



The Global Entrepreneurship Monitor 2006
The Irish Report

Paula Fitzsimons, Colm O'Gorman

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Entrepreneurship in Ireland in 2006

Global Entrepreneurship Monitor (GEM)

The Irish Annual Report

**Paula Fitzsimons
Colm O’Gorman**

**Sponsored by: Enterprise Ireland, Forfás and the NDP Gender Equality
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Table of Contents

	<i>Page</i>
Table of Contents	iii
List of Tables	v
List of Figures	vi
Explanation of Terms used in GEM	vii
Acknowledgements	ix
Authors' Details	xi
Foreword	xiii
Recent Entrepreneurs Featured on the Cover	xv
Highlights: Entrepreneurship in Ireland in 2006	1
1. Entrepreneurship in Ireland in 2006	7
1.1 Introduction	7
1.2 Entrepreneurial Activity in Ireland	7
1.3 Who are Ireland's Entrepreneurs?... ..	8
1.4 What Motivates Irish Entrepreneurs?	9
1.5 The Nature of Early Stage Entrepreneurship in Ireland	9
1.6 Financial Requirements of Irish Early Stage Entrepreneurs	10
1.7 Irish 'Informal' Investors	11
1.8 Entrepreneurial Role Models, Opportunities and Skills	11
1.9 Entrepreneurial Culture in Ireland... ..	12
1.10 The Entrepreneurial Environment in Ireland	12
2. International Comparison	15
2.1 Introduction	15
2.2 Entrepreneurial Activity (TEA)	15
2.3 Entrepreneurs: Age and Education	16
2.4 Motives of Early Stage Entrepreneurs	16
2.5 The Nature of Entrepreneurial Activity	16
2.6 High Expectation Entrepreneurship	17
2.7 Informal Investors	18
2.8 Formal Venture Capital	18
2.9 Entrepreneurial Role Models, Opportunities and Skills	18
2.10 Culture	19
2.11 Environment (Key Informants: Experts and Entrepreneurs)	19

3. Does Gender Matter?	...	...	...	...	...	...	...	...	...	...	...	41
3.1 Introduction	...	...	...	...	...	...	...	...	...	...	...	41
3.2 Context...	...	...	...	...	...	...	...	...	...	...	...	42
3.3 Entrepreneurial Activity by Gender	...	...	...	...	...	...	...	...	...	...	...	42
3.4 International Comparison: Entrepreneurial Activity	...	...	...	...	...	...	...	...	...	...	...	43
3.5 Who Becomes an Entrepreneur? The Influence of Gender	...	...	...	...	...	...	...	...	...	...	...	44
3.6 Entrepreneurial Role Models, Opportunities and Skills of Irish Men and Women	...	...	...	...	...	...	...	...	...	...	...	45
3.7 Cultural Context of Irish Men and Women	...	...	...	...	...	...	...	...	...	...	...	47
3.8 Ireland's Challenge to Increase the Number of Women Entrepreneurs	...	...	...	...	...	...	...	...	...	...	...	50
4. Profiles of Selected other Countries at a Glance	...	...	...	...	...	...	...	...	...	...	...	55
4.1 Introduction	...	...	...	...	...	...	...	...	...	...	...	55
4.2 Australia	...	...	...	...	...	...	...	...	...	...	...	56
4.3 Canada	...	...	...	...	...	...	...	...	...	...	...	58
4.4 Denmark	...	...	...	...	...	...	...	...	...	...	...	60
4.5 Norway	...	...	...	...	...	...	...	...	...	...	...	62
4.6 The UK	...	...	...	...	...	...	...	...	...	...	...	64
4.7 The US	...	...	...	...	...	...	...	...	...	...	...	66
5. Pen Pictures of Recent Entrepreneurs Featured on the Cover	...	...	...	...	...	...	...	...	...	...	...	69
5.1 Catherine Sproule	...	...	...	...	...	...	...	...	...	...	...	69
5.2 David Seavers	...	...	...	...	...	...	...	...	...	...	...	70
5.3 Dearbhail Standún	...	...	...	...	...	...	...	...	...	...	...	73
5.4 Derek Quinn	...	...	...	...	...	...	...	...	...	...	...	74
5.5 Enda Keane	...	...	...	...	...	...	...	...	...	...	...	76
5.6 Gillian Clogan	...	...	...	...	...	...	...	...	...	...	...	79
5.7 Michelle Power	...	...	...	...	...	...	...	...	...	...	...	80
5.8 Mike Hopkins	...	...	...	...	...	...	...	...	...	...	...	82
5.9 Nigel and Carol Harper	...	...	...	...	...	...	...	...	...	...	...	84
5.10 Patsy Carney	...	...	...	...	...	...	...	...	...	...	...	86
5.11 Thomas Marry	...	...	...	...	...	...	...	...	...	...	...	88
5.12 Vivienne Williams	...	...	...	...	...	...	...	...	...	...	...	90
Appendix: Global Results at a Glance	...	...	...	...	...	...	...	...	...	...	...	93

List of Tables

	<i>Page</i>
Table 1.1: Entrepreneurial Activity in Ireland: 2002-2006	7
Table 1.2: Expected Export Activity, Early Stage Entrepreneurs, 2006	9
Table 1.3: Financial Requirements of Early Stage Entrepreneurs	10
Table 1.4: Anticipated Financial Sources of Early Stage Entrepreneurs	10
Table 1.5: Informal Investor's Relationship to Investee, 2006	11
Table 1.6: Personal Context of the Adult Population and of Entrepreneurs, 2006	12
Table 2.1: Entrepreneurial Rankings	21
Table 2.2: Entrepreneurial Activity by Age	22
Table 2.3: Entrepreneurial Activity by Education	23
Table 2.4: Entrepreneurial Activity by Motivation	24
Table 2.5: 'Opportunity' Entrepreneurial Activity by Detailed Motivations	25
Table 2.6: Entrepreneurial Activity by Sectors	26
Table 2.7: Entrepreneurial Activity by Expected Jobs Growth	27
Table 2.8: Entrepreneurial Activity by Export Intensity	28
Table 2.9: Entrepreneurial Activity by High Export Intensity	29
Table 2.10: Entrepreneurial Activity by Novelty of Product	30
Table 2.11: Entrepreneurial Activity by Intensity of Competition	31
Table 2.12: Entrepreneurial Activity by Newness of Technology	32
Table 2.13: Informal Investor Activity	33
Table 2.14: Personal Context of Population	34
Table 2.15: Entrepreneurial Culture	35
Table 2.16: The Environment for Entrepreneurship: Strengths and Weaknesses, Key Informants, 2006	36
Table 2.17: Government Policies: Strengths and Weaknesses, Key Informants, 2006	37
Table 2.18: Education System: Strengths and Weaknesses, Key Informants, 2006	38
Table 2.19: Selected Environment for Entrepreneurship: Strengths and Weaknesses, Key Informants, 2006	39
Table 3.1: Entrepreneurial Activity by Gender: 2002-2006	43
Table 3.2: Age, Education, Work Status and Income by Gender, 2006	45
Table 3.3: Entrepreneurial Role Models, Opportunities, Skills and Fear of Failure by Gender, 2006	46
Table 3.4: Cultural Context and Rates of Entrepreneurship by Gender, 2006	47
Table 3.5: Characteristics of Men and Women Entrepreneurs 2002-2006	48

Table 3.6:	Nature of Activity: Men and Women Entrepreneurs 2002-2006 ...	...	...	...	49
Table 3.7:	Personal Context: Men and Women Entrepreneurs 2002-2006 ...	...	...	...	50
Table 3.8:	Early Stage Entrepreneurs by Gender ...	...	...	...	51
Table 3.9:	Established Entrepreneurs by Gender ...	...	...	...	52
Table 3.10:	Personal Context of Male Population ...	...	...	...	53
Table 3.11:	Personal Context of Female Population...	...	...	...	54
Table 4.1:	Headline Results for Australia and Ireland ...	...	...	...	57
Table 4.2:	Headline Results for Canada and Ireland ...	...	...	...	59
Table 4.4:	Headline Results for Denmark and Ireland ...	...	...	...	61
Table 4.5:	Headline Results for Norway and Ireland ...	...	...	...	63
Table 4.5:	Headline Results for the UK and Ireland ...	...	...	...	65
Table 4.6:	Headline Results for the US and Ireland ...	...	...	...	67
Appendix Table 1:	Rates of Entrepreneurship Across Countries, 2006 ...	...	...	...	95

List of Figures

Figure 1.1:	Entrepreneurial Activity in Ireland: 2002-2006 ...	...	...	...	8
Appendix Figure 1:	Early Stage Entrepreneurship by Country, 2006 ...	...	...	...	96
Appendix Figure 2:	Established Entrepreneurs by Country, 2006 ...	...	...	...	96

Explanation of Terms used in GEM

Nascent entrepreneurs

Nascent entrepreneurs are those actively planning a new venture. These entrepreneurs have done something during the previous twelve months to help start a new business, that he or she will at least part own. Activities such as organising the start-up team, looking for equipment, saving money for the start-up, or writing a business plan would all be considered as active commitments to starting a business. Wages or salaries will not have been paid for more than three months in respect of the new business. Many of these individuals are still in fulltime employment.

New firm entrepreneurs

New firm entrepreneurs are entrepreneurs who at least part own and manage a new business that is between 4 and 42 months old and have not paid salaries for longer than this period. These new ventures are in the first 42 months after the new venture has been set up.

Total early stage entrepreneurial activity (TEA rate)

As its name implies, total early stage entrepreneurial activity refers to the total rate of early stage entrepreneurial activity among the adult population aged 18-64 years inclusive. In some instances, this rate is less than the combined percentages for *nascent* and *new firm* entrepreneurs. This is because, in circumstances where respondents qualify as both a *nascent* and a *new firm* entrepreneur, they are counted only once.

Established business owner

In addition to those individuals who are currently involved in the early-stages of a business, there are also many individuals who have set up businesses that they have continued to own and manage for a longer time. These individuals are included in the *established* business owner index which captures the percentage of individuals in a population that have set up businesses that they have continued to own and manage and which has paid wages or salaries for more than 42 months.

Selected countries for comparison

Forty two countries participated in the 2006 GEM research cycle. In the body of the report we compare Ireland to the European Union and OECD countries that participated in the research. These were Australia, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Mexico, Netherlands, Norway, Slovenia, Spain, Sweden, Turkey, United Kingdom and the United States. (Latvia and Slovenia are in the EU but not in the OECD).

Adult population

The analysis in this report is based on the adult population aged between 18 and 64 years of age. References to Irish people are to those living in Ireland that are in this age bracket. It is not confined to Irish citizens only.

Reading the tables

In many of the tables included in this report we refer to TEA rates. In these cases we are referring to the percentage of adults, aged 18-64 years inclusive, who are active as early stage entrepreneurs (either a *nascent* or *new firm* entrepreneur). So, while the TEA rate for Ireland is 7.35% overall, we would expect different rates for different groups of individuals (for example different age groups or gender). For example, we report that the TEA rate for 18-24 years olds is 5.2%, and for 25-34 year olds it is 10.9%. This highlights the average participation rate across the adult population and the relatively higher or lower participation rates for certain groups.

Acknowledgements

The Irish GEM team would like to thank all the members of the public who participated in our survey, and the entrepreneurs and expert informants that were interviewed as part of this research. They gave generously of their time and their participation and insights as always enriched our understanding of the current state of entrepreneurship in Ireland.

We would also like to thank those recent entrepreneurs who agreed to be featured on the cover of this year's report. We hope that their achievements will be an inspiration to others.

A hallmark of the Global Entrepreneurship Research Association (GERA) is the degree of assistance that the national teams willingly give to each other. We are grateful to the GEM national teams in Australia, Canada, Denmark, Norway, the United Kingdom and the United States for the early stage entrepreneurship profiles of their countries that are included in this year's report.

As always our sincere thanks must also go to our sponsors, Enterprise Ireland and Forfás, without whose generous continued sponsorship Ireland's participation in GEM 2006 would not be possible. This year we also welcome a new sponsor, the NDP Gender Equality Unit of the Department of Justice, Equality and Law Reform.

