestions as to areas in which additional support could most useful be

added. This is principally in areas of advice and knowledge sharing. Many wondered aloud as to who would listen to all the advice and suggestions that they were making, as there was no obvious champion of entrepreneurship emerging. What they believed was needed was some person or persons of influence who could articulate a vision of Irish entrepreneurship and the contribution that Irish entrepreneurs could make to a strong economy in the 21st century, and then, most importantly, who could implement the practical actions to make that vision a reality.

Quite clearly there is much contained in the report that is very positive. Irish people are highly entrepreneurial and in general the environment for entrepreneurial activity within Ireland is very positive. The experts and entrepreneurs, who contributed to GEM 2002, believe that the entrepreneurial momentum, which is clearly under way, has a great deal to offer to Ireland and that the identified gaps that have emerged should be addressed as a matter of urgency so that Ireland can fully capitalize on the entrepreneurial potential of its people that has become evident in recent years.

SECTION 1

How Entrepreneurial was Ireland in 2002?

1.1 Introduction

Ireland participated in the Global Entrepreneurship Monitor (GEM) for the third time in 2002. The GEM Irish team gratefully acknowledges continued sponsorship from Enterprise Ireland, which made participation possible.

The aim of GEM is to create an annual assessment of the levels of entrepreneurial activity across countries. The research also explores a variety of factors both within and across countries that might give rise to systematic differences in entrepreneurship rates. Through a greater understanding of these factors, it is intended that policies to enhance the level of entrepreneurial activity can be based on solid research and the role of entrepreneurship in contributing to a positive economic environment can be better understood.

The Global Entrepreneurship Monitor (GEM) is a research programme run jointly by London Business School and Babson College in the USA. The research also involves a consortium of teams from each of the countries involved in the study. The number of countries participating in GEM is growing each year and, having started with just 10 countries in 1999, the numbers of participating countries

increased from 29 in 2001 to 37³ in 2002. It is expected that the number of participating countries will increase further in 2003.

1.2 Overall Results

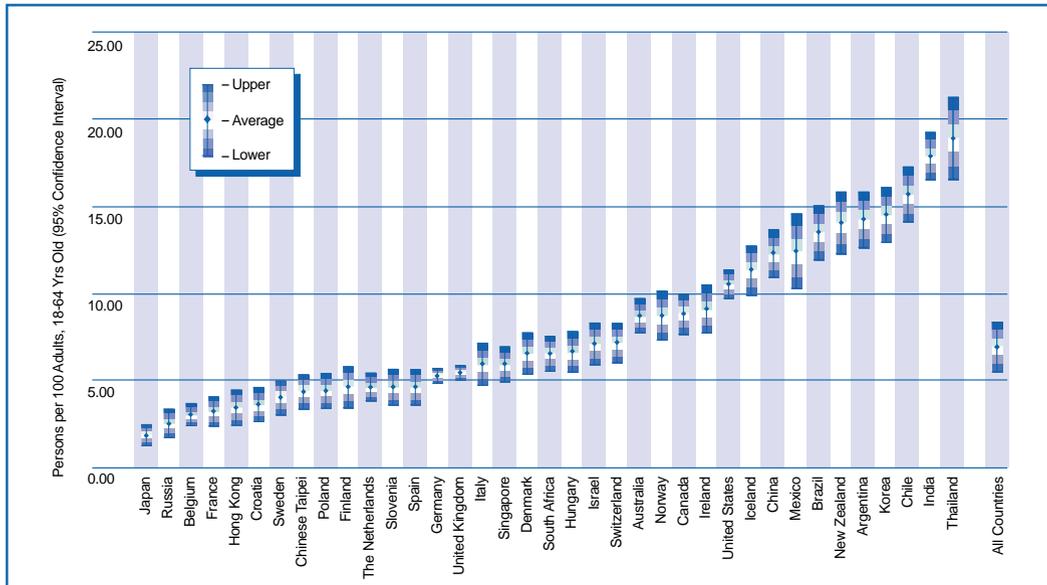
The paragraphs that follow illustrate for Ireland the results of a population survey of 2,000 adults undertaken in June 2002 to assess the current entrepreneurial activity rates of the Irish adult population. The results of the Irish survey are also compared to the results of identical surveys carried out at the same time in 36 other countries.

The GEM 2002 Global Executive Report ranks Ireland the 12th most entrepreneurially active country out of 37 countries, based on the rate of current entrepreneurial activity among its adult population⁴. Last year Ireland was ranked 6th out of 29 participating countries. Against the same countries⁵, Ireland's rank this year is 8th.

³ The 37 countries participating in GEM in 2002 are as follows: Argentina, Australia, Belgium, Brazil, Canada, **Chile, China, Croatia**, Denmark, Finland, France, Germany, **Hong Kong**, Hungary, **Iceland**, India, Ireland, Israel, Italy, Japan, Mexico, Netherlands, Norway, New Zealand, Poland, Russia, Singapore, **Slovenia**, South Africa, South Korea, Spain, Sweden, **Switzerland, Thailand, Taiwan**, UK, and USA. Those countries participating for the first time are marked in bold.

⁴ The Total Entrepreneurship Activity (TEA) ranking is the sum of (i) those individuals involved in the start-up process (nascent entrepreneurs) and (ii) individuals active as owner-managers of firms less than 42 months old (new firm entrepreneurs). The very small percentage (5%), which qualified for both, is counted only once.

⁵ With the exception of Portugal, which is not participating in this year's study. Portugal was ranked 21st last year compared to Ireland's 6th place.

Figure 1: Total Entrepreneurship Activity (TEA) by Country

The vertical bars in Figure 1 represent the 95% confidence intervals, sometimes referred to as the margin of error, and indicate the precision of the estimates. Those countries where the vertical bars overlap would not be considered to have a statistically significant difference. Hence Ireland would be considered as being in the same group as the US, Canada, Norway, and Australia. Accordingly, the rate of entrepreneurial activity in Ireland is well ahead of the European average and, among the more developed economies, one of the highest in the world.

The large number and variety of countries participating in GEM in 2002 spans a range of countries at different stages of development. In some countries entrepreneurs are primarily motivated by necessity, believing that it is only through their own resources can they find work and gainful employment, as they believe that the opportunities for finding paid employment within their country are very limited. These are referred to as “necessity

entrepreneurs” and are predominantly to be found in developing countries or countries that are experiencing severe recession and hardship. In other countries, such as Ireland, entrepreneurs are primarily responding to perceived opportunities. If the rate of entrepreneurial activity in Ireland is compared with those countries in which more than 70% of those entrepreneurially active are pursuing opportunities, then Ireland’s rank improves to 5th position⁶.

On the basis of a survey of 2,000 adults within Ireland in June 2002, the following conclusions can be drawn about the current level of entrepreneurial activity in Ireland:

- One in eleven (9%) Irish adults are actively engaged in the process of starting a business or own a business (partly or fully) that was started since 1999. This level represents a decline of 25% in the entrepreneurial activity among the adult population in Ireland in 2002 compared to 2001. This is on a

⁶ Among that group of countries only in New Zealand, Iceland, the United States and Thailand the level of entrepreneurial activity, among the adult population, higher than it was in Ireland in 2002.

par with the average level of decreased activity that was recorded across those GEM countries that participated in both the 2001 and 2002 studies.

- 5% of the adult population are currently actively planning to start a new business⁷. These entrepreneurs are referred to in the GEM literature as “nascent entrepreneurs”. This level of activity ranks Ireland in 10th position across the 37 GEM countries. The decline in the number of nascent entrepreneurs in Ireland in 2002, compared to 2001 (7.2%), accounts in the main for the fall-off in entrepreneurial activity that GEM records for Ireland in 2002. This rate of decline in the numbers planning to start a new business in Ireland, however, is less than the rate of decline in the numbers of nascent entrepreneurs noted across those countries that participated in GEM in 2001 and again in 2002.
- 4% of the adult population currently partly or fully own and operate a business started since 1999. These are “new firm entrepreneurs”⁸. This level of entrepreneurial new business development places Ireland in 13th position. This level of new firm entrepreneurial activity is on a par with the result for Ireland in 2001.⁹
- 85% of those actively involved in new entrepreneurial activity in Ireland are responding to a perceived opportunity rather than being forced to do so through necessity. This is broadly similar to the result in 2001 (82%). Comparing across the 37 countries in 2002, Ireland is ranked with Finland and Poland in 4th position behind France (88%), the Netherlands (87.2%) and the US

(86.7%) in terms of the proportion of its entrepreneurially active adult population that are pursuing perceived business opportunities.

- More men in Ireland are becoming entrepreneurs in response to a perceived opportunity (87%) than is the case for women (80%), although in both instances response to a perceived opportunity rather than necessity is the dominant motivating factor.
- Just 2% of all those currently active in entrepreneurial activity in Ireland believe that their new venture will employ more than 20 within 5 years and will be selling in export markets. Ireland is ranked 15th of the 37 countries in this regard.
- In 2001, in common with many GEM countries the relatively low proportion of Irish entrepreneurs that were women (30%) was noted and recognized as a cause of concern. In 2002, this trend continued with women continuing to be much less entrepreneurially active than men. In 2002, in Ireland, there were about 1 in every 20 Irish women (5.5%), who were engaged in entrepreneurial activity, compared with 1 in every 8 men (12.4%). With regard to the level of female participation, Ireland is on par with the average activity rate for women across the GEM countries (5.6%), while the number of Irish men involved in entrepreneurial activity is 20% higher than the average activity rate for men across all GEM countries (10.3%)
- Of the women entrepreneurs identified, a higher proportion (69%) was actively planning to start a new business (“nascent entrepreneurs”) compared to

⁷ An individual was considered to be a nascent entrepreneur if he/she fulfilled three conditions: (i) they had done something taken some action- to create a new business in the last year; (ii) they expected to share ownership of the new firm; and (iii) the firm had *not* paid wages or salaries for more than three months.

⁸ If the initiative had paid salaries and wages for more than three months but less than 42 months, it was classified as a “new firm”.

⁹ Ireland’s ranking in terms of nascent entrepreneurs and new firm entrepreneurs in 2002, relative to the 28 countries included in both 2001 and 2002, is 8th and 9th respectively. This compares with the 2001 ranking of 12th and 6th respectively. (Portugal in omitted as it did not participate in the study in 2002, but was included in 2001).

the proportion of identified men entrepreneurs (63%). On the other hand, a greater proportion of men (37%) were owner/managers of businesses (“new firm” entrepreneurs) that had been started in the last three years.

- In Ireland one in 13 in the 18-34 age group (7.6%) are currently involved in entrepreneurial activity, compared with one in 23 in the 35-64 age group (4.4%).
- Fear of failure would prevent one in three Irish people from starting a new business. This is about the average across the 37 countries.
- Three percent of the adult population were identified as being active as business angels or informal investors in the last three years. This level of business angel participation among its adult population places Ireland in a large group of countries in the mid-point across the 37 countries¹⁰.
- Almost half of all adults in Ireland (47%) personally know an entrepreneur who started a new business in the last two years. Given the importance of role models in initiating entrepreneurial activity in others, Ireland’s 7th place in this regard across the 37 countries is perceived as very positive.
- One in every two Irish adults (50%) believes that they have the skills to successfully run a new business. In this Ireland ranks 10th across the 37 countries. This finding is broadly in line with the 2001 findings for Ireland (46%).
- Despite the generally perceived slowdown in the economy, the results

of the survey indicate that two in every five Irish adults (39%) believe that there are good opportunities to start a new business in the next six months. The level of opportunity perception for new business start-ups is higher in Ireland among the general adult population in 2002, than it was in 2001 (33%). Ireland currently ranks 11th across the 37 countries in this regard.

- Almost one in eight of those surveyed in Ireland (13%) expect to start a new business in the next three years. While this indication is below the average (15%) across the 37 countries, that average is distorted by the optimistic predictions of necessity entrepreneurs in countries with little economic alternatives e.g. Brazil (43%) and Argentina (40%). In terms of entrepreneurial predictions in countries with strongly dominant “opportunity” motivated entrepreneurs, Ireland retains a relatively high position, among the highest in Europe, marginally ahead of Canada (12%) and just behind the United States (15%).

The GEM research indicates that there has been an average decline of 25% in the level of entrepreneurial activity among the general adult populations in those countries that participated in GEM 2001 and are participating in GEM again in 2002. This is in line with the decline detected by GEM in Ireland through its 2002 adult survey. GEM attributes this decline in entrepreneurial activity to a universal decline in the rate of national economic growth across virtually all countries from 2001 to 2002. Despite the decline in entrepreneurship activity levels that GEM notes in 2002, the relative standing of the countries remains quite stable over time.

¹⁰ In 2002, countries with the same level of business angel participation as Ireland among their adult populations included Canada, Croatia, Denmark, Finland, Germany, Hong Kong, India, Slovenia, Spain, South Africa and Sweden. The countries with the highest number of business angels among their general population are Iceland (7%) and New Zealand (6%).

SECTION 2

What the Experts and Entrepreneurs Had to Say: The Results of the Questionnaires

2.1 Introduction

Section 1 of this report dealt with the results of the adult population survey which indicated how entrepreneurially active Irish people were in general in 2002. The views and opinions of experts and entrepreneurs on the relative attractiveness of Ireland as a location for entrepreneurial activity were also sought. These are referred to on occasion as “key informants”. Their views were ascertained in two ways. The first involved a series of face-to-face in-depth interviews with a number of experts and entrepreneurs in May and June of 2002. The content of these interviews is reported on in Section 3.

At the end of the individual interview, each key informant was asked to complete a detailed 10-page questionnaire. This takes about 20 minutes to complete. This same questionnaire was completed by all the experts and entrepreneurs interviewed in 2002 in all the countries surveyed. As a result, the opinions of the national experts and entrepreneurs in all the countries surveyed can be compared and Ireland’s relative position on each response can be assessed.

This questionnaire is also sent by post to the experts and entrepreneurs from previous years and they are asked to complete and return the questionnaire.

The second way in which GEM obtains a greater understanding of the entrepreneurial environment is through a detailed analysis of these questionnaires. In 2002, this analysis in

Ireland is based on almost 60 detailed questionnaires, which were completed and returned by those experts and entrepreneurs interviewed this year (18) and those that had been interviewed by the Irish GEM team in previous years (41).

2.2 A Continuity of Expert and Informed Opinion

One of the great benefits of GEM is the continuity in terms of the experts and entrepreneurs (“key informants”) that participate in the research and the growing number that participate each year. In 2000, 40 Irish experts and entrepreneurs were interviewed. A further 36 were interviewed in 2001 and 18 in 2002.