We are also most grateful to our key informants, entrepreneurs and experts alike, who continuously keep us up to date with their views on the changing environment for entrepreneurship in Ireland.

Finally, our sincere thanks go to the many readers of the GEM annual reports. By your comments it would appear that many of you find the information of value in a wide variety of circumstances. We are grateful for your feedback and for your continued interest in the research.

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Foreword

A thriving entrepreneurial economy can deliver a range of economic, regional and social benefits. Accordingly, entrepreneurship has a key role to play in the Government's drive to ensure the future growth and prosperity of the country.

The Small Business Forum emphasised the importance of entrepreneurship and recommended that a national entrepreneurship policy should be adopted. The Forum recommended that the focus of the policy should be on optimising the number of start-up businesses and in particular on maximising the number of start-ups aspiring to and achieving high growth. I was very pleased to accept this recommendation and at my instruction a national entrepreneurship policy is currently being drafted. I hope to present it to Government later this year.

I am determined that Ireland should be among the leading entrepreneurial countries in the world, characterised by a conducive environment for entrepreneurship and the innovative nature of its entrepreneurs. I want to see the education system reinforcing a strong culture, supporting and enabling men and women to develop the skills and confidence they need to start and develop ambitious businesses.

While my Department is ultimately responsible for supporting entrepreneurs and start-up enterprises, through a range of bodies and instruments, a number of other Government Departments are responsible for other aspects of policy relating to entrepreneurship. For this reason I will be conferring with my colleagues in developing the national entrepreneurship policy.

Reading the results of this year's Global Entrepreneurship Monitor (GEM) report, it is apparent that entrepreneurship touches the lives of a great many people in Ireland. Four in every ten of the adult population know someone who has recently started a new business. Given the importance of popular culture in supporting individuals to become entrepreneurs, it is heartening that the culture in Ireland towards entrepreneurship is one of the most supportive in the world. This is very positive, as Ireland will need increasing numbers of entrepreneurs in the years ahead.

The stories behind the entrepreneurs featured on the cover of the GEM report breathe life into the statistics. Entrepreneurs are to be found throughout the country and each has a story to tell. I am delighted that the authors are bringing some of their stories to a wider audience. Those featured make no secret of the fact that setting up a new business has its challenges. Entrepreneurs need to be resilient and determined to work through the difficult times. It's good to know that they have wide spread support around them as they venture forth.

Finally my thanks go to Paula Fitzsimons and Colm O'Gorman for another fine report. GEM continues to add greatly to our knowledge of entrepreneurship in Ireland. I am convinced that with the involvement of all groups within our society in entrepreneurial activity, we can have one of the most entrepreneurial nations in the world and fully reap the benefits associated with that for everyone.

Micheál Martin T.D.
Minister for Enterprise, Trade and Employment

September 2007



1. Thomas Marry
2. Derek Quinn
3. Dearbhaill Standún
4. Nigel and Carol Harper
5. Gillian Clogan
6. Enda Keane
7. Vivienne Williams
8. Patsy Carney
9. Mike Hopkins
10. David Seavers
11. Michelle Power
12. Catherine Sproule

Recent Entrepreneurs Featured on the Cover

Last year we decided to introduce the faces of some recent entrepreneurs on to the cover of the GEM report and to tell their stories in the body of the report. We took this initiative to emphasise that entrepreneurs are people not statistics. This may appear self evident but we considered that in a publication that reports on entrepreneurship in terms of numbers and statistics that this was a very important point to make. The reaction to this initiative was very positive and so we decided to repeat it again this year.

Each of the entrepreneurs featured has set up a new business in 2003 or more recently and therefore comes within the GEM definition of *new firm entrepreneurs*. Each has an interesting story to tell. Some always wanted to set up their own business: while for others entrepreneurship was something that took them almost by surprise. These individuals were suggested to us as interesting examples of recent entrepreneurs by some of our key informants.

As the report will relate there are approximately 80,000 individuals like them who were involved in starting a new business between January 2003 and June 2006 and there are many more that are at the advanced planning stage of setting up their own business.

There is a brief overview of the activities of the featured entrepreneurs in the captions that follow. More extensive pen pictures are to be found in Section 5 of the report. All have faced challenges in bringing their new enterprises this far. But all emphasise the sense of personal satisfaction and strong motivation that continues to drive them and which sustains them through the long hours that are associated with starting a new business.

Catherine Sproule

A combination of difficult personal circumstances was the catalyst that turned Catherine Sproule, her husband and brother from employees into entrepreneurs. Recently returned from the United States, the Guava Juice Bar concept was inspired by her brother John's observations of a growing trend in the US for juice bars. The first Guava Juice Bar was opened in Letterkenny in 2004. Given its success a second was opened in Derry a few months later. There is now a third outlet in Belfast, where the promoters are actively looking for suitable sites to further expand in the greater Belfast area. The new business already employs 15 people, and is examining a range of growth options. www.guavajucebar.com

David Seavers

David Seavers, an electronic engineer, is an example of an entrepreneur who gained his experience and desire for entrepreneurship by working for other Irish entrepreneurs. Having spent 20 years working for small Irish technology companies and, seeing their success, David took the view that he would always regret it if he did not try entrepreneurship for himself. He recognised a gap in the teleconferencing equipment market, due to industry consolidation, and decided to make his move. The result was Aonta Technologies, which was set up in 2005 and is currently located in NovaUCD. www.aonta.com

Dearbhail Standún

Dearbhail Standún was born and reared a native Irish speaker in An Spidéal, Co Galway. When Dearbhail married Charlie Troy in 1981 her love of music and culture was joined with his great interest in natural heritage, the environment and organic gardening. The two shared an ambition to set up some sort of business that would combine all their interests and talents. They believed that visitors to Ireland, and indeed Irish people alike, hungered for an authentic Irish experience. They wanted to offer much more than accommodation but a whole cultural and aesthetic experience steeped in the Gaelic tradition and the uniqueness of the Connemara landscape. The result is Cnoc Suain situated in the heart of the Irish Gaeltacht. www.cnocsuain.com

Derek Quinn

Now a serial entrepreneur, Derek Quinn co-founded his latest venture NewAddress.ie in September 2005. The idea for the new business had come to him through his own experience of the hassle involved in moving address and alerting the range of necessary organisations of his new address. NewAddress.ie is Ireland's only change of address service where people who move can change their address details with banks, utilities, telecoms etc through the internet in one go. The new business was developed while Derek was a participant on the PDC HotHouse Programme. www.NewAddress.ie

Enda Keane

A public servant turned serial entrepreneur may be a fairly rare occurrence, but Enda Keane believes that his time in the public sector as a forestry advisor gave him skills that stood him in good stead when he set up his own business. TreeMetrics is Enda's second new business since the year 2000. The company is based on award winning measurement analysis software that is designed for greater efficiency in the growing, harvesting, selling and purchasing of forest resources. The technology was developed through strategic partnerships with technical experts in universities in Germany, Ireland and the United States. EF's overseas office network supported the company in being born global. www.treemetrics.com

Gillian Clogan

Gillian Clogan comes from an enterprising family in Co. Clare and has shown entrepreneurial tendencies since primary school. Having obtained a primary degree in Business Studies, she completed a Masters in Entrepreneurial Management in the University of Limerick. To her theoretical knowledge, she added practical experience working in both the retail and business to business sectors. Recognising that Irish small and medium sized companies often lack sales and marketing skills, Gillian set up Retail Detail in June 2006, to meet these needs. The new business offers all the benefits of professional marketing expertise and a range of training, research and consultancy services along with mentoring. www.retaildetail.ie

Michelle Power

As its name suggests *Boozeberries Liqueurs* combines berries with alcohol and the idea came to Michelle Power while on a family holiday. Her original business idea was centered on organic herbs but that was limited in its scope and development potential. Seeing the very positive reaction from her customers at the farmers market when she combined alcohol with berries in jams and preserves, she thought that if she reversed the proportions the market might be even bigger. She was right. Several taste and business awards latter, Boozeberries, which started trading in July 2004, is now widely available throughout Ireland and the first export orders are currently being shipped. www.boozeberries.com

Mike Hopkins

Growing up in Donegal, Mike Hopkins' dream was to become a scientist and an inventor. He achieved both objectives and was also able to bring his ideas and his research into the commercial sphere, through becoming involved in three separate start-ups. The most recent, Impedans, was established in December 2004. Now in the first year of trading, the company is located in the INVENT incubator centre within the DCU campus and already has a good spread of customers having sold instruments into Asia, the US and Europe. Mike Hopkins is perhaps best described as an *entrepreneurial academic*. www.impedans.com

Nigel and Carol Harper

A desire to maximise the potential of the family dairy farm convinced Nigel and Carol, a recently married couple, to diversify into the production of farm produced luxury ice cream and sorbets. They were convinced that they could do for ice cream what had been done for Irish farm house cheeses, particularly as Ireland is a nation of ice cream lovers with the third highest consumption of ice cream per capita in Europe. The result was *Cramers Grove Ice Cream*. The new business started production in April 2006. The wide variety of different ice creams and sorbets are now being served in a number of restaurants in the South East and are beginning to be available in local supermarkets. www.cramersgrove.com

Patsy Carney

While studying for an MBA in 2005 in the University of Limerick, Professor Pat Fleming provided the spark to turn Patsy Carney, and his colleague and fellow student Tom Brennan, from experienced managers in the pharmaceutical industry into entrepreneurs. They decided to take seriously the business plan exercise that was an integral part of the course and to use the opportunity to develop a robust plan as the basis for a new business. The result is EirGen Pharma, a pharmaceutical research and development company. Eleven people are already employed by the company in Waterford serving the needs of customers in the UK, Canada, the US and Japan. www.eirgen.com

Thomas Marry

Having gained valuable management experience across a range of functions with multinational companies in Germany and within Ireland, Thomas Marry turned the downsizing of his employer into an opportunity to take the plunge and, with former colleague and fellow engineer, Declan Lennon, followed his entrepreneurial dream. The result is SurfBox, a coin and credit card operated internet access solution for hotels, pubs and cafes. There are now over 200 SurfBox terminals in locations throughout Ireland and the UK. This new company now employ 5 people directly and has many contractors throughout Ireland. The two directors have ambitious plans to further expand the company in the years ahead. www.surfbox.ie

Vivienne Williams

College Scholar (1999) and graduate in experimental physics, Vivienne Williams was not somebody who always hankered after an entrepreneurial career. When the commercial potential of her post graduate work, however, was pointed out to her by her supervising professor, she enthusiastically rose to the challenge. Several years of refining the technology ensued. Cellix now provides new microfluidic technology based solutions in the areas of drug discovery, diagnostics and medical research. The company specialises in developing tools for cell-based assay applications. Cellix began trading in August 2006 and currently employs 4 people. www.cellixltd.com

HIGHLIGHTS

Entrepreneurship in Ireland in 2006

In this section we summarise GEM 2006 results for Ireland under four headings:

- I. Benchmarking Ireland's Entrepreneurship Policy
- II. Ireland's Early Stage Entrepreneurs
- III. The Environment for Entrepreneurship in Ireland
- IV. Women as Early Stage Entrepreneurs in Ireland

I. Benchmarking Ireland's Entrepreneurship Policy Objectives

According to the Small Business Forum report published in 2006 'Government should formally adopt a National Entrepreneurship policy focussed on optimising the number of start-up businesses, and in particular on maximising the number of start-ups aspiring to and achieving high growth' (SBF Report: 55). GEM provides measures that allow Ireland to benchmark its performance on these objectives.

While the overall level of early stage entrepreneurial activity among the adult population in Ireland is lower in 2006 (7.4%) than it was in 2005 (9.8%), the percentage among the adult population that have growth aspirations for their new businesses is approximately the same (1.3% compared with 1.0% in 2005). This means that while the general level of entrepreneurial activity may be somewhat less than in 2005, the number of early stage entrepreneurs aspiring to significant growth has remained constant.¹

II Optimising the level of entrepreneurship

Ireland is an entrepreneurial country. Entrepreneurship is an active career choice for many Irish people.

- Approximately 80,000 individuals in Ireland were involved in starting a new business between January 2003 and June 2006. This is nearly 3 in every 100 adults in the country (1:35).
- In 2006 nearly 122,000 Irish people were actively attempting to start a new business. This is nearly 5 in every 100 adults in the country (1:22).
- There are 214,000 Irish people who own and manage a business they started before 2003. This is nearly 8 in every 100 people in Ireland (1:13).

But, Ireland lags the most entrepreneurial of the OECD countries.

- While Ireland ranks 3rd highest in the EU in terms of early stage entrepreneurial activity (after Greece and the Czech Republic), Ireland lags the most entrepreneurial of OECD countries.
- The average early stage entrepreneurial rate in the top 4 OECD countries, Australia, Iceland, US and Norway, is 10.6%, compared to 7.4% in Ireland (1.4 times higher).

¹ Canada and the US also experienced declines in the rates of early stage entrepreneurial activity in 2006 compared with 2005. (See section 4.2 and 4.7 respectively). The US like Ireland maintained the level among its adult population of early stage entrepreneurs with high growth aspirations (1.4% in both years), despite the overall fall in the number of early stage entrepreneurs. This was not the case in Canada, where the lower number of early stage entrepreneurs was reflected in a lower level among the adult population of early stage entrepreneurs with growth aspirations for their new businesses (0.7% in 2006 compared with 1.6% in 2005).

II Maximising high growth entrepreneurship

While most new businesses focus on local markets, have relatively low growth aspirations, and imitate or replicate existing business strategies (products, markets and technologies), there is an important subset of new businesses that can be broadly classified as 'high expectation' start-ups. These entrepreneurs anticipate growing their business to the extent that they will need twenty or more employees within five years.

There are many 'high expectation' early stage entrepreneurs in Ireland.

- Nearly one in five early stage entrepreneurs have high growth expectations.

Ireland is among the leading OECD countries in terms of 'high expectation' early stage entrepreneurship.

- In 2006 Ireland ranks 3rd in the OECD in terms of the level of high expectation early stage entrepreneurs (the US had the highest rate).
- For the period 2000-2006, Ireland ranks 6th in the OECD in terms of the level of high expectation early stage entrepreneurs- behind the US, New Zealand, Iceland, Canada, and Australia.

However, Ireland ranks less favourably in terms of those established entrepreneurs (businesses started before 2003) who actually achieved growth of twenty or more employees.²

- Ireland ranks 9th in the OECD in terms of the rate of established entrepreneurs who achieved high growth. Countries ranked higher than Ireland are New Zealand, Iceland, Canada, Netherlands, Switzerland, Denmark, and Japan.
- Ireland ranks 13th in the OECD in terms of the percentage of established businesses that achieved high growth.

Other measures associated with high growth include export intensity and innovativeness.

- One in fourteen early stage entrepreneurs in Ireland expects to be 'born global' (they anticipate that 75% of their customers will be in overseas markets).
- There is a group of early stage entrepreneurs (at least 1 in 10) that are either providing a new product, have no competitors or are using a new technology.

Ireland is broadly similar to the OECD average in terms of the percentage of all early stage entrepreneurs that are classified as export intensive or as innovative.

II. Ireland's Early Stage Entrepreneurs

II.I Who starts new businesses in Ireland?

- Men are more active as entrepreneurs than women.
- For men and women education is important. Rates of activity are lowest for men and women who did not complete secondary education. The more educated a woman, the higher the probability that she will engage in entrepreneurship. Women with post graduate education are the most entrepreneurially active of all women.
- Entrepreneurship activity peaks for men and women aged 25 to 44.

² Autio, E. (2007) 'Global Entrepreneurship Monitor: 2007 Global Report on High-Growth Entrepreneurship' (www.gemconsortium.org).

- Men in the highest third of income groups are twice as active as men in the lowest third.

II.II Why start a business in Ireland?

- Nine of every ten entrepreneurs describe their motivation as 'to take advantage of a business opportunity'.
- One in ten entrepreneurs becomes involved in entrepreneurship because they have 'no better choices for work'.
- 'Independence' is more important than the desire to increase income. The 'desire to be independent' is the main driver for entrepreneurs. Only 1 in 4 cites the desire to increase income as their primary motive.

II.III How to start a new business in Ireland?

- Most entrepreneurs start small. Most new businesses will be started with relatively small amounts of finance. The average (median) is €40,000. Two in every three entrepreneurs plan to start with less than €100,000.
- Most entrepreneurs use their own funds and funds from family and friends.

II.IV The 'typical' start-up

- Three in every four entrepreneurs expect to have some employment growth; though one in every four entrepreneurs expects to be self-employed with no employees.
- Half of all early stage entrepreneurs expect to sell only in the Irish market, though nearly half expects to have some customers overseas.
- Most early stage entrepreneurs will use existing technologies to provide known products and services to established 'local' markets.
- Early stage entrepreneurs are equally spread across sectors where the consumer is the primary customer, where other businesses are the primary customers and where the businesses is engaged in either construction or manufacturing. However, early stage entrepreneurship in Ireland differs from the OECD 'average', because a higher percentage of entrepreneurship in Ireland is in Business Services sectors (32% in Ireland, compared to 24% OECD average) and a lower percentage of entrepreneurship is in Consumer Services sectors (32% in Ireland, compared to 40% OECD average).

III. The Environment for Entrepreneurship in Ireland

III.I The environment for entrepreneurship

There are many aspects of the environment in Ireland that are favourable to entrepreneurship.

Start-up Opportunities

- Many Irish people perceive good opportunities in their local area for starting a new business (44%). This is higher than the OECD average.
- Most early stage entrepreneurs are motivated by the desire to take advantage of a market opportunity.
- Experts and entrepreneurs consulted believe a key strength in the Irish environment is the 'availability of opportunities'.

Culture

- There is a supportive culture for entrepreneurship in Ireland.

Experts and entrepreneurs consulted believe a key strength in the Irish environment is the 'high regard for entrepreneurs'. Seven out of every ten Irish people believe entrepreneurship is a good career choice.

There is no evidence of begrudgery, with eight of every ten Irish people believing successful entrepreneurs are held in high regard.

The media plays an important role in 'profiling' entrepreneurs. Ireland is the highest ranking of the OECD countries in terms of the number of people who report there are often stories in the media about successful entrepreneurs.

- One in every three Irish people report that 'fear of failure' would prevent them starting a business (though some of these do start businesses!).

Role Models

- Many Irish people know a recent entrepreneur. Four of every ten Irish people report that they know a recent entrepreneur. Entrepreneurial role models are considered important for individuals when they are starting a new business.

Cost of Start-up

- For most entrepreneurs the 'cost of start-up' is relatively low. Two thirds of entrepreneurs expect to be able to start with less than €100,000. The average amount for these entrepreneurs is €20,000.

Skills and Knowledge to Start-up a Business

- One in every two Irish people believes they have the skills and knowledge required to start a business. This is high compared to other OECD countries.

III.II The environment for 'high expectation' entrepreneurship

There are aspects of the environment that are supportive of high growth entrepreneurship.

- GEM research suggests that entrepreneurs with higher education are more likely to be high expectation entrepreneurs. In Ireland, rates of entrepreneurship are high among those with graduate education (ranked 4th in the OECD) and with post graduate education (ranked 4th in OECD).
- Experts and entrepreneurs specifically identified 'supports for high growth firms' as a strength in Ireland.
- Experts and entrepreneurs cite IPR legalisation as a positive element of the environment for entrepreneurship in Ireland.

However, there are some aspects of the environment that might mitigate against higher levels of high growth entrepreneurship.

Informal Investors

- A significant number of new businesses anticipate needing high levels of finance (greater than €100,000). These entrepreneurs will be dependent on external sources of finance.
- One source of external finance is informal investors. Levels of informal investment activity (investments in new businesses started by someone other than the investor) are relatively low in Ireland. Ireland ranks 16th lowest of twenty two OECD countries in this respect.

- Only one in every twenty informal investors invested in an entrepreneur unknown to them.
- However, amounts invested by each informal investor are relatively high compared to other OECD countries.

Formal Venture Capital

- Levels of venture capital investment are relatively low. Ireland ranks 12th of eighteen OECD countries, on the level of formal venture capital as a percentage of GDP (2005). In Denmark, US, Sweden, UK, Canada, and Norway the level of formal venture capital, as a percentage of GDP, was at least twice the rate in Ireland.
- The average amount invested per company is much higher in the US, compared to all other countries. Ireland ranks 13th of eighteen OECD countries in terms of the average amount of formal venture capital invested per company.

IV. Women as Early Stage Entrepreneurs in Ireland

IV.I Rates of early stage entrepreneurial activity among women in Ireland

- Rates of entrepreneurship are much lower for women when compared to men. Men are 2.5 times more likely to be active as an early stage entrepreneur.
- The rate of early stage entrepreneurial activity among women in Ireland is similar to the OECD average, though higher than the EU average.
- Women are less active as entrepreneurs across all age categories, across all income categories, whether they are employed fulltime or part-time, and across all education categories bar one. (Women with post-graduate qualifications have the same rate of early stage entrepreneurial activity as men.)
- Irish women are less likely to have a recent entrepreneurial role model.
- Irish women are less likely to believe they have the skills and knowledge required to start a business.

IV.II Women early stage entrepreneurs in Ireland

- Women entrepreneurs are similar to men entrepreneurs in terms of age at start-up and education levels.
- Women entrepreneurs differ from male entrepreneurs in terms of the following:

Work status: While most women entrepreneurs come from full-time employment, a higher percentage of women entrepreneurs come from part-time employment or from a 'homemaker' role.

Sector: The four sectors that accounted for over three quarters of early stage entrepreneurship for women (2002-2006 period) were Retail, Trade, Hotels and Restaurants (24%); Business Services (20%); Personal/Consumer Service Activities (17%) and Health, Education, Social Services (16%). For men, the same four sectors accounted for half of all early stage entrepreneurship as compared to 77% for women.

- For those starting with less than €100,000, women on average, plan to start with €18,600, compared to €27,600 for men.

SECTION 1

Entrepreneurship in Ireland

1.1 Introduction

GEM estimates the number of people involved in early stage entrepreneurial activity. In this section we present GEM 2006 results for Ireland. Section two of this report presents comparable data from other OECD and EU countries.