Many of these experts and entrepreneurs give willing of their time and continue to participate in this way in the national GEM research. An indication of this continued participation is the high level of response to the request to complete the questionnaire in subsequent years. These are all very busy people. Yet the response rate of those previous informants, who could be contacted by post (70), to the request to complete and return a detailed questionnaire for the 2002 research, was almost 60%. As a result Ireland, despite its relatively small size, now has the third highest number of experts and entrepreneurs involved in the research across the 37 countries involved in GEM.

This has the benefit of being in effect a

“snowball” of expertise, knowledge and experience, as the number of experts and entrepreneurs participating each year continues to increase. The GEM national team very much appreciates the continuing participation of these key informants in the study, the results of which are greatly enhanced through their ongoing participation and support.

2.3 The Relative Attractiveness of the Entrepreneurial Environment in Ireland

In order to assess the experts’ and entrepreneurs’ opinions of the attractiveness of Ireland for the establishment of new enterprises and in terms of the support and encouragement given to entrepreneurs, the questionnaire posed a series of questions. These questions are grouped around nine framework conditions, all of which are considered in terms of their impact on entrepreneurial activity. There are usually five or six separate but related questions asked in respect of each framework condition. The key informants are asked to respond to the series of questions in terms of a five point scale from True (5) to False (1).

The nine entrepreneurial framework conditions that are investigated are as follows:

- Financial support
- Government policies

- Government programmes
- Education and training
- Research and development
- Commercial and professional infrastructure
- Internal market openness
- Access to physical infrastructure
- Cultural and social norms.

As the same questions are asked in the same way of the experts/entrepreneurs in each participating GEM country, it is possible to compare the responses of the Irish key informants with equivalent groups in 36 countries. This gives an indication of the relative attractiveness of each entrepreneurial framework condition in Ireland compared to the other GEM countries.

Table 1 details the evaluation of the experts and entrepreneurs of each of the entrepreneurial framework conditions in respect of Ireland and indicates the position of Ireland relative to the average of the 36 other countries. To get a more accurate assessment, four of the framework conditions (Finance, Government Policy, Education and Training, and Market Openness) are measured from two angles. In order to give an indication of the spread of opinion among the international key informants in respect of each framework condition, the highest and the lowest scores are also given, together with the name of the countries concerned.

Table 1: Summary of all Experts'/Entrepreneurs' Evaluations of Entrepreneurial Framework Conditions

Variable Description	Ireland's Score	Ireland's Rank	High Score ¹¹	Average Score	Low Score ¹²
Finance – Ease of Access	3.37	4th	3.89 (US)	2.90	1.50 (AR)
Finance – Presence of VC, Business Angel and Other	3.93	6th	4.30 (US)	2.8	1.72 (HU)
Government Policy	3.28	2nd	3.62 (CA)	2.68	1.50 (AR)
Government Policy – Ease, Speed and Lack of Regulatory Burden	3.09	5th	4.33 (HK)	2.41	1.36 (AR)
Government Programme: Efficiency and Effectiveness	3.43	1st	3.43 (IE)	2.63	1.61 (AR)
Education and Training Effectiveness: Primary and Secondary	2.14	8th	2.72 (CA)	1.97	1.34 (JP)
Education and Training Effectiveness: Post Secondary	2.86	16th	3.89 (US)	2.83	2.00 (C) ¹³
Research and Development Transfer Effectiveness	2.70	10th	3.49 (CA)	2.47	1.88 (AR)
Professional and Commercial Infrastructure	3.64	3rd	4.21 (CA)	3.17	2.00 (KR)
Market Stability – Rapid Change	2.39	26th	4.09 (TW)	2.84	1.83 (CL)
Relative Lack of Barriers to Market Entry	3.01	10th	3.88 (CA)	2.75	2.04 (CR)
Access to Physical Infrastructure	3.16	30th	4.79 (CA)	3.86	3.00 (HU)
Cultural and Social Norms: Entrepreneurial Orientation	3.06	7th	4.52 (US)	2.79	1.88 (DK)

The very strong position of North America in terms of all the framework conditions is very striking; with the US or Canada achieving the highest score in 10 of the 13 separate categories. It is interesting to note that Canada is rated highest in 6 of the categories. It may be that Canada has entrepreneurial supports worthy of study by Irish policy makers, for example in the area of effective R&D transfer.

On first sight, the Irish experts and entrepreneurs appear to be very positive with regard to the entrepreneurial framework conditions that prevail in this country, giving an average rating across all variables of 3.03. On closer scrutiny, they may not be giving as positive evaluations as might at first appear.

It is important to look at the options that were presented in the questionnaire. As previously stated, this were on a scale of 1 to 5 and were as follows:

1. Completely False
2. Somewhat False
3. Neither True nor False
4. Somewhat True
5. Completely True.

Hence, an overall average score of 3.03 across the variables means that the Irish experts and entrepreneurs were somewhat ambiguous in their assessment.

¹¹ US: United States; CA: Canada; HK: Hong Kong; IE: Ireland; TW: Taiwan.

¹² AR: Argentina; HU: Hungary; JP: Japan; C: China; KR: Korea; CL: Chile; CR: Croatia; DK: Denmark.

¹³ Interestingly, the key informant group in Finland also gave an exceptionally low score (2.01) to this variable expressing their strong feeling that the third level educational institutions were not preparing their students in any way for an entrepreneurial career.

It is also important to remember that the key informants were not requested to score Ireland relative to other countries. The relative comparisons are done when the national questionnaires from the 37 countries are completed and collected together.

In relative terms, the Irish experts and entrepreneurs were most positive in terms of the Irish Government's policies (2nd + 5th) and programmes (1st) for entrepreneurial development. These two framework conditions also received favourable mention in the face-to-face interviews conducted with 18 experts and entrepreneurs this year (Paragraph 3.2 ii).

2.3.1 Definite Shortcomings Identified

The experts and entrepreneurs were very definite in their view that there were considerable shortcomings in the contribution of the Irish education system to an enterprise culture, particularly at primary and secondary level. This issue was also raised in the individual interviews this year as an identified weakness within the Irish environment in respect of support and encouragement for entrepreneurial endeavor (Paragraph 3.2 iii). Interestingly, it would appear that this situation is not unique to Ireland as this framework condition gets the lowest average score across the 37 participating countries (1.97) and even Canada, which records the highest score in this area, is given a score of less than three (2.72) by its national experts and entrepreneurs.

The relatively low ranking of Ireland in respect of the contribution of the third level education and training sector to support entrepreneurial activity should also be noted (16th), as the third level sector has a more direct impact on preparing and forming potential entrepreneurs, particularly those capable of initiating new ventures with high growth potential, than have the earlier educational levels.

While responses indicating deficiencies by Irish key informants with regard to physical infrastructure may not be surprising, what may be surprising is the position of Ireland in this respect relative to the other GEM countries. Given that about half of the participating countries may be described as "developing" economies, for Ireland to find itself in 30th position out of 37 countries may come as some surprise.

Given the importance of the need to successfully commercialise publicly funded research, the generally negative cumulative response (2.70) that the Irish experts gave to a series of questions designed to assess the effectiveness of R&D transfer within Ireland may give some cause for concern and should highlight an area in need of urgent attention from policy makers.

2.3.2 Views on the Entrepreneurial Nature of the Irish Population

The views of the experts and entrepreneurs were also sought in respect of the general adult population's ability to recognise an entrepreneurial opportunity, their relative degree of skill and experience to successfully capitalise on such an opportunity once recognised and their motivation to do so. As can be seen from Table 2 below the Irish experts and entrepreneurs were particularly positive about the ability of a great number of the population to spot a good opportunity for a new business and they also believed that Irish people in general were well disposed to take up the opportunity once recognised. They gave a more negative indication with regard to their belief that Irish people in general had the necessary skills to make a success of a new business.¹⁴

¹⁴ A score 2 equates to "somewhat false" to a positively framed question.

Table 2: Views of all Experts/Entrepreneurs on the Entrepreneurial Abilities of Their General National Adult Populations

Variable Description	Ireland's Score	Ireland's Rank	High Score ¹⁵	Average Score	Low Score ¹⁶
Entrepreneurial Opportunity – Perception of business opportunity ¹⁷	3.57	6th	3.97 (US)	3.29	2.50 (AR)
Entrepreneurial Capacity – Skills to act on business opportunity ¹⁸	2.64	10th	3.47 (HK)	2.52	1.68 (JP)
Entrepreneurial Capacity – Motivation to act on business opportunity ¹⁹	3.91	4th	4.44 (TW)	3.31	2.63 (NO) ²⁰

2.3.3 Intellectual Property Protection

For the first time in 2002, five related but separate questions were posed in order to understand the views of the national groups of experts and entrepreneurs with regard to the protection that was afforded to IP within their country. The questions explored issues related

to whether the national IP legislation is comprehensive, whether it affords sufficient protection and whether the legislation is adequately enforced. The responses given to these questions are set out in Table 3 below.

Table 3: Assessment of Intellectual Property Rights Protection

Variable Description	Ireland's Score	Ireland's Rank ²¹	High Score ²²	Average Score	Low Score ²³
Intellectual Property Rights Protection	3.46	11th	4.03 (AU)	3.12	2.00 (AR)

2.3.4 Support for Women Entrepreneurs

Successive GEM reports have noted that in virtually all countries, women are much less entrepreneurially active than men. A series of questions were inserted into the national key informants' questionnaires, for the first time in 2002, to get a better understanding of whether the greater participation in entrepreneurial activity by women in some countries is related to the availability of specific cultural supports which encourage women to work, achieve and become entrepreneurs and whether women as a group have equal opportunities, skills and motivation to become successful entrepreneurs as have men.

Table 4 indicates a summary of the combined assessment of the key informants of the position for women in Ireland in respect of these cultural supports and of their relative opportunity recognition and capacity, both skills and motivation, to become successful entrepreneurs. Their assessment is set alongside the highest, the lowest and the average scoring across the participating GEM countries.

¹⁵ US: United States; HK: Hong Kong; TW: Taiwan.

¹⁶ AR: Argentina; JP: Japan; NO: Norway.

¹⁷ Information on this variable is not available in respect of three countries-Italy, Poland and Russia.

¹⁸ Information on this variable is not available in respect of three countries-Italy, Poland and Russia.

¹⁹ Information on this variable is not available in respect of five countries – Canada, Italy, Poland, Russia, and the US.

²⁰ Sweden had virtually the same score (2.64).

²¹ Comparable data is not available for four countries. These are Italy, Poland, Russia, and the US. Hence, Ireland is ranked out of 32 countries.

²² AU: Australia.

²³ AR: Argentina.

Table 4: Assessment of Support for Women Entrepreneurs

Variable Description	Ireland's Score	Ireland's Rank	High Score	Average Score	Low Score
Support for Entrepreneurship by Women	3.24	13th ²⁴	3.97 (HK) ²⁵	3.14	2.25 (AR) ²⁶

Looking in more detail at the responses given by the Irish experts and entrepreneurs, some interesting findings emerge.

- It is apparent that the Irish key informants are very clear in their belief that there are insufficient social services available to enable woman to work after they start a family. On this particular issue, the Irish experts and key informants gave a negative score of 2.73, against an average score of 3.15 across the 32 countries for which comparable information is available.
- They are more positive about entrepreneurship being a socially acceptable career option for women (3.72 against a GEM average of 3.37) and about there being equal encouragement for women to become entrepreneurially active (3.06 against a GEM average of 2.82).
- With regard to equal exposure to good opportunities to start a new business, the Irish key informants were more ambiguous, as was the case among the GEM key informants internationally (3.06 against an a GEM average of 2.98).
- Finally, the experts endorsed the fact that women possess the skills and motivation to start and successfully run a new business (3.70 against a GEM average of 3.46). Indeed it is interesting to note that women received a slightly higher rating in terms of their skill and motivation in this regard than these same experts gave to the general adult population.

2.4 The Great Divide: Differences Between the Experts and the General Population

Included in the questionnaire, which the experts and entrepreneurs completed, was a series of questions that were similar to those posed in the general adult population survey. These questions were designed to assess whether the opinions and entrepreneurial activity levels of the key informants as a group were similar to that of the general population. The results are very interesting and clearly point to the fact that those who had been entrepreneurs in the past, and those who were very knowledgeable about entrepreneurship in Ireland, were much more entrepreneurially active at present than were the general adult population. This finding is replicated in varying degrees across the other GEM countries.

One could argue that in general as a group, the experts and entrepreneurs that are chosen as key informants are more highly educated and from a higher socio-economic background than is the norm across the adult population in the each of the participating countries. These factors may also impact on their entrepreneurial views and behaviour. Hence, the more interesting comparison may be across countries rather than within the country. Accordingly, in the paragraphs that follow both sets of comparisons are given: the views and actions of the Irish expert and entrepreneur group are given relative to other national expert/entrepreneur groups across the GEM countries, as well as to the general Irish adult population.

- Over a quarter (26%) of the experts and previous entrepreneurs in Ireland

²⁴ Comparable information is not available for Canada, Denmark, Russia, Switzerland, and US. Hence, Ireland is ranked in this instance out of 32 countries not 37 countries. Of the countries omitted from inclusion, four of these would certainly be ranked above Ireland. Accordingly, Ireland's rank should more properly be 17th out of the 37 countries.

²⁵ HK: Hong Kong.

²⁶ JP: Japan.

indicated that they were actively planning a new start-up at present. This compares with just 5% of the general Irish adult population. Compared with the key informants across the 37 countries, the Irish experts were below the average (33%) of those currently entrepreneurially active.

- A higher number (35%) of the Irish experts and previous entrepreneurs indicated that they expected to start a new business within the next three years. Once again this is somewhat behind the planned activity rate among the key informants across the 37 countries. It is well ahead, however, of the rate of proposed level of entrepreneurial activity among the general Irish adult population (13%).
- More than one in three (35%) of the key informants in Ireland had acted as a business angel or an informal investor in the last three years and in this they were marginally ahead of the average informal investment activity level across the other GEM countries (33%). Only 3% of the general Irish population were informal investors in 2002.
- Perhaps not surprisingly, virtually all (97%) of the experts and previous entrepreneurs indicated that they personally knew someone who had become an entrepreneur in the last 2 years. This is also the case across the 37 GEM countries. The general Irish adult population had a relatively high level of personal acquaintance with someone who had become an entrepreneur in the last 2 years, but this was almost at half the rate of the key informants (47%).