1.2 Entrepreneurial Activity in Ireland

Rates of entrepreneurial activity in Ireland among adults (aged between 18 and 64 years) for 2006 were as follows (Table 1.1, Figure 1.1):

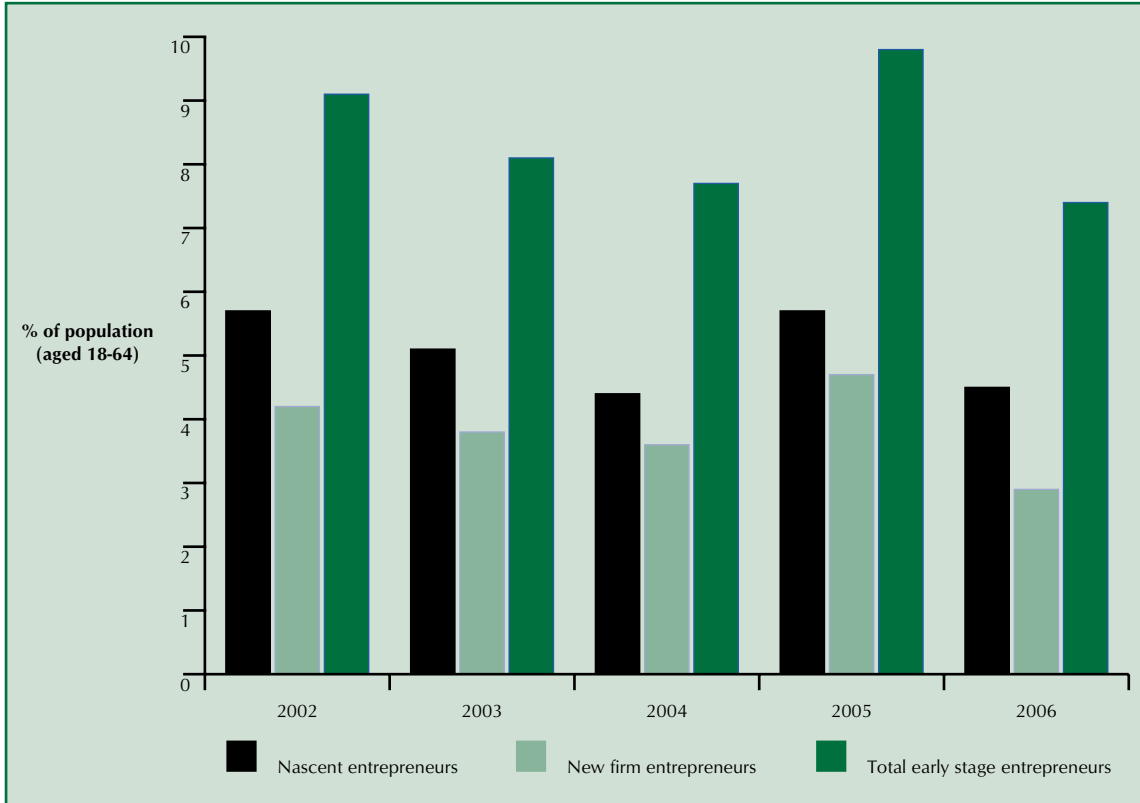
- The total early stage entrepreneurial activity rate for Ireland in 2006 was 7.4%. For the period 2002 to 2006, the total early stage entrepreneurial activity rate averaged 8.4%.
- This means that there were approximately 201,000 people involved in early stage entrepreneurial activity in 2006.³
- There were approximately 122,000 people attempting to start a new business (nascent entrepreneurs) in 2006.
- There were approximately 80,000 people who had been personally involved in starting a new business in the period January 2003 to June 2006.
- In addition, there are approximately 214,000 people actively involved in businesses they established prior to 2003.
- Looking forward, approximately 269,000 people reported that they would aspire to starting a new business in the next three years.
- In terms of closing businesses, approximately 48,000 reported that they had closed a business in the previous twelve months.

Table 1.1 Entrepreneurial Activity in Ireland: 2002-2006

Year	Nascent entrepreneurs	New firm entrepreneurs	Total early stage entrepreneurs (TEA)	Established firm entrepreneurs	Future aspirations to be entrepreneur	Entrepreneurs who closed firms
2006	4.5%	2.9%	7.4%	7.8%	9.8%	1.8%
2005	5.7%	4.7%	9.8%	8.1%	12.6%	2.3%
2004	4.4%	3.6%	7.7%	6.5%	11.0%	1.3%
2003	5.1%	3.8%	8.1%	6.7%	11.3%	2.5%
2002	5.7%	4.2%	9.1%	8.0%	12.7%	1.8%
Average	5.1%	3.8%	8.4%	7.4%	11.5%	1.9%

³ The margin of error associated with the sample size of the Irish adult population in 2006 was +/- 1.2%.

Figure 1.1 Entrepreneurial Activity in Ireland: 2002-2006



While the overall level of early stage entrepreneurial activity among the adult population in Ireland is lower in 2006 (7.4%) than it was in 2005 (9.8%), the percentage among the adult population that have growth aspirations for their new businesses is approximately the same (1.3% compared with 1.0% in 2005). This means that while the general level of entrepreneurial activity may be somewhat less than in 2005, the number of early stage entrepreneurs aspiring to significant growth has remained constant.⁴

1.3 Who are Ireland's Entrepreneurs?

GEM reports the age, gender, education, work status and income groups of early stage entrepreneurs. In 2006 GEM finds the following:

- **AGE.** The most entrepreneurial active are those in the age group 25-34, where 10.9% are active as early stage entrepreneurs, and those aged 35-44, where 9.7% are active as early stage entrepreneurs. Rates are 5.2% for those aged 18-24 and 6.3% 45-54. The least active are those aged 55-64, at 2.0%.
- **GENDER.** Entrepreneurial activity rates are much higher among Irish males than females – 10.5% of Irish males, as compared to 4.2% of Irish females. GEM has reported a difference in rates of entrepreneurship between Irish males and females every year for the last five years.
- **EDUCATION.** In Ireland, entrepreneurial activity rates increase with education. Entrepreneurial activity rates are 11.1% for those with post graduate experience, 9.3% for those with third-level qualifications, 7.3% for those who have completed secondary, and 3.7% for those with only some or no secondary education.

⁴ Canada and the US also experienced declines in the rates of early stage entrepreneurial activity in 2006 compared with 2005. (See section 4.2 and 4.7 respectively). The US like Ireland maintained the level among its adult population of early stage entrepreneurs with high growth aspirations (1.4% in both years), despite the overall fall in the number of early stage entrepreneurs. This was not the case in Canada, where the lower number of early stage entrepreneurs was reflected in a lower level among the adult population of early stage entrepreneurs with growth aspirations for their new businesses (0.7% in 2006 compared with 1.6% in 2005).

- **WORK STATUS.** Not surprisingly, entrepreneurial activity rates are highest among those who are working. Rates are 9.9% for those working either fulltime or part-time, 2.2% for those not working, and 1.0% for those that are either retired or are students.

1.4 What Motivates Irish Entrepreneurs?

In Ireland, the decision by an individual to become involved in starting a new business is mostly to take advantage of a business opportunity (89% of entrepreneurs), while the remaining individuals (11% of entrepreneurs) have decided to become involved in starting a new business because of no better choices for work. The former are referred to as 'opportunity' driven entrepreneurs, while the latter are referred to as 'necessity' driven entrepreneurs.

GEM 2006 gathered new data on the motivations of 'opportunity' entrepreneurs. About half of 'opportunity' entrepreneurs described their primary motivation as the desire to be independent (54%), a quarter said their primary motivation was to increase their income (26%), while 13% said their primary motivation was to maintain their income. (A further 7% had some other primary motivation.)

1.5 The Nature of Early Stage Entrepreneurship in Ireland

GEM reports on the sector, growth orientation, internationalisation and innovativeness of entrepreneurial activity. In 2006, GEM finds the following:

- **SECTOR:** Three out of ten early stage entrepreneurs report their entrepreneurial activity is in consumer related sectors (32%); three out of ten are in sectors where a business is the primary customer (32%); and three out of ten are in 'transformative' sectors, such as manufacturing and construction, (30%). The remainder (6%) are in extractive sectors.
- **JOBS GROWTH:** Three quarters of all early stage entrepreneurs expect to have some employment growth, with nearly one in five expecting to grow to employing twenty or more within five years (18%). One quarter of all early stage entrepreneurs expect to have no employees.
- **INTERNATIONALISATION:** Over half of all early stage entrepreneurs expect to sell only in the Irish market (56%). Nearly half of all early stage entrepreneurs expect to have some exports (measured by number of customers in overseas markets) (46%) (Table 1.2).
- **INNOVATIVENESS:** Most early stage entrepreneurs use existing technologies, to provide known products and services to established markets. Specifically, 66% of early stage entrepreneurs provide products/services that are not new to customers; 47% of early stage entrepreneurs expect to have many competitors providing the same product/service; while 68% of all early stage entrepreneurs will use established technologies to provide the product/service.

However, more than one in ten (13%) plan to provide products that are new to customers; one in ten believe there are no competitors providing the same product/service (10%); while three in ten will use technology not available five years ago (33%).

Table 1.2 Expected Export Activity, Early Stage Entrepreneurs, 2006

% of customers in overseas markets	% of all early stage entrepreneurs
75%-100%	7
25%-75%	12
1%-25%	24
None	56
Total	100%

1.6 Financial Requirements of Irish Early Stage Entrepreneurs

Most early stage entrepreneurs anticipate using relatively small amounts of money to start their new business, though most anticipate requiring investment from a third party. In 2006, GEM reports the following (Table 1.3):

- **FINANCIAL NEEDS:** The average (median) anticipated financial requirement of early stage entrepreneurs is €40,000.

Approximately two thirds of all early stage entrepreneurs anticipate starting their new business with less than €100,000 (64%). For these entrepreneurs the median financial requirement is €20,000. The remaining entrepreneurs (36%) anticipate needing €100,000 or more. Of these the median financial requirement is €263,000.

- **ENTREPRENEURS' OWN FUNDS:** The median planned investment by early stage entrepreneurs is €20,000.

For those expecting to start with less than €100,000, the median planned investment by the entrepreneur is €5,500; while for those expecting to need €100,000 or more, the median planned investment by the entrepreneur is €71,700.

Table 1.3 Financial Requirements of Early Stage Entrepreneurs

	Total finance required (median)	Entrepreneurs own investment (median)
All early stage entrepreneurs	€40,000	€20,000
Entrepreneurs requiring less than €100,000 ⁵ (64% of all entrepreneurs) ⁶	€20,000	€5,500
Entrepreneurs requiring €100,000 or more (36% of all entrepreneurs)	€263,000	€71,700

- **SOURCE OF EXTERNAL FUNDS:** Early stage entrepreneurs expect to get funding from a range of sources (Table 1.4). The most important of these are banks and financial institutions, government programmes, and family.

Table 1.4 Anticipated Financial Sources of Early Stage Entrepreneurs

	% of all entrepreneurs*
Bank or financial institution	67
Government programme	39
Work colleague	22
Close family member	20
Other kin or relatives	13
Friends or neighbour	6
Stranger	3
Any other source	29

* Sums to greater than 100% as entrepreneurs use multiple sources of finance

⁵ Figures in Table 1.3 are medians. For those entrepreneurs requiring less than €100,000 the *mean* total finance required is €23,800 and the *mean* entrepreneurs own investment is €8,900.

⁶ A more detailed analysis of GEM data for Ireland for the period 2002 to 2006 suggests that three quarters of all entrepreneurs anticipate requiring less than €100,000. See Section 3.8

1.7 Irish 'Informal' Investors

'Informal investors' are those individuals that provide money to early stage entrepreneurs. GEM 2006 reports the following:

- In Ireland, the rate of informal investment activity in the population was 1.74%. This means that approximately 48,000 people provided finance to early stage entrepreneurs.
- GEM estimates that the amount of informal investment in 2006 was equal to approximately 1% of Ireland's GDP.
- Informal investors are typically related to the entrepreneur (Table 1.5). Six out of ten informal investors are close family or a relative of the entrepreneur (60%). One quarter of informal investors provide funds to friends or neighbours (24%).
- Only one in twenty informal investors provided finance to entrepreneurs that were unknown to them prior to the investment.

Table 1.5 Informal Investor's Relationship to Investee, 2006

Close Family	48%
Other Relative	12%
Work Colleague	10%
Friend or Neighbour	24%
Stranger	5%
Other	2%
Total	100%

1.8 Entrepreneurial Role Models, Opportunities and Skills

GEM measures four aspects of 'personal context' of Irish people. Three of these aspects of 'personal context' are believed to influence whether you might become an entrepreneur: (i) whether you know a recent entrepreneur, (ii) whether you perceive opportunities in your local area, and (iii) whether you believe you have the skills to start a new business. The fourth aspect of 'personal context' is whether fear of failure would prevent you from starting a business. GEM research has shown that fear of failure is less significant than the other positive aspects in explaining whether an individual becomes active as an early stage entrepreneur. GEM 2006 reports the following (Table 1.6):

- Four in ten people in Ireland know a recent entrepreneur (39%)
- More than four in ten people perceive good opportunities in their local area (44%).
- Half of all people perceive they have the knowledge and skills required to start a new business (51%).
- One third of people say that 'fear of failure' would prevent them starting a new business (35%). Conversely for two thirds of Irish people, 'fear of failure' would not prevent them starting a new business.
- Those people active as entrepreneurs, either as early stage entrepreneurs or as established entrepreneurs, are different on all measures of personal context than Irish people that have no entrepreneurial activity. Those active as entrepreneurs are much more likely to know a recent entrepreneur; are more likely to perceive good opportunities; are twice as likely to believe they have the knowledge and skills to start a business; and three times less likely to report that fear of failure would prevent them from starting a business.

Table 1.6 Personal Context of the Adult Population and of Entrepreneurs, 2006

	All adults	Early stage entrepreneurs	Established entrepreneurs	Adults with no entrepreneurial activity
Know a recent entrepreneur	39%	63%	65%	35%
Perceive good opportunities	44%	56%	50%	42%
Knowledge and skills to start up	51%	89%	90%	44%
'Fear of failure' would prevent start-up	35%	12%	15%	39%

1.9 Entrepreneurial Culture in Ireland

Ireland has a strong entrepreneurial culture. GEM 2006 reports the following:

- Seven out of ten Irish people report that entrepreneurship is a good career choice (70%).
- Eight out of ten people report that successful entrepreneurs are held in high regard (82%).
- Eight out of ten people report that there are often stories in the public media about successful entrepreneurs (84%).

1.10 The Entrepreneurial Environment in Ireland

The Irish team has a panel of over 70 key informants, entrepreneurs and experts, who were asked for their views of the particular strengths and weaknesses that are prevalent in Ireland and affect entrepreneurs and new enterprise development.

Almost half of these key informants are entrepreneurs (46%) from a variety of sectors. Some are recent entrepreneurs. Others have been involved in entrepreneurial activities for some time and include several serial entrepreneurs. The experts included 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.

Separating out the entrepreneurs from the other key informants, various facets of the supporting culture were most frequently singled out for mention in terms of strengths by the entrepreneurs consulted (1 in 4 of those consulted highlighted culture as a strength within the environment). The national culture was generally considered to be well disposed towards entrepreneurs. In particular, the entrepreneurs considered that the proliferation of success stories in the media, and through word of mouth more generally, created a feeling that entrepreneurs can thrive in Ireland. It was also considered that people were generally more confident because of the strength of the economy.

The support provided through government supported initiatives and programmes were identified by one in five of the entrepreneurs consulted. Enterprise Ireland (EI) and the Country Enterprise Boards (CEBs) were identified by many of the entrepreneurs as being particularly helpful. The availability of financial support in particular was frequently mentioned. The Enterprise Platform Programmes, run through the Institutes of Technology, with the support of EI, were also highly praised.

The third most frequently mentioned strength related to networking possibilities made possible through the highly networked nature of Irish society. This was in the form of networking among those in their peer group who were just setting up, opportunities for interaction between larger companies and entrepreneurs who are trying to get established, and relatively easy access to influential individuals in business and politics.

The expert group consulted, for their part, were very strong in their praise for both the pro-business Government policy and the manner of its implementation through a wide range of support agencies. Taken together, these areas were most frequently mentioned by the experts as being supportive of entrepreneurship in Ireland. (One in three experts consulted made mention of either Government policy or programmes as being a strength within the Irish environment in support of entrepreneurship).

The nature of the very positive culture among the general population, strong media support and a growing awareness of the success of entrepreneurs were contributing to a very supportive environment for entrepreneurship according to the experts. (One in five highlighted this area). The experts also emphasized the growing number of experienced entrepreneurs that were present in the country and the continued strength of the economy which continued to create opportunities and fuel confidence.

Turning now to those areas which are less strong, issues related to finance most occupied the entrepreneurs when they considered shortcomings within the Irish environment for entrepreneurship. Two in every five of the shortcomings that they specified related to this area. Difficulty with finding sufficient initial start-up funding was mentioned by many and not only by those whose businesses did not qualify for financial support by the development agencies. Negative mention was also made of the attitude of the banks, the lack of business angel investors and the relative small scale of domestic VCs.

Certain areas of the operations of the development agencies were also mentioned as being less than helpful by the entrepreneurs. These ranged across the criteria for eligibility for Enterprise Ireland's assistance which was considered too narrow, and the fragmented nature of the existing support systems.

The rising costs of doing business in Ireland were also mentioned by several of the entrepreneurs as a weakness within the Irish environment for entrepreneurship.

While the experts were less concentrated in their focus than were the entrepreneurs on finance as being a source of weakness within the Irish environment, it was the aspect of the environment that was mentioned most frequently by them. They were concerned about general difficulties with regard to access to finance and in particular about the availability of business angels and sufficient sources of VC funding.

The experts mentioned a wider range of areas that were less strong in the Irish environment than did the entrepreneurs. They were concerned about a lack of the necessary skills among entrepreneurs; several mentioned piecemeal and unlinked sources of support; and they perceived weakness in the infrastructure particularly with regard to road networks and the availability of broadband. Mention was also made of issues related to the opportunity cost of becoming an entrepreneur and the impact that a full employment economy would have on slowing the movement into entrepreneurship.

The Irish key informants, entrepreneurs and experts, were also asked their views on the "*state of the nation*" in a series of standard questions across a range of framework conditions with regard to the relative support of each for entrepreneurship in Ireland. In each country the key informants were asked identical questions. As the same questions are asked in each of the participating countries, comparisons with the responses of key informants in other countries can be made. The results of these standard questions are reported in section 2.11.

SECTION 2

International Comparison

2.1 Introduction

In this section the extent and nature of entrepreneurial activity in Ireland is compared to other countries.

Two reference groups of countries are used. The first group is countries from the OECD. Twenty two of the thirty member countries of the OECD are included in the analysis⁷. The second group is EU member countries⁸. Sixteen member countries are included in the comparison, twelve of the EU-15. Tables include a list of twenty four countries, as all but Latvia and Slovenia (EU member countries) are members of both the OECD and the EU.

We provide brief commentary which is followed by extensive tables at the end of this section.

2.2 Entrepreneurial Activity (TEA)

Table 2.1 compares countries in terms of rates of total early stage entrepreneurs (TEA), including nascent and new firm entrepreneurs, and established entrepreneurs.

Early stage entrepreneurship

Ireland ranks seventh of the twenty two OECD countries in the rate of early stage entrepreneurship, lagging Australia (12.0%), Iceland (11.3%), US (10.0%), Norway (9.1%), Greece (7.9%) and the Czech Republic (7.8%). The OECD average is 6.4%. The rate of early stage entrepreneurship in Ireland is 1.16 times the OECD average. Ireland (7.4%) ranks third in the EU. Greece (7.9%) ranks first, followed by the Czech Republic (7.8%), with Spain ranking fourth (7.3%). The EU average is 6.3%.

Established entrepreneurs

Ireland (7.8%) ranks fifth in terms of the rate of established entrepreneurs (owner-managers of businesses started prior to 2003) in the OECD, lagging Turkey (11.4%), Australia (9.1%), Greece (8.2%) and Finland (7.8%). Ireland ranks third in the EU.

Ireland and the US

Looking at Ireland and the US, the total rates of entrepreneurial activity (nascent, new firm, and established) is similar, at 14.5% and 15.4% respectively. The difference in the nature of the activity is that the US has a higher rate of nascent entrepreneurs, a similar rate of new-firm entrepreneurs, and a lower rate of established entrepreneurs. In 2006, both countries experienced a reduction in the level of early stage entrepreneurial activity. Early stage entrepreneurial activity declined in the US from 12.4% in 2005 to 10.0%, while in Ireland the level of early stage entrepreneurial activity decreased from 9.8% in 2005 to 7.4%.

⁷ OECD countries not included are Austria, Korea, Luxembourg, New Zealand, Slovak Republic, Poland, Portugal, and Switzerland.

⁸ Of the EU-15 countries all but Austria, Luxembourg and Portugal are included. Of the ten countries that joined the EU in 2004, Czech Republic, Hungary, Latvia and Slovenia are included.

2.3 Entrepreneurs: Age and Education

Tables 2.2 (Age) and 2.3 (Education) compares countries in terms of the rate of entrepreneurship in each age category and by level of education achieved. (Gender is considered in Section 3).

- **AGE:** In terms of age, the high rate of entrepreneurship in Ireland, relative to the OECD and EU averages, is accounted for by the disproportionately higher rates of entrepreneurial activity in the 25-34 and 35-44 age groups.
- **EDUCATION:** In Ireland the rate of early stage entrepreneurship among those with postgraduate education is 1.9 times the EU average; and 1.6 times the OECD average.

2.4 Motives of Early Stage Entrepreneurs

The motives of early stage entrepreneurs in Ireland are compared with other countries in Tables 2.4 and 2.5.

- **MOTIVES:** Entrepreneurial activity is more ‘opportunity’ driven in Ireland (89%) compared to the OECD and EU averages (both 82%), and correspondingly, entrepreneurial activity in Ireland is less ‘necessity’ driven, (11%), compared to OECD and EU averages (18%).
- **INDEPENDENCE OR INCOME?** The motives of ‘opportunity’ driven entrepreneurs in Ireland are similar to those in most other EU and OECD countries, with ‘independence’ as the most important motive in all but three of the twenty two countries, and accounting for at least four out of ten ‘opportunity’ entrepreneurs in all but one country.

Comparing the importance of the ‘independence’ motive to the combined motive of either increasing income or maintaining income, we find that ‘independence’ is more important than ‘income’ in fifteen countries, the same in the US, and less in six countries (Mexico, Japan, Italy, Hungary, Greece, and Turkey). In Ireland the ‘independence’ motive is 1.4 times more common than the combined income motives.

2.5 The Nature of Entrepreneurial Activity

How does the nature of entrepreneurship in Ireland differ from that of other EU and OECD countries? Tables 2.6 (Sector), 2.7 (Jobs Growth), 2.8 (Exports), 2.9 (High Export Intensity), 2.10 (Novelty of Product), 2.11 (Intensity of Competition) and 2.12 (Newness of Technology) suggest the following:

- **SECTOR:** Early stage entrepreneurship in Ireland differs from the EU and OECD averages because a higher percentage of entrepreneurship is in Business Services sectors (32% in Ireland, compared to 24% OECD average) and a lower percentage of entrepreneurship is in Consumer Services sectors (32% in Ireland, compared to 40% OECD average). Ireland ranks 3rd highest of the OECD countries in terms of Business Services (UK and Canada rank first and second respectively); while it ranks third lowest of the OECD countries in terms of Consumer Services.
- **JOBS GROWTH:** Seventy five percent of early stage entrepreneurs expect some employment growth in the coming five years. This is similar to the EU and OECD averages (71% and 73%).

However, there is a difference between Irish early stage entrepreneurs and OECD and EU entrepreneurs in terms of the percentage expecting to employ twenty or more within five years. In Ireland 18% of all early stage entrepreneurs are high expectation entrepreneurs, compared to an average of 11% and 12% in the OECD and EU, respectively. Ireland ranks third highest in the OECD in the percentage of early stage entrepreneurs that are high growth *expectation* entrepreneurs. Turkey at 22% and Iceland at 19%, rank higher. A lower level of longer established entrepreneurs in Ireland, however, have actually achieved significant growth.

- **INTERNATIONALISATION.** A relatively high percentage of early stage entrepreneurs in Ireland expect to have no export customers. In Ireland over half (56%) of early stage entrepreneurs expect to have no export customers, compared to an OECD average of 43% and an EU average of 45%. Ireland ranks 16th lowest of the twenty two OECD countries, and 12th lowest of the sixteen EU member countries in this respect.

In terms of the percentage of entrepreneurs with high export expectations (greater than 50% of customers in overseas markets) Ireland is similar to the EU and OECD averages. 13% of Irish entrepreneurs have high export expectations, compared to 13% average in EU and an 11% average in the OECD. Given the relatively higher rate of early stage entrepreneurship in Ireland, Ireland ranks 7th in the OECD and 5th in the EU in terms of the level of these entrepreneurs in Ireland.

- **INNOVATIVENESS.** Broadly speaking, most new businesses are not that innovative in terms of offering products or services that are new to customers, facing little competition, or using new technology. This is the case in Ireland and other OECD and EU countries.