- The key informants also tended to be very positive in their opinion that there were many good opportunities to start a business in Ireland over the next 6 months with 87% of them expressing such an optimistic perspective. This compared very favourable with the average response (76%) for experts and entrepreneurs across the other GEM countries. The Irish experts and entrepreneurs were also more positive in their perception of good entrepreneurial opportunities in the short term than were the general Irish adult population (39%). These in their turn, relative to other general populations across the 37 GEM countries, were equally positive.
- All of the Irish experts and previous entrepreneurs indicated that they believed that they had the knowledge, skills and experience to start a new business. Only in the US, Spain, Switzerland and Australia were the key informants unanimous in this regard, although the average response across the GEM countries (88%) indicated a high level of confidence among the key informants in terms of their own abilities.
- Only one in nine (11%) from among the key informant group in Ireland would be deterred by fear of failure from starting a new enterprise and fear of failure is less of a deterrent for this group than it is for the general Irish population (33%) or for the average national expert/entrepreneur groups from across the 37 GEM countries (16%).

These findings are summarised in Table 5 below.

Table 5: Entrepreneurial Activity on the Part of the Key Informants Relative to the General Population

Variable Description	Average across all GEM Key Informants	Irish Key Informants	General Irish Adult Population
Currently trying to start a business	33%	26%	5%
Expect to start a business within the next three years	46%	35%	13%
Acted as a business angel within the last three years	33%	35%	3%
Personally know a new entrepreneur	92%	97%	47%
Believe that there are good opportunities to start a business	76%	87%	39%
Possess knowledge, skills and experience to start a new business	88%	100%	50%
Fear of failure would act as a deterrent	16%	11%	33%

2.5 A Three-Year Perspective

As Ireland has now participated in GEM over three consecutive years, it is possible to examine the change that has occurred in the responses of the experts and entrepreneurs over this time. The following paragraphs and tables compare the responses of these key informants in Ireland, and across the other GEM countries, to sets of similar questions over the years 2000, 2001, and 2002.

The number of Irish informants who complete the detailed questionnaire has increased each year since Ireland's first year of participation in GEM. But, as the mix is broadly similar each year, with experts and entrepreneurs chosen to represent each of the nine entrepreneurial framework conditions, the key informant scores for each of the questions is comparable year on year. Similarly, although the number of countries participating in GEM has increased, as the mix of countries is broadly similar year on year, the average score across GEM

countries is comparable. Given the increase in the number of participating countries over this period²⁷, however, Ireland's ranking or relative position would not be directly comparable. Notwithstanding this, a comparison of Ireland's score to the average score across all GEM countries allows a fairly accurate assessment of Ireland's relative position to be made.

2.5.1 The Entrepreneurial Environment

Table 6 sets out the three-year trend in terms of the scores given by Irish experts and entrepreneurs in relation to each of the entrepreneurial framework conditions. To get a more accurate assessment, four of the framework conditions (Finance, Government Policy, Education and Training, and Market Openness) are measured from two angles. The Irish scores are given for each of the years 2000, 2001 and 2002. For comparison purposes, the average score across all GEM countries for each of these years is also given.

²⁷ 21 countries participated in GEM in the year 2000. This number increased to 29 in 2001 and further increased to 37 in 2002.

Table 6: Three-Year Trend in Scores on Entrepreneurial Framework Conditions

Variable Description	Ireland's scores 2000	Ireland's scores 2001	Ireland's scores 2002	Average Score across all GEM Countries 2000	Average Score across all GEM Countries 2001	Average Score across all GEM Countries 2002
Finance – Ease of Access	3.26	3.64	3.37	3.30	3.12	2.90
Finance – Presence of VC, Business Angel and Other	3.69	3.66	3.93	3.44	3.02	2.81
Government Policy	3.84	2.99	3.28	2.82	2.71	2.68
Government Policy – Ease, Speed and Lack of Regulatory Burden	3.22	3.61	3.22	2.40	2.23	2.41
Government Programme: Efficiency and Effectiveness	3.64	3.14	3.43	2.84	2.66	2.63
Education and Training Effectiveness: Primary and Secondary	N/C	N/C	2.14	N/C	N/C	1.97
Education and Training Effectiveness: Post Secondary	N/C	N/C	2.86	N/C	N/C	2.83
Research and Development Transfer Effectiveness	3.25	2.69	2.70	2.73	2.39	2.47
Professional and Commercial Infrastructure	3.93	3.49	3.64	3.49	3.18	3.17
Market Stability – Rapid Change	2.74	2.45	2.39	2.79	2.82	2.84
Relative Lack of Barriers to Market Entry	3.28	2.93	3.01	2.78	2.63	2.78
Access to Physical Infrastructure	3.93	3.04	3.16	3.64	3.82	3.86
Cultural and Social Norms: Entrepreneurial Orientation	N/C	N/C	3.06	N/C	N/C	2.79

N/C = Not comparable with previous year

In interpreting the three-year perspective, it is important to remember that the questions posed to the experts and key informants are not phrased on a year on year comparison basis. This makes a significant difference.

There tends to be a general continuity between 2000, 2001 and 2002 in the average response of the key informants across GEM countries to an assessment of each of the entrepreneurial framework conditions. The area of finance is the only exception. This continuity in the average responses is maintained regardless of the fact that the number of participating countries increased from 21 in 2000, to 29 in 2001, to 37 in 2002. This should not be surprising, however, as many of the framework conditions, on which the

experts and entrepreneurs are commenting, change relatively slowly within the national economies. Once again, the area of finance is the only exception.

Interestingly, the current difficulties being experienced by entrepreneurs internationally, in the area of the availability of finance and the terms attaching to it, are more reflected in the downward movement of the GEM average score over the three-year period, than it is in the responses of the Irish experts and key informants.

This is not to suggest that the search for finance by entrepreneurs is not presenting significant difficulties in Ireland at present. It clearly is. Nearly all the Irish key informants

spoke of the difficulties new and growing ventures are encountering this year compared to last year, but they freely admit that the difficulties being faced at present are nothing compared to those faced by entrepreneurs in Ireland 20 years ago, when interest rates were in the high teens, personal guarantees were the norm for even relatively small amounts and VCs were non-existent. Hence, there is not the sharp dip in the Irish key informants' score in this regard over the three years that might otherwise be expected.

Section 4: Financing a New and Growing Business: The Current Difficulties explores this situation in more detail.

“Research and Development – Transfer Effectiveness” is an area in which a distinct downward trend can be seen in terms of the Irish scores over the three years. Having spoken to all the key informants about this important area for Ireland, the GEM national team is of the view that the relatively positive score in 2000 related more to a sense of encouragement and optimism of what could be achieved given the Government's earmarking of €1.9 billion in funding to be invested in the period 2000 to 2006, which was designed to bring about a major accelerated increase in Research, Technological Development and Innovation (RTDI). This funding was made available as part of the National Development Plan, which was launched in the year 2000. The cumulative score of the Irish group of experts and entrepreneurs, who participated in GEM in the year 2000, related more it would seem to this sense of the possibilities that were presented by this investment, than to the realities of what had been achieved to date.

The more recent, and lower scores reflect a more realistic assessment of the set of questions posed. In other words, the experts and entrepreneurs believe that the current

reality in terms of the effective transfer of R&D into commercial application within Ireland leaves a lot to be desired. This is a matter of concern given the large investment currently being put in place.²⁸

2.5.2 The Entrepreneurial Characteristics of the Irish Population

The view of the Irish experts regarding the entrepreneurial characteristics of the Irish population were very slightly ahead of the average assessment of the GEM key informants of their respective populations across all participating countries in 2000 and 2002 and slightly behind the GEM average in 2001. These differences are so slight, however, as to be without real significance. What is more significant, and is common to both the Irish and international groups of experts and entrepreneurs, is their more positive view of their respective populations' ability to recognise a good opportunity for a new business and their positive motivation to act on it, than their belief that in general the population of their country possess the relevant skills to act on a business opportunity once identified.

This presents challenges for those involved on both the policy and implementation side to have appropriate training and support mechanisms in place for those who wish to become entrepreneurs.

Table 7 below sets out the three-year trend in terms of the scores given by Irish experts and entrepreneurs in relation to their assessment of the entrepreneurial characteristics of the general adult population in respect of opportunity recognition and capacity. For comparison purposes, the average score across all GEM countries for each of these years is also given.

²⁸ The experts and entrepreneurs in the face-to-face interviews also raised concerns in this area. Their relevant views are contained in 3.3(iv).

Table 7: Three-Year Trend in Scores on Entrepreneurial Opportunity and Capacity

Variable Description	Ireland's scores 2000	Ireland's scores 2001	Ireland's scores 2002	Average Score across all GEM Countries 2000	Average Score across all GEM Countries 2001	Average Score across all GEM Countries 2002
*Entrepreneurial Opportunity – Assessment of general adult population's perception of business opportunity	4.10	3.26	3.57	3.37	3.74	3.29
*Entrepreneurial Capacity – Assessment of general adult population's skills to act on business opportunity	2.95	2.40	2.64	2.57	2.71	2.52
*Entrepreneurial Capacity – Assessment of general adult population's motivation to act on business opportunity	4.02	3.37	3.91	3.39	3.94	3.31

*Based on five point scale in which the higher the score the more positive the rating.

SECTION 3

What the Experts and Entrepreneurs Had to Say: The Content of the Interviews

3.1 Introduction

The Irish GEM team interviewed 18 leading experts and entrepreneurs in the early summer of 2002 to ascertain their views about the current 'state of the nation' with regard to entrepreneurship in Ireland. These interviews in 2002 added to the total of 76 interviews with experts and entrepreneurs that had been conducted by the Irish GEM team in 2000 and 2001. Many of the views expressed by the interviewees this year were similar to those that had been expressed by experts and entrepreneurs in previous interviews. In particular, all were in agreement that the general environment for entrepreneurship had greatly improved in Ireland in recent times, compared to say ten or twenty years ago.

As in previous years, about one third of those interviewed were successful entrepreneurs from a variety of sectors. Some were recent entrepreneurs, others had been involved in entrepreneurial activities for some time and they included several serial entrepreneurs. The experts included senior government officials, development and support agency executives, private sector providers of advice, supports and finance to new enterprises, academics and those involved in the transfer of research and technology from third level colleges to commercial enterprises.

In the interviews in 2002, the experts and entrepreneurs were asked three specific questions:

- (i) What do you consider to be the main strengths in Ireland with regard to starting and growing a new business?
- (ii) What in your opinion are the weaknesses?
- (iii) What three things do you consider need to be done to improve the environment for entrepreneurial activity and to encourage more entrepreneurs in Ireland?

These same questions were put to the national experts and entrepreneurs by the various GEM national teams in the 37 countries that participated in GEM in 2002.

As in previous years, there was a consistency in many of the issues raised and discussed during these interviews, though on certain issues contradictory opinions were expressed by some of the interviewees. In those situations where there were differing views expressed, these tended to reflect the particular experiences and expertise of an individual interviewee. As a result on occasion, the specific view or experience of an interviewee might contradict a more general and widely held opinion. On other occasions, apparent contradictions arose because of different interpretations by the experts and entrepreneurs of the same circumstances. For example, while virtually all interviewees spoke of a much improved environment for entrepreneurship when comparing past and present circumstances. Depending on the point of view of the interviewee commenting upon

the situation, some emphasized the great progress that had been made, while others emphasized that much still needed to be done. These were not necessarily contradictions, but rather comments from different perspectives on an emerging trend. In short, it was a case of whether the glass was considered to be half empty or half full.

Each of the face-to-face interviews lasted at least one hour and during these the interviewees spoke very openly of their experiences and of their views. As was the case in most of the GEM countries, these interviews were conducted on a confidential basis. This allowed the interviewees to speak more openly than might otherwise be the case.

The views and opinions articulated in these interviews are summarized below.

3.2 Aspects of the Environment in Ireland that Support and Encourage Entrepreneurship

The aspects of the environment in Ireland that the experts and entrepreneurs considered to be the most important in providing support and encouragement for entrepreneurs and entrepreneurship fall into three broad categories.

- (i) Cultural support for entrepreneurship
- (ii) Positive Government policies and programmes
- (iii) Relative ease of setting up a new business.

The views of the experts and entrepreneurs in terms of these three supports for entrepreneurship in Ireland are outlined in the paragraphs that follow.

(i) Cultural Support for Entrepreneurship

By far the most commonly cited strength with respect to entrepreneurship in Ireland was the presence of a supportive culture. This was cited, without prompting, by almost 40% of the experts and entrepreneurs interviewed as

being a significant support to entrepreneurship in Ireland. Irish experts and entrepreneurs cited a supportive culture relatively more frequently than their counterparts in all of the other 36 countries that participated in GEM in 2002²⁹.

One relatively young entrepreneur expressed it in this way:

‘ ‘ There is now a great admiration within society for the entrepreneur. The entrepreneur feels that his peer group from college admire him for trying to create a new business. His family and other friends are also very supportive. He also feels that if he had to wind up the business and ‘ call it a day’ , that future employers would admire him for being a self-starter and that this would stand to his credit.’ ’

The experts believe that Irish society is now more supportive of entrepreneurship; that there is a greatly reduced ‘fear of failure’ among Irish people; that the ‘Irish psyche’ is essentially entrepreneurial; and that the government has recognized the importance of entrepreneurship.

The experts are of the view that the emergence of successful entrepreneurial role models has played a critical part in creating this supportive environment and thereby in encouraging Irish entrepreneurs. Successful entrepreneurs have, in general, been portrayed in a very positive manner by the Irish media. It was suggested that these role models have also been instrumental in the emergence of a positive ‘can do’ attitude evident among many Irish people, particularly young people.

One expert, summarizing the positive impact that the emergence of role models, from the universities, from the multinationals and from the indigenous companies is playing, used this phrase:

‘ ‘ They make success appear achievable.’ ’

The cumulative effect of this supportive culture and the presence of high profile, successful entrepreneurial role models is that there is now

²⁹ For example, just 20% of the experts and entrepreneurs in the US cited a supportive culture as a significant strength.

a steady 'flow' of new start-ups being initiated in Ireland. It was pointed out that this flow includes new ventures started by 'serial entrepreneurs' – a relatively new phenomenon on the Irish scene.

(ii) Positive Government Policies and Programmes

More than a quarter of the Irish experts and entrepreneurs also cited the generally positive support provided by Government for those endeavouring to set up and develop new businesses (In many instances, this point was not unqualified, as many of the experts and entrepreneurs also suggested areas and ways in which this support could be further enhanced).

Several of those interviewed drew attention to the fact that supportive government policy and programs and government funding for RTDI have been, and will be, important for many high technology, high growth entrepreneurs. Others, whose experience is at local level with less high tech new ventures, mentioned the positive benefits that are flowing from social partnership, in the form of coordinated operational interventions, as employers, unions and government are all represented on the boards of the County Enterprise Boards, Leader Programmes and Area Partnerships, all of which support and develop entrepreneurship at the local level.

(iii) It is Now Easier to Start a Business in Ireland

Many comments by individual experts and entrepreneurs referred in some way to aspects of the business environment in Ireland that are supportive of those trying to start or grow a new business. Specifically mentioned was the easier access to informal advice, the availability of space in incubators, the unrestrictive labor laws, the flexibility of the workforce and the availability of very good professional and legal services.

The entrepreneurs and experts suggested that it is now easier to start and grow a business in Ireland than it was a decade ago and that many of the challenges that this generation of Irish entrepreneurs face, principally access to finance, resources and expertise, are, despite short term difficulties, now significantly easier to overcome than they were in the past.

Commenting on the fact that it was easier to start a technology-based business in Ireland at present compared to say ten years ago, several of the interviewees commented upon the greater technological sophistication and knowledge that was now present in the country and on which new enterprises were being created.

In terms of the availability of private and public funding for entrepreneurs, while acknowledging some current difficulties, the experts suggested that there has been a significant improvement in recent times in this important area for entrepreneurs in Ireland. The emergence of 'business angels' and "smart money," that brings with it not only money but also experience and expertise, and the rapid increase in the flow of international venture capital money into the country has played a critical role in the emergence and growth of the many high technology start-ups³⁰.

3.3 Weaknesses in the Irish Enterprise Environment

The experts and entrepreneurs also outlined what they considered to be the weaknesses in the social, economic and support frameworks in Ireland with regard to the encouragement and support for entrepreneurship. The weaknesses identified by the experts and entrepreneurs interviewed may be grouped into a number of broad areas.

- (i) Availability of finance
- (ii) Shortage of managers experienced in growing a new business

³⁰ Those interviewed also spoke in some detail about the current difficulties in financing a new and developing enterprise. Given the importance of this issue for entrepreneurs at present, this area is explored in more detail in Section 4: Financing a New and Growing Business: The Current Difficulties.

- (iii) Shortcomings in the contribution of the educational system to an enterprise culture
- (iv) Weaknesses in the ability of the universities to commercialize R&D
- (v) Inefficiencies in Government entrepreneurial policies and programmes
- (vi) Shortcomings in the development of a well balanced entrepreneurial economy
- (vii) Specific difficulties facing entrepreneurs in starting a new business.

These specific weaknesses are outlined in the paragraphs that follow.

(i) Availability of Finance

The experts and entrepreneurs interviewed most frequently cited general difficulties with the availability of financial support as a weakness in the Irish environment for entrepreneurship. In particular, many cited specific problems with regard to the availability and access to 'seed capital', the early stage funding that entrepreneurs need to start a business. They observed that private 'business angel investment' and so-called 'smart money' had 'dried-up' in the last year or so. This appears to be directly related to the global downturn in the electronics industry and the collapse in the value of technology stocks. As this issue is of particular importance to the quality of the entrepreneurial environment in Ireland at present, it is also covered in more detail in Section 4: Financing a New and Growing Business: The Current Difficulties.

There is also a suggestion that the requests for funding are often made by individual entrepreneurs who clearly have a good idea, or a good invention/discovery, but who lack commercial experience. This is reflected not only in their lack of understanding of the need to put in place a rounded management team, but in their lack of professionalism in the preparation and presentation of a business plan to potential investors. This results in more business plans being rejected by providers of funding, than might otherwise be the case, if

the entrepreneurs and their business plans were better prepared.

(ii) Shortage of Managers Experienced in Growing a New Business

Many of the experts and entrepreneurs were of the opinion that there is a shortage in Ireland of managers with the experience of managing rapidly growing new and young businesses. There was also perceived to be a shortage of managers with international sales and marketing experience.

Many echoed this quotation, from one interviewee:

*' ' There is a very definite gap in terms of **experienced** sales and marketing managers. Many of the entrepreneurial firms have a definite gap in their management team in this area. Their technology is often first class, unfortunately their product management and sales/marketing is not' ' .*

Such skills are particularly important in this country, as many young businesses have to internationalize at an early stage in their development, due to the small size of the Irish market.

Many of the interviewees also pointed to the fact that many entrepreneurs are coming from a technical background and therefore lack many of the necessary commercial skills needed to grow and develop a fully-fledged business.

Specific areas in which managerial shortcomings were identified by the interviewees related to the management of R&D and the management of the early and growth phases of a business.

' ' Many of the new high growth enterprises being formed at present are initially involved in an extended period of R&D, hence the need to manage this stage well and to keep it commercially focused. The shortage of experienced management in this area is having a decidedly negative effect.' ' .

‘ ‘ There is a shortage of managers with strong commercial skills and with the experience of building a business from inception to growth. This situation flows from the fact that there is not a long tradition of entrepreneurial endeavor within Ireland, as the current level of activity is a fairly recent phenomenon.’ ’

The interviewees also considered that many entrepreneurs do not invest enough time in recruiting and developing rounded teams of complimentary skills and in developing their own managerial capability.

The managerial weaknesses referred to above are nearly all related to the country's entrepreneurial stage of development. As one interviewee put it:

‘ ‘ You could apply a ‘ stage of development’ framework to Ireland. We are not yet a fully mature entrepreneurial economy’ ’ .

(iii) Shortcomings in the Contribution of the Educational System to an Enterprise Culture

Some experts and entrepreneurs argued that the Irish educational system does not sufficiently promote enterprise and does not fully contribute to nurturing a culture that is supportive of entrepreneurial endeavor. Particular mention was made of a failure to encourage and reward creativeness and independent thinking among students.

There was a general belief that career guidance teachers, parents and other influencers of career choice within the educational system do not perceive entrepreneurship as a legitimate career option and still steer students towards traditional and 'safe' professional career choices.

(iv) Weaknesses in the Ability of Universities to Commercialize R&D

Many of the experts and entrepreneurs interviewed in 2002 echoed the views of those interviewed in 2000 and 2001 in their belief that the commercialisation and transfer of R&D from universities and other third level colleges and research institutes is one potential significant source of high tech new businesses.

This year, as in previous years, the experts and entrepreneurs generally observed, however, that the universities and other third level colleges have failed to date to produce commercially useful research and to transfer this research to industry or to create spin-off new enterprises to any significant extent. One particular interviewee, very knowledgeable in this area, illustrated the current situation as follows:

‘ ‘ The commercialisation of R&D has traditionally not been prioritised in Irish universities, and academic norms within the colleges, while often formally encouraging such activity, make its successful implementation extremely difficult. The result is that if R&D does transfer out of the colleges into new commercial enterprises, it does so as a non-core activity.

While there are some signs that this situation is improving, Ireland is starting from a long way back. For example, the entire technology transfer activity to date of all the Irish universities combined is worth less than 25% of the annual technology transfer revenues of Columbia University in the US. In net terms, the Irish technology transfer out of the colleges is worth merely 7% of that American university Besides the missed opportunity that this presents, in terms of a failure to leverage publicly funded research for entrepreneurial purposes for the further benefit of the State, it also contributes to the reluctance of FDIs to locate their R&D activity within Ireland.’ ’

Potential explanations for this poor performance given by those interviewed included the nature of university incentive systems and the associated cultural and social norms that pertain within these institutions. For example, one interviewee said:

‘ ‘ Academics are not given any recognition within academia for the work that they do to assist the development of entrepreneurship and in the growth of companies.’ ’

The interviewees also cited the quality and nature of the research in the universities, and the training and priorities of the researchers, as possible explanations for the present situation.

‘ ‘ Third level research tends to be technology driven, rather than market driven. There is not a sufficient understanding of the structure of the industry to allow market driven research and development to take place.’ ’

Given the very significant investment that is being made in research and innovation at present, the experts and entrepreneurs interviewed considered that the long-standing weakness regarding the effective transfer of R&D should be tackled as a matter of priority.

(v) *Inefficiencies in Government Entrepreneurial Policies and Programmes*

There were a number of diverse issues raised by individual experts and entrepreneurs with regard to specific weakness in government entrepreneurship policy and the operation of the support agencies. For example, several considered that there are an excessive number of agencies that offer support to entrepreneurs, citing Enterprise Ireland, Shannon Development, the County Enterprise Boards, the Leader Programmes, the Area Programmes and the BICs among others.

One interviewee, echoing the opinion expressed by several, expressed concern that there was a lack of a national entrepreneurship strategy, and that this was leading to confusion and inefficiencies.

‘ ‘ There is a definite lack of a coherent national strategy for enterprise development and entrepreneurship. This is mirrored in the operation of the various agencies with responsibilities in this area. All appear as disjointed pieces in a jigsaw – without anyone apparently having a vision of how all the pieces should be put together. This is confusing for the entrepreneur and totally inefficient.’ ’

Another area of concern was the government's regional policy, which heavily discriminates in

favour of new business initiatives in the BMW region. It was considered that new business and the expansion of existing small businesses, if they are located outside the BMW region, should not be excluded from equal support, particularly if there is a strategic reason for their choice of specific location.

There was also some criticism of the support that individual agencies were providing in terms of both the scope and quality of advice and the level of financial support.

(vi) *Shortcomings in the Development of a Well Balanced Entrepreneurial Economy*

Several of the experts and entrepreneurs interviewed spoke of the need to develop a well balanced entrepreneurial economy and cited the many benefits that a thriving entrepreneurial sector can bring in terms of competitiveness, increased productivity and innovation to all aspects of the economy.

Several raised concerns that there were gaps emerging in the way in which the entrepreneurial economy was developing in Ireland and that these gaps would become more pronounced weaknesses over time, if they were not addressed in a timely fashion.

One interviewee expressed his concern in these words:

‘ ‘ Entrepreneurship in Ireland has a very fragile base’ ’

The interviewees, who expressed concerns in this area, cited for example, the considerably lower level of entrepreneurship among women.

‘ ‘ The lack of women entrepreneurs, particularly in the ICT sector, is a definite weakness, as it denies the country of the talents of one half of its population.’ ’

While recognizing the significant advances that entrepreneurs in the software sector had made in recent years, several also voiced their concern about the narrow focus on a single technology sector, whose location is concentrated primarily in the Dublin area.

(vii) *Specific Difficulties Facing Entrepreneurs in Starting a New Business*

Notwithstanding the general agreement that advances had been made on many fronts in improving the environment for entrepreneurship in Ireland in recent years, the experts and entrepreneurs pointed to many specific problems that still remain and negatively affect the ease and cost of starting a new business in Ireland. The specific examples cited included the following and are illustrated, where appropriate, with a quotation from one of the experts and entrepreneurs interviewed by the Irish GEM team in 2002.

- **Accommodation:**

‘ ‘ There is a shortage of accommodation for start-up ventures, and what is available is often very expensive. The emergence of campus incubators is going some way towards filling this gap. But this accommodation is only suitable for specific types of start-ups, primarily within the high-tech sectors.’ ’

- **The cost of insurance:**

‘ ‘ The very high and increasing cost of insurance makes it more and more difficult to do business. In some instances, within the food sector for example, it is impossible to get a quote from an insurance company to cover a new factory.’ ’

- **The cost of skilled labour (particularly for technology businesses):**

‘ ‘ The recent increases in the direct cost of labour arose as a direct result of a shortage of key skills. While the shortage of key labour has eased in the short-term, if it were to recommence and to once again drive up costs as a result, Ireland would soon become uncompetitive. Direct labour costs can amount to as much as 70% of the total costs of a new software house.’ ’

- **Deficiencies in the physical infrastructure:**

‘ ‘ The internal links within the country are highly inefficient and inadequate.’ ’

This applies not only to the roads, whose shortcomings are well documented, but also to the trains and most importantly to the air links.’ ’

Another interviewee commented:

‘ ‘ I could give you a litany of infrastructural deficiencies that add to the difficulty and to the cost of starting and growing a business in Ireland, but for me the cost and availability of Internet access would be the most acute’ ’

The disadvantages, which are associated with Ireland's physical infrastructural deficiencies, are considered to be more acute in the regions. This is particularly pertinent at present given the Government's stated policy to increase the rate of entrepreneurial and enterprise activity in the regions.

One interviewee summed it up in this way:

‘ ‘ The definite deficiencies in infrastructure, which prevail in Ireland at present, are even more acute in the regions. This relates to both commercial (high quality professional advice for entrepreneurs) and physical (telecom and airport access and the availability of high quality facilities) infrastructure. This will inhibit the formation and growth of new enterprises in the regions and negatively affect their competitiveness.’ ’

- **Certain aspects of the social and cultural norms:**

Some of the entrepreneurs interviewed, suggested that social and cultural norms are still not sufficiently pro-enterprise, with a dependency culture and an anti-failure bias still prevalent. Specifically, they suggested that there is still little understanding of the personal toll attached to starting a business and the personal risks that the entrepreneur takes by deferring current earning potential for an uncertain future return.

3.4 What Needs to be Done? The Experts' and Entrepreneurs' Recommendations

Having identified the relative strengths and weaknesses of the entrepreneurial frameworks and supports within Ireland for entrepreneurial activity, the experts and entrepreneurs were asked for their opinion as to what could be done to improve the environment for entrepreneurship in Ireland. The responses represent a range of specific initiatives and interventions that collectively address some of the deficiencies identified by the interviewees. Many of these suggestions relate to ways to improve an existing aspect of current government policy.

- It was considered that at present, while the government would be generally supportive in a general way, there is no coherent and strategic Government policy on entrepreneurship. It was suggested that a national coherent strategy for entrepreneurship needed to be developed and championed and that its scope should be inclusive and encompass the person who merely wishes to become self employed, right up to the largest high tech enterprise.
- It was also suggested that a champion of entrepreneurship should emerge from either within the government or the development agencies that would constantly keep the entrepreneurial agenda to the fore; give a lead in strengthening the supportive cultural norms by emphasizing the value of entrepreneurship and entrepreneurs within all facets of Irish society; and identify any blocks to the realization of its full contribution to the Irish economy that are present or may arise.
- Several of the experts and entrepreneurs interviewed also suggested that government policy should focus on supporting the initiation and development of specific clusters focused on emerging sectors. It was suggested that, as the country has limited resources, it was vital that these

resources are concentrated in particular directions rather than being spread too thinly. Accordingly, choices have to be made, as it is not possible for Ireland to have a competitive advantage in all sectors, even in all high tech sectors.

It was strongly recommended that a lead must be given in making these choices and then, having narrowed down the options and selected the specific areas with potential for Ireland, all the elements necessary for their development should be put in place. This would include infrastructure, appropriate education and training, research funding, and the provision of seed capital among others. The scope of the co-ordination and forward planning should encompass all of the relevant interests in a coherent and coordinated manner- the development agencies, the relevant Government Departments, (Communications, Environment, Education and Science), Science Foundation Ireland, and the appropriate private sector interests. It was suggested that this type of planning should take place on a continuous basis, so that Ireland is constantly looking forward to the "next wave" and actively planning how to harness its resources to capitalize upon the opportunities it presents.