An innovative business might be expected to be characterised by one or more of the following: offers a product that is new to customers, has few competitors, and uses the latest technology. In terms of these measures Irish entrepreneurs are at the OECD and EU averages for new product/service to all customers (13% of all entrepreneurs); similar numbers expect no competition (10% in Ireland compared to 9% in OECD and 8% in EU); and fewer expect to use the very latest technology (5% in Ireland compared to 11% in OECD and 12% in EU). However, on the later measure, if entrepreneurs expecting to use the very latest and new technology are combined (1 to 5 years) Ireland is at the EU and OECD average.

2.6 High Expectation Entrepreneurship⁹

For the period 2000-2006 Ireland was among the leading OECD countries in terms of high expectation early stage entrepreneurship. High expectation entrepreneurs are early stage entrepreneurs who expect to employ twenty or more within five years of start-up. While many of these entrepreneurs won't achieve this level of growth, including nascent entrepreneurs who abandon their start-up efforts, it is unlikely that growth will occur without such aspiration or intent.

- Ireland ranks sixth of twenty one OECD countries, in terms of the rate of high expectation early stage entrepreneurs among its adult population – lagging the US, New Zealand, Iceland, Canada, and Australia.

However, in terms of those established entrepreneurs that achieved twenty or more employees, Ireland ranks lower in the OECD. (Note GEM does not capture the time period over which this growth was achieved, so this is not a measure of rapid growth.)

- Ireland ranks ninth out of twenty one OECD countries, in terms of the rate of established entrepreneurs that have achieved twenty or more employees. Countries ranked higher than Ireland are (in order) New Zealand (highest), then Iceland, Canada, Netherlands, Switzerland, Denmark, and Japan. Moreover, Ireland ranks thirteenth, in terms of the percentage of all established entrepreneurs that have achieved high growth.

2.7 Informal Investors

GEM measures informal investors as people who have provided funds to new businesses during the last three years. The rate of informal investment activity by Irish people is relatively low. Ireland ranks 16th of twenty two OECD countries, and 10th of sixteen EU member countries (Table 2.13). Rates of informal investment activity in Ireland are less than the OECD and EU averages.

⁹ This section draws on Autio, E. (2007) 'Global Entrepreneurship Monitor: 2007 Global Report on High-Growth Entrepreneurship' (www.gemconsortium.org).

The rate of informal investment activity in the highest ranked country is 3.4 times higher than the rate in Ireland (6.0% in the US versus 1.7% in Ireland).

Rates of informal investment activity are lower than rates of early stage entrepreneurial activity in all but one of the twenty two countries. However, the difference is particularly marked in a number of countries, including Ireland.

The number of informal investors is low in Ireland relative to other OECD countries. However there is some evidence that the average annual amount invested by each informal investor in Ireland is relatively high. The 2006 GEM Global Financing Report reports that relative to Ireland only the Netherlands had a higher average amount invested by each informal investor (OECD countries).

2.8 Formal Venture Capital¹⁰

The US dominates the formal venture capital market. However, even in the US the number of firms that access formal venture capital is very small. For example, in 2005 in the US, only 910 companies accessed first round venture capital, while only 45 venture capital-backed companies had IPOs (Initial Public Offerings).

- Ireland ranks 12th, of eighteen OECD countries, on the level of formal venture capital as a percentage of GDP (2005). The top six countries were Denmark, US, Sweden, UK, Canada, and Norway. In each of these countries the level of formal venture capital, as a percentage of GDP, was at least twice the rate in Ireland.
- Ireland ranks 13th, of eighteen OECD countries, on the average amount of formal venture capital invested per company. The average amount invested per company is much higher in the US, compared to all other countries. For example, the average amount invested in the US is over US\$8.5 million, compared to an average in Ireland of just over US\$1 million. The average amounts invested per company in the US, Denmark, Italy, UK, Netherlands, Norway, and Canada is at least twice that of Ireland.

2.9 Entrepreneurial Role Models, Opportunities and Skills

The personal context of Irish people is compared with that of people from other EU and OECD countries in Table 2.14.

- The personal context of Irish people is positive relative to the EU and OECD averages.
- Four in ten Irish people (39%) report knowing a recent entrepreneur, compared to 37% for EU and OECD averages.
- 44% of Irish people perceive good opportunities in their local area, compared to 34% and 35% for the EU and OECD respectively.
- One in two (51%) Irish people believe they have the skills and knowledge required to start a business, compared to 41% and 42% in the EU and OECD. Irish people are third in the OECD and 2nd in the EU in terms of believing they have the skills and knowledge to start a business.
- About one third of Irish people (35%) say that 'fear of failure' would prevent them from starting a business. This is similar to the EU average (38%) and the same as the OECD average (35%).

¹⁰ This section draws on Bygrave, William D. (2006) 'Global Entrepreneurship Monitor: 2006 Financing Report' (www.gemconsortium.org).

2.10 Culture

The culture for entrepreneurship in Ireland is strong relative to other OECD and EU countries (Table 2.15).

- Seven out of ten Irish people (70%) believe that entrepreneurship is a good career choice, compared to an average of 60% in EU countries and 53% in OECD countries.
- Eight out of ten Irish people (82%) believe that successful entrepreneurs are held in high regard, compared to an average of 69% in EU countries and 67% in OECD countries. Ireland ranks third on this measure.
- More than eight out of ten Irish people (84%) report that there are often stories in the public media about successful entrepreneurs, compared to an average of 52% in EU countries and 56% in OECD countries. Ireland ranks first on this measure in the OECD and EU.

2.11 Environment (Key informants: experts and entrepreneurs)

GEM assesses the specific factors that might influence the extent and nature of entrepreneurial activity by asking entrepreneurs and those involved in supporting entrepreneurs to assess eighteen aspects of the environment for entrepreneurship.¹¹ Entrepreneurs and experts rate each framework condition on a scale which allows framework conditions be classified as 'supportive' of entrepreneurship (+), 'neutral' in their impact, or as areas of 'weakness' in the environment for entrepreneurship (-) (Table 2.16 at end of section).

In the majority of countries, the experts and entrepreneurs assess most factors as neutral, highlighting a few areas of strength and a few areas of weakness. The average across the countries is three supportive factors, eleven neutral factors, and four negative factors.

Most supportive in terms of the support which the key informants perceive that it offers to entrepreneurs is the US with 11 supportive factors. The factors considered as strengths in the US were Availability of Funding, Education Systems (Higher), Business Services, Physical Infrastructure, National Entrepreneurial Culture, Availability of Opportunities, Population Entrepreneurial Competencies, Intellectual Property Protection, Respect for Entrepreneurs, Support for Women Entrepreneurship, and High Growth Firms.

Other countries, with more factors than average scored as 'supportive' by the key informants, are Iceland (7 factors), Denmark (5 factors), and Australia, Belgium and the Netherlands each of which had four factors that were scored as 'supportive'.

In 2006 Ireland also had four aspects of its environment that were perceived by the key informants of experts and entrepreneurs as being supportive of entrepreneurship:

- **THE AVAILABILITY OF OPPORTUNITIES**, which is a measure of the opportunities available for the creation of new firms, and the creation of high growth firms.
- **RESPECT FOR ENTREPRENEURS**, which is a measure of attitudes to entrepreneurs and to successful entrepreneurs, and the appropriateness of entrepreneurship as a way to become rich and as a career choice.
- **INTELLECTUAL PROPERTY PROTECTION**, which is a measure of the comprehensiveness of intellectual property rights (IPR) and the enforcement of IPR legislation.

¹¹ The eighteen aspects of environment are Availability of Funding, Government Policy, Government Regulations and Institutions, Government Programmes, Education Systems (Primary & Secondary), Education Systems (Higher), Technology Transfer (Commercialisation), Business Services, Market Change, Market Openness (Anti-competition), Physical Infrastructure, National Entrepreneurial Culture, Availability of Opportunities, Population Entrepreneurial Competencies, Intellectual Property Protection, Respect for Entrepreneurs, Support for Women Entrepreneurship, and High Growth Firms.

- **SUPPORTS FOR HIGH GROWTH FIRMS**, which is a measure of the extent of policy focus and support on high growth firms.

GOVERNMENT POLICIES: The relative support for entrepreneurship by national Governments is assessed through a range of measures. Included in these are 'Government Policy', 'Government Programmes', 'Government Regulations', 'Intellectual Property Protection', 'Market Openness (Anti-competition Policy and Enforcement)', 'Technology Transfer (Commercialisation)', 'High Growth Firms (Supports)', and 'Support for Women Entrepreneurship' (Table 2.17).

Two of these factors were considered 'supportive' in Ireland: Intellectual Property Protection and the Support for High Growth Firms. Relative to most other countries this is positive as in half of the countries none of these eight factors were considered 'supportive'. The US had the most 'supportive' factors (three factors): Intellectual Property Protection, Supports for High Growth Firms, and Support for Women Entrepreneurship.

SUPPORT FOR ENTREPRENEURSHIP THROUGH THE EDUCATION SYSTEM: The role of the education system in supporting entrepreneurship has recently been the focus of discussion in Ireland and in the European Union. Entrepreneurs and experts considered that the primary and secondary education systems are 'weak' in terms of encouraging entrepreneurship in Ireland, as was the case in 15 of the 20 countries; and the higher education as 'neutral' in terms of the impact of the 'higher' education system on entrepreneurship, as was the case in 17 of the 20 countries. Only entrepreneurs and experts in the US considered the higher education system as 'supportive' of entrepreneurship (Table 2.18). Ireland is similar to other countries in terms of the assessment of experts and entrepreneurs with regard to the degree of support that the education system provides towards entrepreneurship.

OPPORTUNITIES AND THEIR EXPLOITATION: Table 2.19 sets out the results across the OECD participating countries in respect of the following:

- (i) Are there entrepreneurial opportunities for people to exploit?
- (ii) Will people exploit opportunities? Is there a supporting entrepreneurial culture and is there respect for entrepreneurs?
- (iii) Can people exploit opportunities (i.e. resources and entrepreneurial competencies)?

Ireland scores particularly well in the view of the experts and entrepreneurs consulted in respect to the availability of opportunities, which is a measure of the opportunities available for the creation of new firms, and the creation of high growth firms.

Table 2.1 Entrepreneurial Rankings

	Early Stage Entrepreneurial Activity (TEA) Rankings	Nascent entrepreneurs %	Newfirm entrepreneurs %	Early stage entrepreneurial activity %	Established entrepreneurs %
Australia	1	7.3	5.7	12.0	9.1
Belgium *	24	1.8	1.1	2.7	2.1
Canada	9	4.1	3.2	7.1	5.1
Czech Republic *	6	6.4	2.0	7.8	5.4
Denmark *	15	2.9	2.7	5.3	5.3
Finland *	17	2.9	2.4	5.0	8.2
France *	19	3.8	.7	4.4	1.3
Germany *	20	2.9	1.7	4.2	3.0
Greece *	5	5.7	2.3	7.9	8.2
Hungary *	12	3.2	3.0	6.0	6.7
Iceland	2	8.1	3.8	11.3	7.4
Ireland *	7	4.5	2.9	7.4	7.8
Italy *	21	2.2	1.4	3.5	3.0
Japan	23	1.6	1.4	2.9	4.8
Latvia *	10	4.0	2.6	6.6	5.7
Mexico	16	4.1	1.2	5.3	2.3
Netherlands *	14	3.6	1.9	5.4	6.6
Norway	4	5.2	4.3	9.1	6.0
Slovenia *	18	2.9	1.8	4.6	4.4
Spain *	8	3.0	4.4	7.3	5.4
Sweden *	22	2.2	1.4	3.4	5.0
Turkey	11	2.2	4.0	6.1	11.4
UK *	13	3.2	2.8	5.8	5.4
US	3	7.5	3.3	10.0	5.4
EU average		3.4	2.2	5.5	5.2
OECD average**		4.0	2.6	6.4	5.7