- To respond to the recognized shortage of key management skills for new and growing companies, it was suggested that a specific manpower policy in this area should be developed and put into effect. For example, it was suggested that, just as specific research skills are being attracted into the country at present, so too specific gaps in the managerial needs of new and growing companies could be filled in this way. It was also suggested that simultaneously with such a policy being put into effect, educational and training initiatives would be put in place to develop the capability and competences of those

within Ireland interested in deepening their knowledge in these areas.

- With regard to 'early stage' funding, very many of the experts recommended that fiscal measures should be used creatively to encourage private sector investment in new ventures in order to fill the funding gap that has emerged³¹.
- It was suggested that the government should review its regional policy and should consider making it less rigid. In particular, it was suggested that the government should reconsider the merits of primarily supporting new ventures only in the less developed regions, particularly if there are strong strategic and commercial reasons for them to be located close to the main population areas. It was also suggested that high potential start-ups being assisted by the development agencies, should be allowed to develop in their chosen location, until they reach a stage when planned growth or expansion may be encouraged in a different and regional location without disrupting the impetus and cohesion of the initial fragile new venture.
- In terms of the government's education policy several of the experts suggested the need for interventions that would ensure that all levels of the education system (primary, secondary and third level) systematically encourage and support the development of the personal characteristics and skills that are conducive to entrepreneurship.
- It was recommended that all third level students across the technical, scientific and business disciplines should be exposed to entrepreneurial concepts and be encouraged to think like entrepreneurs. It was also suggested that the study of entrepreneurship should be made an integral part of the main business studies curriculum in second level schools. It was felt that

these suggestions if implemented, would have the effect of strengthening the supportive culture and social norms within Irish society for entrepreneurs and entrepreneurship and that they would also have the effect of exposing more young people to the possibility of starting their own business at some stage as a real career option. In this way the education system would be playing a key and necessary role in strengthening the attractiveness of entrepreneurship as an attractive and legitimate career option.

- The government should consider making computer and Internet literacy among the population at large a priority, as this would have the positive effect of opening up the use and knowledge of IT to a much broader base of the population. It was suggested that this could be done through initiatives at school level and /or through the distribution of low cost computers to those who cannot afford them. Simultaneously, much more information and government services should be available online. In this way, the number of potential ICT entrepreneurs would be greatly increased.
- Several of the experts and entrepreneurs interviewed emphasised that it is critical that the state investment in research in third levels educational establishments be commercially exploited. Various specific measures were suggested that might encourage this, including a recommendation that the commercialisation of publicly funded research should be made an integral part of the research objective and that researchers be better informed so that they have a greater understanding of the market requirements.
- It was suggested that there is a lack of clarity surrounding the ownership of the

³¹ This point will be further developed in Section 4: Financing a New and Growing Enterprise: The Current Difficulties.

IP of the research developed in the universities. It was recommended that clarification and simplification of the legislation and regulations surrounding patents would be beneficial, particularly if these spelt out the need for the research to be commercialised in order for the State to realise its full return on its investment, as this amounts to almost 80% of the research funding.

- Improvements in the area of internal access are considered essential to complement the Government's strategy of developing the regions. As an immediate solution to the problem of internal access, it was suggested that the government should ensure that more internal flights are introduced without delay. In the longer term, all major centres should have appropriate airport facilities.
- It was considered that there is a need to build a broader base of entrepreneurial activities that are applauded and put forward as role models, as the present base may be too narrowly focused on IT. While the achievement of entrepreneurs in this area is to be commended, others may also add to the competitiveness of the economy through their entrepreneurial activity in other areas, including those operating in the locally traded services sector of the economy. Their achievements should also be recognized and encouraged.
- The low level of participation by women in entrepreneurial activity should begin to be addressed in a systematic way. The barriers to their greater participation should be identified and then supports should be put in place to address these identified barriers.
- It was suggested that entrepreneurs should be rewarded through personal tax credits for creating employment.
- Recognising the fact that the experience of being an entrepreneur is often a

lonely one, it was suggested that the establishment of a network of entrepreneurs should be given serious consideration. Such a network could be put in place by the development agencies alone or in partnership with others.

- The experts and entrepreneurs also identified a number of areas relating to the development agencies and the management and organization of supports for entrepreneurs, which they believed were in need of improvement. In particular, it was suggested that greater co-operation and co-ordination is needed of all those involved in nurturing and supporting entrepreneurs.
- It was also suggested that a benchmark standard of service should be introduced for all support agencies; that there should be better access to agencies; that the number of programs should be streamlined; and that there should be faster processing of grant applications.
- The experts and entrepreneurs also made some suggestions as to improvements that could be made to the type of supports available. They identified the following areas in particular in which they believed that greater support should be available:
 - Development agencies should provide "boiler plate" standard information packs that deal with problems encountered by entrepreneurs on an occasional basis, but which the development agencies have encountered many times over the years, e.g. arranging a lease, employee share option schemes, establishing an export presence in an overseas market, raising VC finance etc. Entrepreneurs often have to spend a considerable amount of time and expense just understanding the basics in these problems first time around,

whereas if they had a means of easily accessing basic, standard information they could then concentrate on tailoring this to their particular circumstances.

- Recognizing the national imperatives in the area of internationalization, at the same time as recognizing this area as a national skill gap, many expert and entrepreneurs called for greater assistance focused on achieving marketing and sales capability enhancement, specifically in terms of building an international sales and marketing presence.
- Entrepreneurs in particular called for greater access to appropriate networks and to high caliber mentors with experience of building a high growth company on international markets.
- Experienced managers who wish to become entrepreneurs, but who currently have not identified an entrepreneurial opportunity, should be facilitated to identify a suitable opportunity. Giving them sufficient time, space and a good sounding board to bounce their ideas off, is one way of doing this. Alternatively, a “marriage” may be made between a good researcher, who is primarily an academic and not an entrepreneur, and one of these experienced managers,

who only lacks a good concept on which to develop their latent entrepreneurial potential.

- It was suggested that the cost of patenting and of protecting IP rights might be prohibitive for many fledging entrepreneurs. It was considered that the development agencies could be more pro-active in putting a standardized system in place that would greatly reduce the costs for the researchers/ entrepreneurs involved. It was considered that this would be particularly pertinent when the time came to drive the commercialization of the significantly increased RTDI activity that is being put in place at present.
- The development agencies should act as a “link” for new and developing enterprises to make contact with multinational companies who may be potential customers and may be located virtually on the doorsteps of the new enterprise.

As is evident from the wide ranging, practical and thoughtful set of suggestions and recommendations detailed above, the experts and entrepreneurs, interviewed as part of GEM 2002, have many interesting suggestions to make which are worthy of further consideration by policy makers and by all those interested in further strengthening the environment for entrepreneurial activity within Ireland.

SECTION 4

Financing a New and Developing Business: The Current Difficulties

4.1 Introduction

During the face to face interviews conducted as part of the 2002 GEM research, issues surrounding the funding of new and growing businesses were mentioned most frequently by the Irish experts and entrepreneurs, when they were asked to identify the weaknesses that exist within the environment that negatively affect entrepreneurship in Ireland at present.

Several of the interviewees also mentioned the availability of finance as a positive feature of the Irish environment, although not quite as often. In some instances, it was the same person who mentioned finance in both a positive and a negative light.

How could this be?

Simply put, those of the experts and entrepreneurs interviewed, for whom the availability of financial support was an issue, made it very clear that Ireland had undergone a sea change for the better, over the last twenty years, in terms of the availability of finance, particularly venture capital finance, and the general attitude of the lending institutions to entrepreneurs. Even the most critical would agree that the difficulties being faced at present are nothing compared to those faced by entrepreneurs in Ireland 20 years ago, when interest rates were in the high teens, personal guarantees were the norm for even relatively small amounts, and venture capital was non-existent.

The interviewees agreed that all of the changes that have taken place to greatly improve this

situation are most welcome. To put them in context, however, twenty years ago an Irish entrepreneur was a rarity and was more often to be found establishing a new business in another country, than as a resident of Ireland. This situation has changed dramatically. As the results of the GEM adult population have shown, more than one in nine of the adult population living in Ireland are active entrepreneurs. Ireland has now begun to emerge as an entrepreneurial nation.

Not only are there more active entrepreneurs in Ireland to day than in the past, the scale of the ambition of many of them for their new enterprises, in terms of technical sophistication and potential growth is truly world class. This means that they must compete on international markets, often at an early stage in their development, against the best in the world. The new enterprises must be sufficiently funded to allow them to do so successfully.

That is the reason that the experts and informants can, on the one hand, comment in a positive way on the major improvements that have been made in the availability of funding for new enterprises, while at the same time voicing concerns about the present difficulties entrepreneurs are encountering in adequately financing new and growing ventures. The availability of finance will not of itself create new ventures: but its lack will inhibit their development and growth.

4.2 A Shortage of Seed Capital

Nearly all the Irish experts and entrepreneurs interviewed in 2002, as part of the GEM

research, spoke of the current difficulties that new and growing ventures are encountering in obtaining adequate funding, particularly at the early stages.

The words of this interviewee, who is dealing with a number of early-stage, high potential growth companies, was echoed by many others of those interviewed:

‘ ‘ There is a definite shortage of funding at the start-up stage for new enterprises. There is the availability of VC funding further down the line, but the gap exists in the early stages. Sometimes BES money comes into play, but a definite gap still remains’ ’ .

All agreed that seed capital is critical to a fledgling company and many felt that the problem was becoming more acute in recent months. There would appear to be a definite shortage of funding for entrepreneurs that wish to move beyond the feasibility stage. Funding for feasibility is available from the development agencies, but beyond that, until the new enterprise begins to attract VC funds, there appears to be a definite funding gap.

Their general sentiment was expressed in the words of one interviewee:

‘ ‘ Ways must be found of bridging the early stage funding gap’ ’ .

Business Angels and the Business Expansion Scheme were the two means that were suggested most frequently as a means to bridge this early-stage funding gap. Both of these are perceived to have specific shortcomings at present, however, which affect their ability to adequately meet the current needs.

The recent emergence of “Business Angels” with a combination of money, networks and experience, many of them successful entrepreneurs, has generally been very welcomed and their contribution acknowledged. They are bringing both advice and money to a new generation of new enterprises.

Two difficulties arise, however, that prevent business angel investment from fulfilling its potential in meeting the needs of early stage financing:

- (i) For reasons associated with the early stage of Ireland’s development as an entrepreneurial nation, there are simply not enough of these business angel investors relative to the number of emerging new enterprises that would wish to avail of them.
- (ii) Business Angels and “Smart Money”, which combine expertise with investment, have almost evaporated in the last two years. This appears to be directly related to the global downturn in the electronics industry and the collapse in the value of technology stocks, which has directly affected the individuals concerned. Many of them have incurred personal losses and are now more wary of high-risk investments, which early stage investment essentially is.

The other suggestion put forward by the experts and informants interviewed to bridge the early stage funding gap is to use the Business Expansion Scheme (BES), a fiscal based incentive that already exists to encourage individual high taxpayers to invest in new and expanding enterprises. This Scheme in its current form, however, is not without its difficulties either.

One entrepreneur, who is an advocate of the possibilities of the BES scheme, pointed out the shortcomings of the current scheme, while making suggestions as to how these shortcomings could be ameliorated:

‘ ‘ The amount available to a single company under this scheme, was reduced from the equivalent of £1 million in 1998 to £250,000. This reduction was introduced because of certain ‘ abuses’ of the scheme, whereby companies for whom the scheme was not intended were able to avail themselves of it. In December 2001, the BES limit was raised to £750,000. While this was a welcome development, it should

be possible to revisit this scheme again and to devise rules that would ensure that the 'riskier' start-up and early stage companies could avail themselves of BES money at the former or increased levels' .

Several of the experts and entrepreneurs argued that there was real market failure in this area and suggested that there was a need for a specific fund or funds to be created to fill this critical gap in financial support. They also advocated that fiscal measures should be used in a creative fashion to increase the attractiveness to investors to invest in early-stage high-risk ventures, which are often based on intangible knowledge-intensive assets, rather than on the more tangible, and "safer", bricks and mortar.

4.3 Venture Capital

There is general agreement that there has been a significant and welcome growth in VC funds in Ireland in recent years.

While the amount of VC invested in Ireland in 2001³² was down substantially on the 2000 figure, this trend mirrored the significant decrease experienced in most of the developed venture capital markets. Here, the year on year downturn, from 2000 to 2001, was 40%, compared with a decrease of over 66% in the UK and 60% in the US. The underlying trend, however, is upwards, if one excludes the year 2000, which by all accounts was an exceptional year. For example, the amount invested in Ireland in 2001 (€124 million) was over three times the level invested in 1997 (€39 million).

As one professional VC investor remarked:

' There is now plenty of VC funds available within the system to fund the growth of new enterprises' .

The growth in the amount of VC funds available in Ireland has been driven by two sources. The first is indigenous growth. The second is the flow of funds coming from

overseas. This latter is becoming increasingly important. For example, in the year 2000, VC funds in Ireland were sourced almost equally between Irish funds (52%) and International funds (48%); while in the year 2001 a greatly increased percent (67%) of the funds came from International sources. International funds are particularly involved in the larger deals (€5m & over), and the amounts dedicated to larger deals rose over all from €276 million to €313.5 million over this period.

The arrival of international funds into the Irish market is particularly welcome, as they bring not only money, but also substantial international contact networks. These provide very necessary support for the development of a business, as it moves into a substantial expansion phase. Before their arrival, the VC funds available in Ireland were best suited to the initial growth phase of a new business.

It would appear that there are now well-developed VC funds that have sufficient funds available to them. The experts and entrepreneurs mentioned five caveats here, however.

- (i) The first relates to the current "vicious circle" whereby the flow of funds that is tied up in ventures in which the VCs have already invested cannot be released to flow into new projects, as the usual exit mechanisms of IPO or trade sale are virtually closed at least for the moment. This situation is not confined to Ireland, however, but pertains internationally.
- (ii) The second is that the VCs are primarily concentrating on those projects in which they have already invested and are taking a more hands-on approach to their management, as a means of protecting their investment, through these very difficult times for technology companies.
- (iii) The VCs are being more cautious in their choice of new investments even though there are fewer suitable

³² The experts referred to the annual Report of the Irish Venture Capital Association (IVCA) as the source of the Irish figures.

ventures approaching the VCs for first time funding. This cautiousness is primarily because the technology sectors, from which these new ventures all come, have received very heavy investment internationally in recent years, and as a result there are a great many competitors in virtually all sectors fiercely competing for business, at the same time as the market continues to be depressed and revenue projections are being slashed. In other words, it is increasingly difficult to identify a new commercial opportunity, in a very crowded but depressed marketplace, that can be exploited by a fledgling company seeking substantial growth.

- (iv) Due to the current difficulties, the terms on which a VC can invest in a company are very attractive for later stage investments, relative to early stage investments, even though the risk is greatly reduced for later stage investment rounds. This is as a result of companies, at all stages of funding, being prepared to offer very attractive terms to attract investment. Hence, more of the VC investment is currently being attracted to later investment rounds.
- (v) There is general agreement that VCs are very selective and funds from this source are not available, and not suitable in some cases, for a variety of projects.

4.4 The Entrepreneurs' Perspective

Nearly all of the entrepreneurs interviewed as part of the GEM 2002 research in May generally complained about difficulties in raising finance. Several have confirmed that the climate for raising finance has got even more difficult in the latter half of the year. There appears to be a particular difficulty in raising

amounts of between €50,000 and €500,000. Such an amount is greater than that required at the feasibility stage, but it is still too small to be of interest to the majority of VCs. This is similar to the view of the experts who identified that there was a decided lack of seed capital at the early stage of a new business's development and growth, before the venture capital companies become interested.

The entrepreneurs complain that it is not only in finding a funding source sufficient for their businesses' needs that is the problem, but with the time associated with the search, and with the terms attaching to the funding once it has been identified.

Several of the entrepreneurs interviewed spoke in particular about the amount of time that they had to spend in trying to secure sufficient finance to sustain their fledgling businesses.

' I have spent at least 40% of my time trying to raise the necessary finance to support this business. '

' Getting money from the VCs in the current climate is also difficult. There is a misleading impression doing the rounds that there is a ' pile ' of funds just waiting to be tapped! This is simply not true. '

The entrepreneurs interviewed were also of the view that the banks are very conservative at present, are not particularly interested in supporting knowledge-based businesses, such as those in the software sector, and are increasingly looking for security to back all debt.

Not surprisingly in the current climate, the entrepreneurs also complain that the valuation of their companies has deteriorated, and, as a result, with their now being obliged to give away more for less.

They are also loud in their calls for a means to be found to help in bridging the "early stage" funding gap.

SECTION 5

Entrepreneurial Activity Across GEM Countries in 2002³³

5.1 A General Decline in Entrepreneurial Activity

There was an average year-on-year decline of 25% in entrepreneurial activity, during 2002, among the general adult population in the 28 countries that participated in GEM in 2001 and again in 2002. This decline was particularly pronounced among some of the more developed countries. For example, particularly steep declines were recorded in Japan (–65%), France (–57%), Italy (–42%), Germany (–35%), the United Kingdom (–31%), and Canada (–22%). In contrast, the rate of entrepreneurial activity in the US, however, was more or less the same in 2001 and 2002³⁴. That country had experienced its main period of significant decline in entrepreneurial activity (–40%) the previous year.

Despite the overall decline in entrepreneurial activity noted in 2002, the relative rankings of the participating GEM countries, however, remained remarkably stable. This suggests that, while variations in the general rate of growth may have a short-term impact on the absolute level of entrepreneurial activity within a country year-on year, the more underlying, and more stable, national characteristics and framework conditions have an influence on the relative level of entrepreneurial activity among the general population, when that level of

activity is compared between and across countries.

5.2 Great Variation Between Countries

Scientific surveys and interviews with about 113,000 individuals, including active entrepreneurs and 1,000 recognized experts in entrepreneurship, were used to determine the level of entrepreneurial activity in countries participating in the GEM 2002 study. This provided an unprecedented portrayal of the national variation in entrepreneurial activity and its impact on economic development in these countries.

An analysis of the results of the adult population surveys, conducted in each of the 37 countries participating in GEM in 2002, clearly shows that the number of individuals involved in entrepreneurial activity varies sharply from country-to-country. The average Total Entrepreneurial Activity rate (TEA) across the 37 participating countries in 2002 was 8%. This ranged from a high of one in almost 5 of the general adult population (18.9%) in Thailand, to a low of one in 55 (1.8%) in Japan.

Overall levels of activity are relatively low in Europe, Central Europe and developed Asian

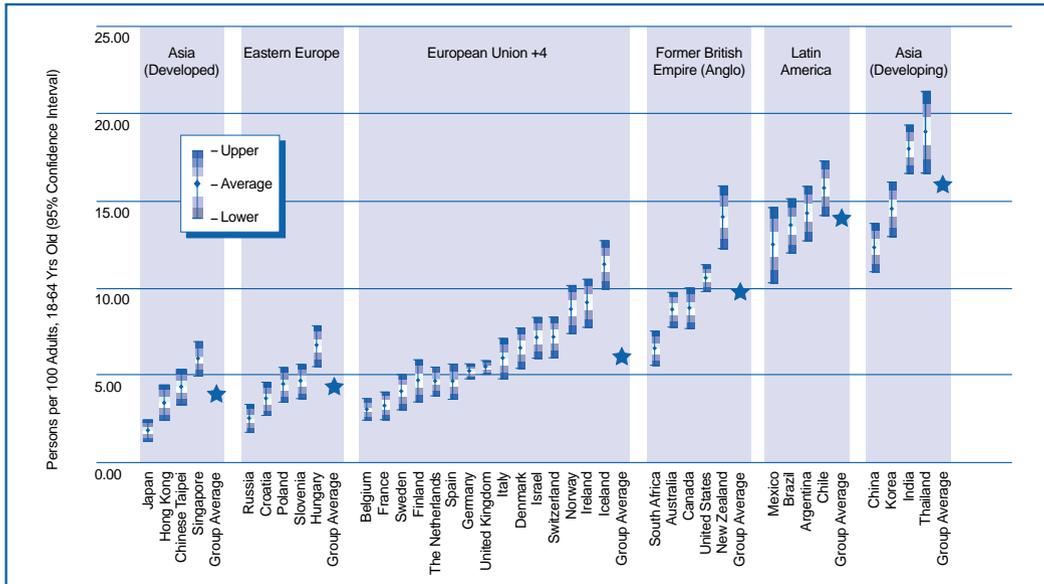
³³ This summary is based on the Global Entrepreneurship Monitor 2002 Executive Report whose authors are Paul D. Reynolds, William D. Bygrave, Erko Autio, Larry W. Cox and Michael Hay. It is a joint publication of Babson College, Ewing Marion Kauffman Foundation and London Business School. It was published in November 2002. It is freely available for downloading from www.gemconsortium.org.

³⁴ In 2001 the entrepreneurial level among the general population in the US was 10.5%, in 2002 it was 10.0%. This difference is not considered statistically significant.

countries³⁵; moderately high in Latin America and a group of non-EU English speaking countries³⁶ (including Australia, Canada, New Zealand, South Africa, and the United States); and highest in the developing Asian countries,

where entrepreneurship is more the result of economic necessity.

Figure 2: TEA by Global Region



5.3 Motivation for Entrepreneurial Activity

There are two major reasons that individuals participate in entrepreneurial activities: either they perceive a business opportunity and choose to pursue this as an active career choice, or they consider that they have no other viable option to earn a living.

Across all participating GEM countries, about two-thirds of individuals reported that they are voluntarily pursuing an attractive business opportunity. In contrast, the remaining one third reported they were involved because they had “no better choices for work.” Such efforts are referred to in the study as “necessity entrepreneurship,” reflecting the individual’s participation in entrepreneurship as their perceived best option for employment, not necessarily their preferred option. Opportunity

entrepreneurs dominate in developed countries³⁷, while necessity entrepreneurs are up to half of those involved in developing countries.

The fall-off in entrepreneurial activity, noted across the GEM participating countries in 2002, primarily occurred in those countries in which opportunity entrepreneurship is the dominating motivating factor. It is not surprising that this decrease in entrepreneurial activity should happen at a time of a general slowing down in the rate of economic growth in these countries, as this general economic slowdown resulted in a decline in demand for goods and services.

5.4 Growth Expectations³⁸

As part of the general adult population survey, those interviewed, who identified themselves

³⁵ Japan, Hong Kong and Singapore.

³⁶ Referred to in the GEM Executive Report and in Figure 2 as former British Empire Anglo countries.

³⁷ This includes Ireland, where in 2002 85% of those active as entrepreneurs were doing so in pursuit of an identified commercial opportunity.

as being entrepreneurially active, were asked to project how many jobs they would expect to have created within a five year period. The breakdown in their responses is outlined in Table 8. Almost 60% of the entrepreneurs identified said that they expected to employ 5 or less people in this period. Hence, the vast

majority of entrepreneurs are setting up very small businesses and have low growth expectations for their new enterprises.

Table 8: Growth Expectations of New Entrepreneurs

5 year Employment Projection	Across all GEM countries
No jobs	20%
1-5 jobs	39%
6-19 jobs	12%
20+ jobs	28%

Ireland, in common with many of the developed economies, is particularly interested in learning more about the personal and business characteristics of the small number of active entrepreneurs who have higher growth expectations of their fledgling enterprises. It must be remembered that this in fact is a very small percentage of a national population. The prevalence of entrepreneurs, who believe that they have high growth potential ventures, varies from 0% to 4% of the adult population. On average, across GEM participating countries, it is less than 2.25%.

Professor Erko Autio and his team have been tackling the difficult task of learning more about high potential innovative new ventures and their promoters from the GEM data. Their analysis shows that there appears to be little correlation between a high rate of general entrepreneurial activity within a country and the formation of high potential new ventures. As a result, they conclude that high potential venturing represents a distinct facet of entrepreneurial activity and may be influenced by different environmental factors to those that influence the general level of entrepreneurial activity within a country.

There are also indications that certain aspects of the national science and technology base may have an influence on the rate of formation of new enterprises with high growth potential. In particular, the enrolment rate in higher education, the number of computers per capita, computing capacity in relation to GDP, and the proportion of internet users per capita, all seem to have a strong positive relationship

with the instances of high potential growth starts.

The new ventures themselves are likely to be based on new technology and are concentrated in manufacturing, wholesale and business services sectors.

An analysis of the GEM data demonstrates that, compared to the majority of entrepreneurs, an even greater percentage of the entrepreneurs, who are pursuing these high growth ventures, are men, are educated to third level, are younger than 35 years old, and come from the upper third of their countries' household income distribution group. It is perhaps not surprising that the majority of these entrepreneurs, who have high growth expectations for their new businesses, identify themselves as entrepreneurs through choice and in pursuit of an identified opportunity.

While recognising that high growth venturing is a distinct facet of entrepreneurial activity within a country, which may be influenced by other factors, Professor Autio, in analysing the GEM data, concludes that certain aspects of the entrepreneurial framework conditions may have a particularly positive relationship with a higher incidence of high growth potential new enterprises.

These include the following:

- The degree of market openness, i.e. an entrepreneurial firm's access to markets and the quality of anti-trust legislation;
- The support provided by the educational system in first and second

³⁸ Professor Erko Autio, of Helsinki University of Technology and CERN in Geneva Switzerland, is the leader of the team doing special assignments related to the development of technology and science based new firms.

level schools within a country for entrepreneurial activities;

- The relative level of skills within the national population for starting a new business;
- The quality of the intellectual property protection regime;
- The quality of national support programmes for entrepreneurial companies; and
- The support afforded for female entrepreneurship.

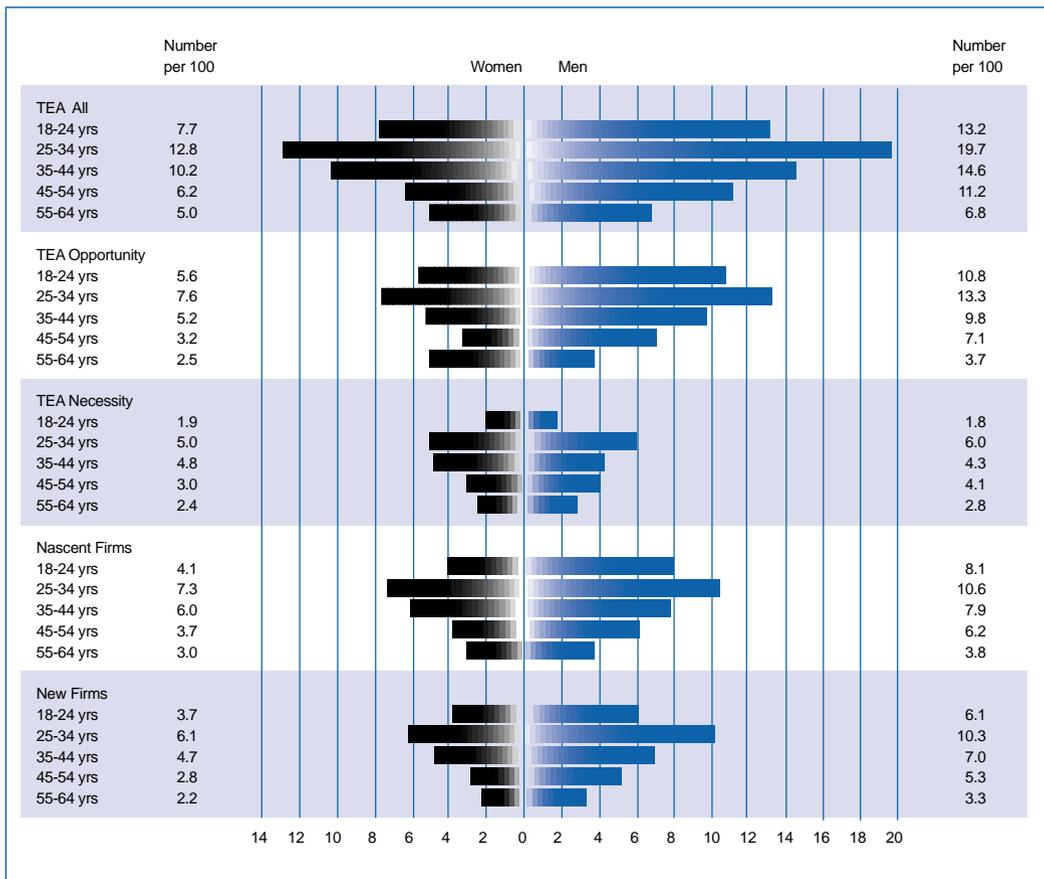
5.5 Gender³⁹ and Age Balance

The findings of GEM 2002 confirm the findings

of earlier GEM reports that men are considerably more entrepreneurially active than women. In fact in 2002, the results of the adult population surveys show that on average men are more than twice as active in entrepreneurship as women. This greater participation rate by men as entrepreneurs is particularly evident among the “opportunity” group of entrepreneurs (9.3% to 4.9%), and less evident among the “necessity” group of entrepreneurs (4.2% to 3.8%)

As Figure 3 illustrates, men and women in the 25-34 age group are the most entrepreneurially active. This is the dominant age group for entrepreneurs pursuing identified opportunities and for those becoming entrepreneurs through necessity.