* EU member state

** Excludes Latvia and Slovenia

Table 2.2 Entrepreneurial Activity by Age

	Early Stage Entrepreneurial Activity (TEA) Rate %	18-24 years %	25-34 years %	35-44 years %	45-54 years %	55-64 years %
Australia	12.0	10.4	13.6	16.8	10.0	7.3
Belgium *	2.7	1.7	4.0	3.5	3.2	.5
Canada	7.1	5.4	8.7	8.8	7.2	4.2
Czech Republic *	7.8	5.5	9.6	9.7	11.2	1.9
Denmark *	5.3	3.5	6.6	7.6	4.6	3.2
Finland *	5.0	2.2	8.0	8.1	3.7	2.6
France *	4.4	.9	4.9	6.2	4.6	4.0
Germany *	4.2	2.2	5.8	5.5	3.6	2.8
Greece *	7.9	3.8	10.7	10.0	8.5	3.7
Hungary *	6.0	3.3	9.4	6.1	6.2	3.2
Iceland	11.3	5.1	12.9	13.6	13.0	9.6
Ireland *	7.4	5.1	10.9	9.7	6.3	2.0
Italy *	3.5	4.8	5.8	4.0	2.6	.3
Japan	2.9	.9	4.6	4.3	1.9	1.9
Latvia *	6.6	10.3	10.9	5.7	4.0	1.8
Mexico	5.3	3.3	5.9	6.5	4.7	6.0
Netherlands *	5.4	4.2	7.6	5.6	5.9	3.1
Norway	9.1	6.8	11.9	11.6	9.7	4.1
Slovenia *	4.6	3.4	6.9	5.7	4.5	1.5
Spain *	7.3	4.5	10.5	8.6	6.4	3.5
Sweden *	3.4	2.9	3.8	4.8	3.9	1.6
Turkey	6.1	4.1	9.6	7.0	4.1	1.6
UK *	5.8	4.0	7.0	7.4	5.8	3.7
US	10.0	10.8	14.1	11.0	8.2	5.2
EU average	5.5	3.9	7.6	6.8	5.3	2.5
OECD average**	6.4	4.3	8.4	8.0	6.2	3.5

* EU member state

** Excludes Latvia and Slovenia

Table 2.3 Entrepreneurial Activity by Education†

	Early Stage Entrepreneurial Activity (TEA) Rate %	Primary and/or some secondary %	Completed secondary school %	Third level %	Post graduate %
Australia	12.0	8.1	10.3	15.5	12.5
Belgium *	2.7	1.0	2.1	2.9	4.2
Canada	7.1	3.6	4.5	8.3	8.8
Czech Republic *	7.8	6.0	9.1	12.8	†
Denmark *	5.3	1.1	1.2	3.9	4.9
Finland *	5.0	4.4	6.1	7.3	11.7
France *	4.4	3.1	3.5	7.8	4.2
Germany *	4.2	3.2	5.4	5.9	†
Greece *	7.9	3.2	8.4	8.2	8.0
Hungary *	6.0	3.7	7.4	7.5	7.9
Iceland	11.3	9.1	11.8	†	11.6
Ireland *	7.4	3.7	7.2	9.3	11.1
Italy *	3.5	1.6	4.6	3.0	3.9
Japan	2.9	†	2.5	3.6	3.1
Latvia *	6.6	4.7	5.6	6.8	8.9
Mexico	5.3	3.8	6.4	2.7	7.2
Netherlands *	5.4	9.9	4.6	8.3	6.8
Norway	9.1	7.9	7.2	†	10.9
Slovenia *	4.6	1.8	5.1	6.2	†
Spain *	7.3	6.5	8.1	†	8.2
Sweden *	3.4	1.6	3.1	2.9	4.8
Turkey	6.1	5.9	7.5	4.3	2.2
UK *	5.8	2.8	5.3	5.4	7.4
US	10.0	7.9	8.2	10.8	10.3
EU average	5.5	3.7	5.4	6.1	5.7
OECD average**	6.4	4.5	6.1	5.9	6.8

* EU member state

** Excludes Latvia and Slovenia

†As education systems differ across countries, categories are aggregated for some countries.

Table 2.4 Entrepreneurial Activity by Motivation

	Early Stage Entrepreneurial Activity (TEA) Rate (%)	Opportunity entrepreneurs (%)	Necessity entrepreneurs (%)	Opportunity entrepreneurs (% of all)	Necessity entrepreneurs (% of all)
Australia	12.0	10.6	1.3	89%	11%
Belgium *	2.7	2.4	0.2	93%	7%
Canada	7.1	6.0	1.0	85%	15%
Czech Republic *	7.8	5.4	2.4	69%	31%
Denmark *	5.3	4.9	0.2	96%	4%
Finland *	5.0	3.7	0.7	84%	16%
France *	4.4	2.7	1.7	61%	39%
Germany *	4.2	2.5	1.5	62%	38%
Greece *	7.9	5.0	1.6	75%	25%
Hungary *	6.0	4.6	1.3	78%	22%
Iceland	11.3	9.8	0.9	91%	9%
Ireland *	7.4	6.2	0.8	89%	11%
Italy *	3.5	2.6	0.8	77%	23%
Japan	2.9	2.5	0.4	85%	15%
Latvia *	6.6	5.0	1.0	83%	17%
Mexico	5.3	3.4	1.2	74%	26%
Netherlands *	5.4	4.9	0.3	94%	6%
Norway	9.1	8.4	0.3	96%	4%
Slovenia *	4.6	4.0	0.5	90%	10%
Spain *	7.3	6.1	1.1	85%	15%
Sweden *	3.4	3.0	0.2	92%	8%
Turkey	6.1	3.7	1.8	67%	33%
UK *	5.8	4.7	0.9	84%	16%
US	10.0	8.3	1.3	86%	14%
EU average	5.5	4.2	1.0	82%	18%
OECD average**	6.4	5.1	1.0	82%	18%

* EU member state

** Excludes Latvia and Slovenia

Table 2.5 'Opportunity' Entrepreneurial Activity by Detailed Motivation

	Early Stage Entrepreneurial Activity (TEA) Rate (%)	Opportunity entrepreneurs (%)	Primary Motivation(% of all opportunity-driven entrepreneurs)			
			Independence	Increase income	Maintain income	Other
Australia	12.0	10.6	56%	34%	4%	7%
Belgium *	2.7	2.4	61%	26%	13%	0%
Canada	7.1	6.0	54%	27%	13%	5%
Czech Republic *	7.8	5.4	59%	26%	7%	8%
Denmark *	5.3	4.9	61%	27%	4%	8%
Finland *	5.0	3.7	57%	32%	5%	6%
France *	4.4	2.7	52%	22%	20%	6%
Germany *	4.2	2.5	57%	25%	17%	1%
Greece *	7.9	5.0	41%	58%	0%	1%
Hungary *	6.0	4.6	41%	36%	19%	3%
Iceland	11.3	9.8	42%	32%	3%	23%
Ireland *	7.4	6.2	54%	26%	13%	7%
Italy *	3.5	2.6	44%	50%	5%	0%
Japan	2.9	2.5	48%	42%	9%	0%
Latvia *	6.6	5.0	51%	43%	1%	4%
Mexico	5.3	3.4	49%	39%	12%	0%
Netherlands *	5.4	4.9	66%	13%	5%	16%
Norway	9.1	8.4	58%	26%	6%	10%
Slovenia *	4.6	4.0	66%	20%	4%	9%
Spain *	7.3	6.1	54%	29%	9%	8%
Sweden *	3.4	3.0	60%	19%	8%	13%
Turkey	6.1	3.7	21%	42%	31%	6%
UK *	5.8	4.7	55%	20%	6%	18%
US	10.0	8.3	48%	41%	8%	3%
EU average	5.5	4.2	55.0%	29.6%	8.6%	6.8%
OECD average**	6.4	5.1	51.8%	31.5%	9.9%	6.8%

* EU member state

** Excludes Latvia and Slovenia

Table 2.6 Entrepreneurial Activity by Sectors

	Early Stage Entrepreneurial Activity (TEA) Rate (%)	Sector (% of all entrepreneurs)			
		Extractive sectors	Transformative sectors (Construction and Manufacturing)	Business sectors	Consumer sectors
Australia	12.0	6%	29%	23%	42%
Belgium *	2.7	5%	40%	28%	27%
Canada	7.1	4%	24%	33%	40%
Czech Republic *	7.8	3%	46%	24%	27%
Denmark *	5.3	7%	28%	30%	34%
Finland *	5.0	6%	36%	22%	35%
France *	4.4	16%	24%	21%	39%
Germany *	4.2	7%	24%	26%	44%
Greece *	7.9	1%	23%	13%	64%
Hungary *	6.0	4%	38%	26%	32%
Iceland	11.3	8%	35%	18%	39%
Ireland *	7.4	6%	30%	32%	32%
Italy *	3.5	4%	38%	22%	36%
Japan	2.9	2%	13%	26%	59%
Latvia *	6.6	9%	34%	19%	37%
Mexico	5.3	0%	57%	7%	36%
Netherlands *	5.4	4%	12%	32%	52%
Norway	9.1	7%	28%	29%	36%
Slovenia *	4.6	1%	33%	31%	34%
Spain *	7.3	6%	30%	25%	39%
Sweden *	3.4	5%	35%	22%	38%
Turkey	6.1	8%	34%	12%	46%
UK *	5.8	1%	18%	41%	40%
US	10.0	7%	26%	22%	45%
EU average	5.5	5%	31%	26%	38%
OECD average**	6.4	5%	30%	24%	40%

* EU member state

** Excludes Latvia and Slovenia

Table 2.7 Entrepreneurial Activity by Expected Jobs Growth

	Early Stage Entrepreneurial Activity (TEA) Rate (%)	Any jobs or any job expected		Expecting 19 or more jobs	
		Rate	Percentage of all entrepreneurs	Rate	Percentage of all entrepreneurs
Australia	12.0	7.5	62%	1.0	8%
Belgium *	2.7	1.9	70%	0.3	11%
Canada	7.1	5.0	71%	0.7	9%
Czech Republic *	7.8	5.8	74%	1.2	15%
Denmark *	5.3	3.9	73%	0.7	12%
Finland *	5.0	3.5	69%	0.4	7%
France *	4.4	3.3	75%	0.3	7%
Germany *	4.2	2.6	61%	0.5	12%
Greece *	7.9	4.2	53%	0.6	8%
Hungary *	6.0	3.7	61%	0.5	8%
Iceland	11.3	9.4	84%	2.2	19%
Ireland *	7.4	5.5	75%	1.3	18%
Italy *	3.5	2.6	74%	0.5	14%
Japan	2.9	2.4	84%	0.0	0%
Latvia *	6.6	4.6	71%	1.7	26%
Mexico	5.3	4.0	77%	0.1	2%
Netherlands *	5.4	3.8	70%	0.6	11%
Norway	9.1	7.1	77%	0.7	8%
Slovenia *	4.6	3.6	78%	0.4	8%
Spain *	7.3	6.4	89%	0.3	4%
Sweden *	3.4	2.8	83%	0.5	13%
Turkey	6.1	4.9	81%	1.4	22%
UK *	5.8	3.9	67%	0.7	12%
US	10.0	7.5	75%	1.4	14%
EU average	5.5	3.9	71%	0.6	12%
OECD average**	6.4	4.6	73%	0.7	11%

* EU member state

** Excludes Latvia and Slovenia

Table 2.8 Entrepreneurial Activity by Export Intensity

	Early Stage Entrepreneurial Activity (TEA) Rate (%)	% customers outside country			
		No export customers	1-25%	26-75%	76-100%
Australia	12.0	52%	35%	5%	8%
Belgium *	2.7	35%	26%	23%	16%
Canada	7.1		75%	14%	10%
Czech Republic *	7.8	2%	73%	18%	7%
Denmark *	5.3	56%	24%	8%	12%
Finland *	5.0	57%	32%	4%	6%
France *	4.4	20%	59%	16%	6%
Germany *	4.2	19%	70%	9%	2%
Greece *	7.9	40%	41%	9%	9%
Hungary *	6.0	77%	10%	5%	7%
Iceland	11.3	29%	51%	10%	11%
Ireland *	7.4	56%	24%	12%	7%
Italy *	3.5	55%	36%	9%	0%
Japan	2.9	32%	68%	0%	0%
Latvia *	6.6	36%	33%	18%	13%
Mexico	5.3	69%	24%	4%	3%
Netherlands *	5.4	63%	24%	9%	4%
Norway	9.1	45%	36%	11%	9%
Slovenia *	4.6	37%	36%	19%	8%
Spain *	7.3	61%	20%	12%	7%
Sweden *	3.4	49%	23%	10%	18%
Turkey	6.1	60%	22%	7%	10%
UK *	5.8	52%	30%	11%	8%
US	10.0	19%	66%	10%	5%
EU average	5.5	45%	35%	12%	8%
OECD average**	6.4	43%	39%	10%	7%