Figure 3: Entrepreneurial Activity by Gender and Age



³⁹ The GEM special team working on the topic of women and entrepreneurship is comprised of Pia Arenius, Helsinki University of Technology, Anne Kovalainen, Turku School of Economics, Maria Minniti, Babson College and Susan Rushworth, Swinburne University of Technology.

5.6 Leading National Issues Around Entrepreneurship

Across all the participating countries, the three issues that were cited most frequently by the group of experts and entrepreneurs interviewed in 2002, when commenting upon the entrepreneurial situation in their country, were as follows:

- (i) Government policies;
- (ii) Cultural and social norms; and
- (iii) Education and training.

In some instances, the experts were commenting on these factors as being positive strengths for the entrepreneurial environment in their country: in others there were perceived as weaknesses. The fact that they were most frequently commented upon, however, clearly identifies these factors as being central to the quality of the entrepreneurial environment within a country.

5.7 Entrepreneurial Finance⁴⁰

GEM 2002 once again highlighted the importance of informal financial support in supporting start-ups both in terms of the number of new ventures that benefited from this form of funding and the total amount invested in start-ups. The level of informal support was five times that of domestic venture capital support (\$300 billion versus \$60 billion) across the 37 participating countries, replicating findings from previous GEM assessments. Nearly half of all informal investments went to family members.

In 2002, the average participation rate of the general public across all GEM countries in the informal funding of new ventures initiated by others was 2.9%. It ranged from a high of 7.4% in Iceland, to a low of 1% in Japan.

While venture capital support has decreased significantly since 2000, as the potential for successful initial public offerings declined, informal support has been more consistent, reflecting the greater stability in the grassroots sources of entrepreneurial funding. The average number of informal investors, across those GEM countries that participated in 2001 and again in 2002, fell by just 0.5% during this period.⁴¹

Most new firms receive their initial financial support from informal investments made by family, friends, business associates and other personal contacts. An extremely small proportion of the most promising firms receive funding from venture capital firms.

Having analysed the data on the amount of venture capital invested, Professor Bygrave concludes that the amount of venture capital fell from 0.5% of GDP in 2000 to 0.2% of GDP in 2001 across those GEM participating countries for which the relevant data is available. The greatest year-to-year declines were in the UK (-66%), South Africa (-66%), France (-61%) and the US (-60%).

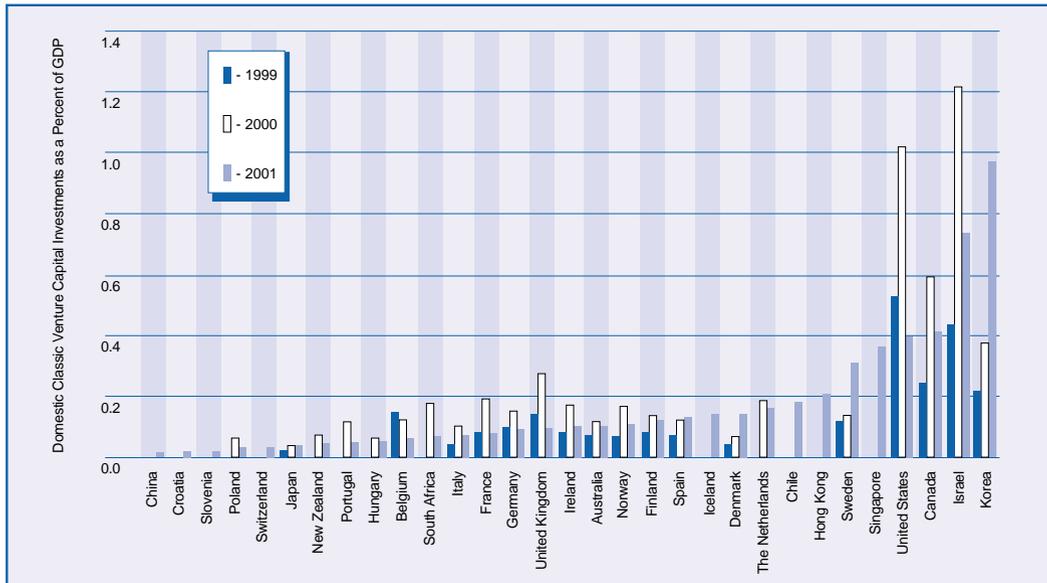
Only in four of the participating GEM countries did the amount of venture capital invested actually increase in this period: these were Korea (+133%), Denmark (+114%), Sweden (+101%) and Spain (+9%).

Figure 4 illustrates the movement in the amount of domestic classic venture capital⁴² investment as a percent of GDP for the period 1999 to 2001.

⁴⁰ William D. Bygrave, an internationally recognised expert in this area, analyses the movement in the availability of finance to support entrepreneurial endeavour on an annual basis, as part of the GEM research.

⁴¹ The decline in the average number of informal investors was from 3.4% in 2001 to 2.9% in 2002.

⁴² This includes investments made by all venture capital firms that have offices in the country in question. Hence, it excludes investments made directly in a specific country by a foreign VC firm with no office in that specific country, but includes VC invested in a specific country by a VC headquartered in another country, provided that it has an office in the country in which the investment was made.

Figure 4: Classic Venture Capital as a Percent of GDP (1999-2001)

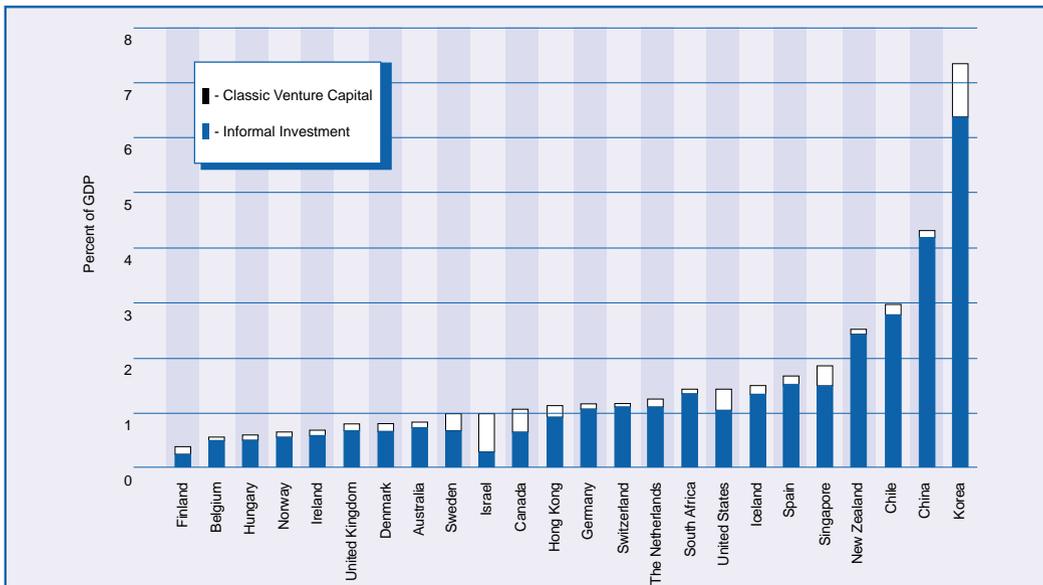
While the amounts of venture capital invested in 2001 fell from their 2000 peak in most countries, the actual amounts invested were high by historical standards and in most cases were equal to, or better than, the amount invested in 1999. The exceptions to this were Belgium, the US and the UK where the amount invested in 2001 was significantly lower than in 1999.

For those GEM nations for which there is comparable data for both 2000 and 2001, the total amount of venture capital declined by 53%, although the actual number of

companies that received a venture capital investment fell by only 7%. The explanation for this is that the average amount invested per company declined considerably.

Figure 5 illustrates the combined informal investment and the classic venture capital invested for those countries for which there are relevant data available. The Figure is also interesting in that it shows at a glance the relatively large proportion of informal investment made within virtually all countries compared to the amount of venture capital invested. The exception is Israel.

**Figure 5: Domestic Capital Investment as a Percentage of GDP
(Informal investment plus classic venture capital)**



SECTION 6

Policy Implications

6.1 The Good News

The results of GEM 2002 confirm the fact that Ireland is one of the leading entrepreneurial countries in Europe and on a par with the most entrepreneurial nations in the developed world. In the year 2002 about 208,000 people in Ireland were actively initiating a new business, or were the owner manager of a new business that had been started relatively recently.⁴³ 85% of these are actively choosing to start a new business in that they are responding to a perceived opportunity.

While this number of active entrepreneurs represents a decline (-25%) in the numbers planning or managing new business in Ireland in 2002 compared with the previous year, when about 270,000 were active, the lower number reflects the average decline in entrepreneurial activity experienced internationally and is related to a slowing down in the international and domestic economy. The steepest decline was in the numbers planning new businesses.

Despite this decline in the numbers entrepreneurially active in Ireland in 2002, Ireland's rank as a leading entrepreneurial nation held firm.

The majority of entrepreneurs behind these new businesses expect that their new businesses will remain small. In 2002, however, over 4,100 Irish people considered that the new business that they were initiating had the potential to employ 20 or more people and would be selling on export markets within five years. This is a very substantial number of people planning sizeable businesses.

Relative to other countries, the Irish experts and entrepreneurs, who are involved in the GEM research, are very positive in relation to their view of the entrepreneurial framework conditions that prevail in Ireland at present. They placed Ireland in the top 5 position in five of thirteen key variables and in the top 10 in respect of ten of the thirteen key variables, which are considered to have a significant impact on the level of entrepreneurial activity within a country.

The experts and entrepreneurs are also very positive in respect of their view of the ability of Irish people to spot a good business opportunity and they credit them with having the motivation to act on it.

From their responses to the questionnaires, the experts and entrepreneurs clearly suggest that there is strongly supportive cultural and social norms surrounding entrepreneurial activity in Ireland to day, positive government policy and programmes and that it is relatively easy to set up a new business.

This catalogue of positive features is very impressive. They underpin the relatively high level of entrepreneurial activity throughout the country and are another indication of how far Ireland has travelled in terms of economic development. They combine to provide a strong framework on which new and substantial Irish businesses can be built in the future.

6.2 Maximising Ireland's Entrepreneurial Potential — Remaining Gaps

Several of the experts and entrepreneurs spoke of Ireland in terms of its journey on the way to

⁴³ Within 42 months of the adult population survey, which was held in June 2002.

becoming a fully mature entrepreneurial nation. They point out that while great progress has undoubtedly been made, the lack of a strong entrepreneurial tradition has resulted in several “gaps” which they identify as needing to be bridged if Ireland is to further capitalize on the entrepreneurial momentum that has become evident in recent years.

The gaps that were identified by the experts and entrepreneurs interviewed related in particular to the following areas:

- **The availability of finance, particularly early-stage finance**

The experts and entrepreneurs interviewed suggested that fiscal measures could be effectively used to make this type of high-risk investment more attractive to Business Angel Investors, that the Business Expansion Scheme should be revised, and that specific fund(s) should be established to fill the early-stage funding gap.

- **Shortage of managers experienced in growing a new, international business**

The experts and entrepreneurs clearly recognized that this gap was arising because of Ireland’s lack of an entrepreneurial tradition and they suggested that it be bridged through a variety of means, including fiscal incentives, so that experienced managers, with world-class sales and marketing experience, might be attracted to strengthen the management team of young Irish companies. It was also recognized that the supports available to potential and new entrepreneurs should be expanded in a systematic way (i) to include mentoring from experienced entrepreneurs and (ii) to make available other appropriate sources of advice and training.

- **Weaknesses in the ability of the universities to commercialize R&D**

There was an acceptance among the experts and informants that the commercialization of academic research had never been given a high priority

within the colleges in the past and that its transfer to commercial application had never been very effective. This gap in the country’s knowledge infrastructure is now much more important, they point out, given the need to capitalize on the very significant investment currently being made in research and innovation.

- **Shortcomings in the contribution of the educational system to fostering an enterprise culture**

The experts believe that the educational system is lagging behind the entrepreneurial reality that is now a part of modern Ireland, rather than leading the way. They suggest that students should be equipped with the personal skills and characteristics that would open up the possibilities of an entrepreneurial career as an attractive career option, that entrepreneurship be included in the second level business studies curriculum and that third level colleges should be much more proactive in introducing students from all disciplines to entrepreneurship modules.

- **Gaps in the development of a well-balanced entrepreneurial economy**

In many respects the experts and entrepreneurs accept that it is only now that a certain entrepreneurial momentum has begun to be built up in Ireland and that role models have begun to emerge, that the policy makers can turn their attention to those areas that have been more peripheral to this development. Accordingly, they are suggesting that more attention be focused on encouraging:

- More women entrepreneurs;
- Entrepreneurial activity in a broader range of high technology sectors;
- The development of clusters based on emerging technologies; and

- A greater regional balance, but only when appropriate.
- **Gaps in physical infrastructure**
That the experts and entrepreneurs pointed to major deficiencies in the physical infrastructure will come as no surprise. It is a recurrent theme in this annual assessment as in many other reports. This year, those interviewed highlighted in particular difficulties in internal access and communication and suggested that infrastructural bottlenecks of this nature may inhibit the government's avowed policy to develop enterprise within the regions, as such deficiencies will inhibit the formation and growth of new enterprises in the regions and negatively affect their competitiveness. They suggested that short-term measures, such as increased internal flights, should be prioritised and that in the longer term all major centres should have appropriate airport facilities.
- **Policy and co-ordination gaps**
The experts and entrepreneurs believe that the government and the development agencies are well disposed to supporting and encouraging an enterprise culture and individual entrepreneurs. They point to a policy and co-ordination gap, however. They believe that there is a need to develop an all-embracing entrepreneurship policy and to better co-ordinate the work of the many

agencies and organisations focused on supporting entrepreneurs. At present, they believe that there is duplication and inefficiencies within the system that are both costly and confusing. The experts and entrepreneurs also have suggestions as to areas in which additional support could most useful be added. This is principally in areas of advice and knowledge sharing. Many wondered aloud as to who would listen to all the advice and suggestions that they were making, as there was no obvious champion of entrepreneurship emerging. What they believed was needed was some person or persons of influence who could articulate a vision of Irish entrepreneurship and the contribution that Irish entrepreneurs could make to a strong economy in the 21st century, and then, most importantly, who could implement the practical actions to make that vision a reality.

Quite clearly there is much contained in the report that is very positive. Irish people are highly entrepreneurial and in general the environment for entrepreneurial activity within Ireland is very positive. The experts and entrepreneurs, who contributed to GEM 2002, believe that the entrepreneurial momentum, which is clearly under way, has a great deal to offer to Ireland and that the identified gaps that have emerged should be addressed as a matter of urgency so that Ireland can fully capitalize on the entrepreneurial potential of its people that has become evident in recent years.

APPENDIX 1

The GEM Project Explained

History of the Project

The Global Entrepreneurship Monitor (GEM) is a research programme run jointly by London Business School and Babson College in the USA. The research also involves a consortium of teams from each of the countries involved in the study. In 2002, 37 countries participated⁴⁴.

The aim of GEM is to create an annual assessment of the levels of entrepreneurial activity across countries. The research also explores a variety of factors both within and across countries that might give rise to systematic differences in entrepreneurship rates. Through a greater understanding of these factors, policies to enhance the level of entrepreneurial activity can be based on solid research and the role of entrepreneurship in contributing to a positive economic environment can be better understood.

GEM began in 1999. The first study began with 10 countries⁴⁵, expanded to 21⁴⁶ in the year 2000, to 29⁴⁷ countries in 2001 and 37 countries in 2002. It is expected that the number of participating countries will rise further in 2003. All of the countries that have participated in previous years, except Portugal, continue to be involved.

GEM Definition of Entrepreneurship

For the purposes of the research, GEM uses a very comprehensive definition of

entrepreneurship, which encompasses any type of entrepreneurial initiative, including self-employment. The Total Entrepreneurship Activity (TEA) rating is made up of those actively planning to become entrepreneurs, and taking some specific actions to bring this about, (categorised by GEM as “nascent” entrepreneurs) and those who have set up a new enterprise in the 42 months prior to the carrying out of the adult population survey (categorised by GEM as “new firm” entrepreneurs).

Thesis to be Proven

GEM was designed to answer three fundamental questions:

- (i) Does the level of entrepreneurial activity vary between countries, and, if it does, to what extent?
- (ii) Does the level of entrepreneurial activity affect a country's rate of economic growth and prosperity?
- (iii) What makes a country entrepreneurial?

The GEM 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 sized enterprises. The focus is, therefore, on

⁴⁴ The 37 countries participating in GEM in 2002 are as follows: Argentina, Australia, Belgium, Brazil, Canada, **Chile, China, Croatia**, Denmark, Finland, France, Germany, **Hong Kong**, Hungary, **Iceland**, India, Ireland, Israel, Italy, Japan, Mexico, Netherlands, Norway, New Zealand, Poland, Russia, Singapore, **Slovenia**, South Africa, South Korea, Spain, Sweden, **Switzerland, Thailand, Taiwan**, UK, and USA. Those participating for the first time are marked in bold.

⁴⁵ Canada, Denmark, Finland, France, Germany, Israel, Italy, Japan, UK and USA.

⁴⁶ Ireland was among the countries that participated in GEM for the first time in 2000. The other first time participants in that year were Argentina, Australia, Belgium, Brazil, India, Norway, Singapore, Spain, South Korea and Sweden.

⁴⁷ The first time participants in GEM 2001 were Hungary, Mexico, Netherlands, New Zealand, Poland, Portugal, Russia and South Africa.

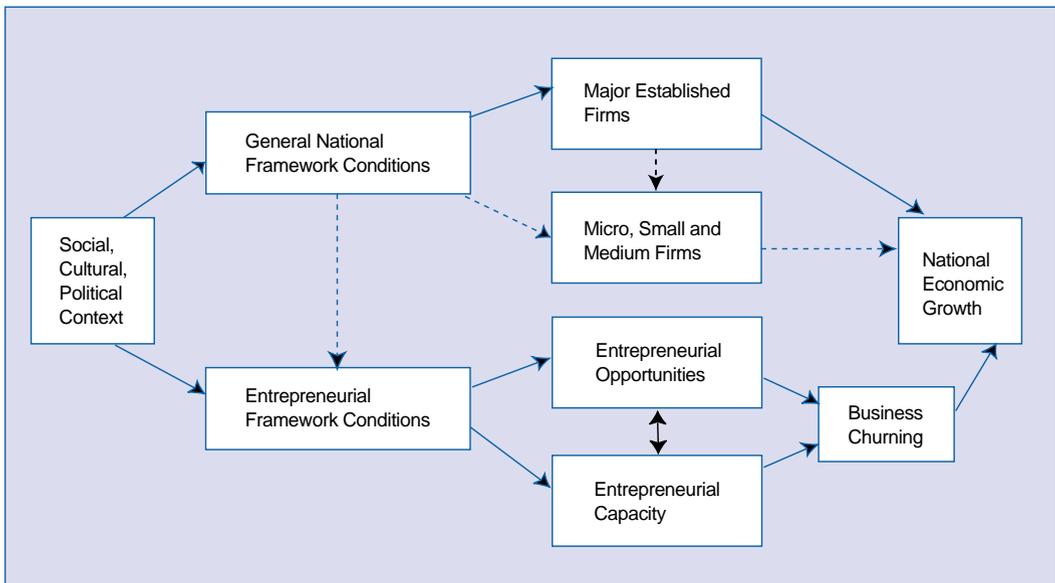
enterprises already established, in other words the “status quo”. The entrepreneurial sector, (i.e. start-ups and new firms), is missing.

The GEM model specifically incorporates both the established and entrepreneurial sectors and illustrates the relationship between them. GEM

seeks to examine the strength and influence of the entrepreneurial sector, (i.e. the effect of new firm creation and growth,) on the economy.

The model for GEM is illustrated in diagrammatic form in Figure 6.

Figure 6: The GEM Theoretical Model



The general environment, which pertains within a particular country at a point in time, influences both new and existing firms. The characteristics of this general environment are referred to in GEM as the “ National Framework Conditions”.

The National Framework Conditions are as follows:

- The relative openness of the economy;
- The role and extent of Government intervention;
- The efficiency of the financial markets;
- The level and intensity of technology and R&D;
- The physical infrastructure;
- The availability and extent of management skills;
- The degree of flexibility in the labour market; and

- The degree to which institutions are unbiased and the rule of law prevails.

In addition to this, there is a set of factors that GEM has identified as specifically influencing the entrepreneurial sector. These are termed the “Entrepreneurial Framework Conditions”. The Entrepreneurial Framework Conditions are as follows:

- Finance
- Government Policies
- Government Programmes
- Education and Training
- R&D Transfer
- Commercial Infrastructure
- Internal Market Openness
- Physical Infrastructure
- Cultural and Social Norms

There is somewhat of an overlap between the National Framework Conditions and those specifically affecting entrepreneurship, but within the Entrepreneurial Framework Conditions, it is the relative effect of the Condition for a new firm that is the issue. For example, there may be instances within countries whereby the general financial environment is supportive of established businesses, but is less available to and less supportive of new businesses.

GEM suggests that at the heart of the explanation of the relative entrepreneurial propensity of a country's adult population is a combination of the following:

- Differences in the nine entrepreneurial framework conditions between countries;
- The relative perceptiveness of the adult population of new venture opportunities, ("entrepreneurial opportunity"); and
- The capacity and motivation of the adult population to capitalise on such opportunities ("entrepreneurial capacity").

How Gem Collects Data

The GEM model incorporates four fundamental research instruments⁴⁸ in order to explore these questions. These instruments are as follows:

- (i) A population survey, based on a random sample of approximately 2,000 adults.
- (ii) Face-to-face interviews with at least 36 experts (called 'key informants') in the first year on various aspects of entrepreneurship⁴⁹.
- (iii) A detailed questionnaire completed by the experts interviewed.

- (iv) The use of selected national economic data, measured in standard units, from credible international sources including the Organisation for Economic Cooperation and Development (OECD), the World Bank, and the Global Competitiveness Report.

Details of each of these instruments are contained in the paragraphs that follow.

(i) Adult Population Survey

Professional survey research firms in each country administer the adult population surveys, which are based on a random sample of approximately 2,000 adults⁵⁰. Sampling procedures vary somewhat, but all of the survey firms are able to provide samples that are, when properly weighted, representative of the adult population in each country.

Telephone interviews are utilized in Ireland, as in most of the developed countries, where most households have a telephone. The interview completion time ranges from a low of 60 seconds to a high of 15 minutes, depending on the extent of the respondent's involvement in entrepreneurial activity. The first four items asked of all those interviewed are related to participation in entrepreneurial activities – starting a new firm, owning and managing a new firm and informally investing in another's new firm. Anyone engaged in any of these activities is asked for additional selected details about that activity.

A further six items, also asked of all those interviewed, are for assessing attitudes towards and knowledge of the entrepreneurial climate.

(ii) Expert Informant Interviews

Expert informants are chosen by reputation and referrals to represent the nine entrepreneurial framework dimensions in the GEM model as outlined above. At least three experts should come from each of the nine

⁴⁸ (i) and (iv) are the responsibility of the GEM central co-ordination team and (ii) and (iii) are the responsibility of the national team.

⁴⁹ The number of key informants interviewed face-to-face may be reduced to 18 after the first year.

⁵⁰ A small number of countries use a much larger sample being interested in carrying out regional comparisons within the country. The 2000 person adult person survey is, however, the norm, in most countries.

entrepreneurial framework conditions and 25% of them should be entrepreneurs. The GEM national team conducts face-to-face interviews with at least 36 such experts, called “key informants” in the first year. This number may reduce in subsequent years. The interviews attempt to ascertain the views of national experts on the factors that have been shown to influence the level of entrepreneurial activity.

(iii) Detailed Questionnaires Completed by the ‘ ‘ Key Informants’ ’

The experts interviewed also complete a detailed questionnaire. The group of experts, chosen for an in-depth face-to-face interview, complete this questionnaire in the presence of the interviewer at the end of the interview, while experts interviewed in the preceding year(s) are requested to complete the questionnaire and return it by post.

Expert self-completed questionnaires, translated into the national languages, consist of those items asked in the adult population survey,

plus an additional 80 five-point scale items covering a range of topics relating to the entrepreneurial framework conditions, the entrepreneurial capacity and opportunity recognition perceptiveness of the adult population, as well as other socio-demographic items. These questionnaires take about 20 minutes to complete.

(iv) National Economic Data

Standardized cross-national data on a variety of national characteristics and attributes (e.g., growth in GDP) are assembled from a wide range of harmonized international sources. Sources include the United Nations, Eurostat, ILO, U.S. Census International Data Base, World Bank, and International Monetary Fund, among others.

The following table (Table 9) sets out for each GEM participating country the agency used to collect the adult population survey data, the co-ordinator/supervisor of the data collection process and the number of adults surveyed.

Table 9: Survey Research Firms, Sample Size by Country

Country	Data Collection Agency	Co-ordinator	No. Cases
Argentina	MORI Argentina	GEM Co-ordination	1,999
Australia	Digipoll	GEM Co-ordination	3,378
Belgium	Taylor Nelson Sofres	Taylor Nelson Sofres	4,057
Brazil	Instituto Bohilha	GEM Co-ordination	2,000
Canada	Market Facts	GEM Co-ordination	3,014
Chile	Adimark	GEM Co-ordination	2,016
China	AMI	GEM Co-ordination	2,054
Croatia	Taylor Nelson Sofres	Taylor Nelson Sofres	2,001
Denmark	Taylor Nelson Sofres: IFKA	GEM Co-ordination	2,009
Finland	Taylor Nelson Sofres: MDC	GEM Co-ordination	2,005
France	AC Nielsen	AC Nielsen	2,029
Germany	Taylor Nelson Sofres: EMNID	GEM Co-ordination	15,041
Hong Kong	Consumer Research	GEM Co-ordination	2,000
Hungary	MEMRB, Hungary	GEM Co-ordination	2,000
Iceland	Gallop – Iceland	GEM Co-ordination	2,000
India	Scope	GEM Co-ordination	3,047
Ireland	Landsdown Research	GEM Co-ordination	2,000
Israel	BI Cohen Institute	GEM Co-ordination	2,004
Italy	Nomesis	GEM Co-ordination	2,002
Japan	SSRI	GEM Co-ordination	1,999
Korea	Hankook Research	GEM Co-ordination	2,015
Mexico	ALDUNCINY	GEM Co-ordination	1,002
Netherlands	Survey@	GEM Co-ordination	3,510
New Zealand	Digipoll	GEM Co-ordination	2,000
Norway	Taylor Nelson Sofres	Taylor Nelson Sofres	2,036
Poland	AC Nielsen	AC Nielsen	2,000
Russia	AC Nielsen	AC Nielsen	2,190
Singapore	Joshua Research Consultants	GEM Co-ordination	2,005
Slovenia	Gral-Iteo	GEM Co-ordination	2,030
South Africa	Markinor	GEM Co-ordination	3,498
Spain	Opinometre	GEM Co-ordination	2,000
Sweden	SKOP	GEM Co-ordination	2,000
Switzerland	Taylor Nelson Sofres	Taylor Nelson Sofres	2,001
Taiwan	Graduate Institute of Applied Statistics	GEM Co-ordination	2,236
Thailand	AC Nielsen	GEM Co-ordination	1,043
UK	MORI Telephone Surveys	GEM Co-ordination	15,002
	Taylor Nelson Sofres (Pretest)		1,000
US	Market Facts	GEM Co-ordination	6,058
	Market Facts (Pretest)		1,001
TOTAL			113,282

APPENDIX 2

GEM Teams and Sponsors

Unit	Location	Members	Financial Sponsor
GEM Project Directors	Babson College London Business School	William D. Bygrave Michael Hay	The Ewing Marion Kauffman Foundation
GEM Project Co-ordinator	Babson College London Business School	Paul D. Reynolds	The Laing Family Charitable Settlement
GEM Co-ordination Team	Babson College London Business School	Paul D. Reynolds William D. Bygrave Marcia Cole Paul D. Reynolds Erkko Autio Marc Cowling Michael Hay Steven Hunt Isabelle Servai Natalie De Bono Michelle Hale Kola Azeez Veronica Ayi-Bonte Matthew Freegard Anwen Garston Ruth Lane Shu Lyn Emily Ng Thomas Baily	David Potter Foundation Fellow Anonymous Foundation Fellow
Family Business Special Topic	Alfred University Oregon State University	Carol Wittmeyer Mark Green	Raymond Family Business Institute

Team	Institution	Members	Financial Sponsor
Argentina	Center for Entrepreneurship IAE Management & Business School Universidad Austral	Silvia Torres Carbonell Hector Rocha Florenca Paolini	IAE Management and Business School HSBC Private Equity Latin America
Australia	Australian Graduate School of Entrepreneurship Swinburne University of Technology	Kevin Hindle Susan Rshworth Deborah Jones	Sensis Pty Ltd.
Belgium	Vlerick Leuven Gent Management School Universiteit Gent	Sophi Manigart Bart Clarysse Hans Crijns Dirk De Ciercq Nico Vermeiren Frank Verzele	Vlerick Leuven Gent Management School Steunpunt Ondernemerschap, Ondernemingen en Innovatie (Vlaamse Gemeenschap)
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