* EU member state

** Excludes Latvia and Slovenia

Table 2.9 Entrepreneurial Activity by High Export Intensity

	Early Stage Entrepreneurial Activity (TEA) Rate (%)	High export intensity (more than 50% of customers in export markets)	
		Rate	Percentage of all entrepreneurs
Australia	12.0	1.1	9%
Belgium *	2.7	0.6	22%
Canada	7.1	0.6	9%
Czech Republic *	7.8	1.2	16%
Denmark *	5.3	0.8	15%
Finland *	5.0	0.5	10%
France *	4.4	0.4	10%
Germany *	4.2	0.3	6%
Greece *	7.9	1.0	12%
Hungary *	6.0	0.5	9%
Iceland	11.3	1.7	15%
Ireland *	7.4	0.9	13%
Italy *	3.5	0.1	3%
Japan	2.9	0.0	0%
Latvia *	6.6	1.7	26%
Mexico	5.3	0.1	2%
Netherlands *	5.4	0.4	8%
Norway	9.1	1.2	14%
Slovenia *	4.6	0.8	17%
Spain *	7.3	1.0	13%
Sweden *	3.4	0.7	20%
Turkey	6.1	0.8	13%
UK *	5.8	0.8	13%
US	10.0	0.9	9%
EU average	5.5	0.7	13%
OECD average**	6.4	0.7	11%

* EU member state

** Excludes Latvia and Slovenia

Table 2.10 Entrepreneurial Activity by Novelty of Product

	Early Stage Entrepreneurial Activity (TEA) Rate (%)	Novelty of product/service (Percentage of all entrepreneurs)		
		New to all	New to some	New to none
Australia	12.0	10%	26%	64%
Belgium *	2.7	10%	28%	62%
Canada	7.1	15%	29%	56%
Czech Republic *	7.8	7%	49%	45%
Denmark *	5.3	26%	28%	46%
Finland *	5.0	10%	42%	48%
France *	4.4	7%	38%	54%
Germany *	4.2	10%	26%	64%
Greece *	7.9	11%	23%	66%
Hungary *	6.0	3%	19%	78%
Iceland	11.3	12%	29%	59%
Ireland *	7.4	13%	21%	66%
Italy *	3.5	19%	34%	48%
Japan	2.9	4%	44%	52%
Latvia *	6.6	9%	29%	62%
Mexico	5.3	12%	43%	46%
Netherlands *	5.4	12%	29%	59%
Norway	9.1	16%	29%	55%
Slovenia *	4.6	17%	38%	45%
Spain *	7.3	18%	30%	52%
Sweden *	3.4	17%	31%	51%
Turkey	6.1	34%	31%	35%
UK *	5.8	11%	27%	62%
US	10.0	11%	29%	61%
EU average	5.5	13%	31%	57%
OECD average**	6.4	13%	31%	56%

* EU member state

** Excludes Latvia and Slovenia

Table 2.11 Entrepreneurial Activity by Intensity of Competition

	Early Stage Entrepreneurial Activity (TEA) Rate (%)	Intensity Competition (Percentage of all entrepreneurs)		
		Many	Few	None
Australia	12.0	41%	42%	17%
Belgium *	2.7	60%	35%	5%
Canada	7.1	57%	34%	10%
Czech Republic *	7.8	58%	34%	8%
Denmark *	5.3	46%	37%	17%
Finland *	5.0	61%	35%	4%
France *	4.4	45%	48%	7%
Germany *	4.2	61%	35%	4%
Greece *	7.9	76%	21%	3%
Hungary *	6.0	66%	26%	8%
Iceland	11.3	48%	37%	16%
Ireland *	7.4	47%	43%	10%
Italy *	3.5	51%	36%	13%
Japan	2.9	76%	24%	0%
Latvia *	6.6	68%	27%	5%
Mexico	5.3	50%	44%	6%
Netherlands *	5.4	47%	42%	11%
Norway	9.1	44%	42%	15%
Slovenia *	4.6	46%	46%	8%
Spain *	7.3	60%	31%	9%
Sweden *	3.4	41%	48%	11%
Turkey	6.1	72%	25%	3%
UK *	5.8	41%	45%	14%
US	10.0	38%	47%	16%
EU average	5.5	55%	37%	8%
OECD average**	6.4	54%	37%	9%

* EU member state

** Excludes Latvia and Slovenia

Table 2.12 Entrepreneurial Activity by Newness of Technology

	Early Stage Entrepreneurial Activity (TEA) Rate (%)	Newness of technology (percentage of all entrepreneurs)		
		Very latest (less than 1 year)	New technology (1 to 5 years)	No new technology
Australia	12.0	7%	18%	74%
Belgium *	2.7	23%	24%	53%
Canada	7.1	9%	17%	74%
Czech Republic *	7.8	37%	37%	26%
Denmark *	5.3	5%	10%	85%
Finland *	5.0	12%	9%	79%
France *	4.4	13%	24%	63%
Germany *	4.2	1%	12%	87%
Greece *	7.9	35%	32%	33%
Hungary *	6.0	3%	9%	88%
Iceland	11.3	10%	19%	72%
Ireland *	7.4	5%	28%	68%
Italy *	3.5	14%	29%	57%
Japan	2.9	8%	15%	77%
Latvia *	6.6	3%	15%	82%
Mexico	5.3	11%	12%	77%
Netherlands *	5.4	4%	13%	83%
Norway	9.1	14%	15%	71%
Slovenia *	4.6	14%	24%	63%
Spain *	7.3	0%	18%	82%
Sweden *	3.4	8%	31%	61%
Turkey	6.1	1%	14%	84%
UK *	5.8	7%	20%	73%
US	10.0	7%	22%	71%
EU average	5.5	12%	21%	68%
OECD average**	6.4	11%	19%	70%

* EU member state

** Excludes Latvia and Slovenia

Table 2.13 Informal Investor Activity

	Early Stage Entrepreneurial Activity (TEA) Rate (%)	Informal investors (%)	Informal investors (ranking)
Australia	12.0	3.0	10
Belgium *	2.7	2.5	14
Canada	7.1	3.6	7
Czech Republic *	7.8	5.3	4
Denmark *	5.3	2.5	15
Finland *	5.0	2.7	12
France *	4.4	4.7	5
Germany *	4.2	1.7	18
Greece *	7.9	3.1	8
Hungary *	6.0	.7	23
Iceland	11.3	5.8	2
Ireland *	7.4	1.7	17
Italy *	3.5	1.6	19
Japan	2.9	.6	24
Latvia *	6.6	5.3	3
Mexico	5.3	2.1	16
Netherlands *	5.4	1.1	22
Norway	9.1	4.0	6
Slovenia *	4.6	1.6	20
Spain *	7.3	2.8	11
Sweden *	3.4	2.6	13
Turkey	6.1	3.0	9
UK *	5.8	1.6	21
US	10.0	6.0	1
EU average	5.5	2.6	0
OECD average**	6.4	2.8	0

* EU member state

** Excludes Latvia and Slovenia

Table 2.14 Personal Context of Population

	Early Stage Entrepreneurial Activity (TEA) Rate (%)	Personal context (percentage responding Yes)			
		Know a recent entrepreneur	Opportunities in local area	Skills and knowledge to startup	Fear of failure prevent startup
Australia	12.0	41	55	51	35
Belgium *	2.7	28	15	35	27
Canada	7.1	31	45	53	24
Czech Republic *	7.8	33	27	38	35
Denmark *	5.3	43	65	36	40
Finland *	5.0	47	50	37	41
France *	4.4	47	21	33	49
Germany *	4.2	34	20	39	46
Greece *	7.9	32	22	46	58
Hungary *	6.0	26	16	43	28
Iceland	11.3	61	60	50	39
Ireland *	7.4	39	44	51	35
Italy *	3.5	37	23	44	39
Japan	2.9	28	9	16	26
Latvia *	6.6	48	41	36	44
Mexico	5.3	33	27	41	25
Netherlands *	5.4	29	46	38	29
Norway	9.1	43	51	39	27
Slovenia *	4.6	45	39	48	32
Spain *	7.3	34	33	46	46
Sweden *	3.4	46	46	42	29
Turkey	6.1	34	34	55	33
UK *	5.8	27	37	50	36
US	10.0	34	24	50	21
EU average	5.5	37	34	41	38
OECD average**	6.4	37	35	42	35

* EU member state

** Excludes Latvia and Slovenia

Table 2.15 Entrepreneurial Culture

	Early Stage Entrepreneurial Activity (TEA) Rate (%)	Cultural context for entrepreneurship (percentage of population responding Yes)		
		Entrepreneurship a good career choice	Success at entrepreneurship has high status	Supportive media coverage of entrepreneurs
Australia	12.0	57	72	64
Belgium *	2.7	47	53	37
Canada	7.1	71	70	76
Czech Republic *	7.8	65	47	63
Denmark *	5.3	52	74	33
Finland *	5.0	37	88	71
France *	4.4	65	68	37
Germany *	4.2	56	75	46
Greece *	7.9	64	66	40
Hungary *	6.0	56	68	23
Iceland	11.3	67	73	83
Ireland *	7.4	70	82	84
Italy *	3.5	73	69	46
Japan	2.9	25	45	54
Latvia *	6.6	66	76	70
Mexico	5.3	50	53	51
Netherlands *	5.4	80	65	59
Norway	9.1	61	69	77
Slovenia *	4.6	57	76	58
Spain *	7.3	71	60	45
Sweden *	3.4	51	61	57
Turkey	6.1	77	86	64
UK *	5.8	54	73	55
US	10.0	51	50	54
EU average	5.5	60	69	52
OECD average**	6.4	59	67	56

* EU member state

** Excludes Latvia and Slovenia

Table 2.16 The Environment for Entrepreneurship: Strengths and Weaknesses, Key Informants, 2006†

	Early Stage Entrepreneurial Activity (TEA) Rate (%)	Availability of funding	Government Policy	Government Regulations and Institutions	Government Programmes	Education Systems (Primary & Secondary)	Education Systems (Higher)	Technology Transfer (Commercialisation)	Business Services	Market Change	Market Openness (Anti-competition)	Physical infrastructure	National Entrepreneurial Culture	Availability of Opportunities	Population Entrepreneurial Competencies	Respect for Entrepreneurs	Intellectual Property Protection	Support for Women Entrepreneurship	High Growth Firms	Number of Experts
Australia	12.0		-							-		+		+			+	+		37
Belgium	2.7			-		-			+	-		+					+	+		36
Czech Republic	7.8	-	-	-		-		-			+	-			-				-	37
Denmark	5.3						-		+			+		+			+	+		37
Finland	5.0		-	-		-		-			-	+	-		-					36
Germany	4.2			-		-	-					+	-		-		+			71
Greece	7.9		-	-		-						+								35
Hungary	6.0		-	-	-	-							-		-			-		22
Iceland	11.3			+		-			+			+	+	+	+	+		+		31
Ireland	7.4					-				-				+		+	+		+	54
Italy	3.5		-	-		-		-			-		-	-	-		-			20
Latvia	6.6	-	-	-	-			-				+	-		-					21
Mexico	5.3		-		-		-			-										18
Netherlands	5.4					-		-	+			+		+			+			23
Norway	9.1		-					+	-		+						+			58
Slovenia	4.6	-	-	-	-	-			-			-		-						53
Spain	7.3	-				-				-		+								36
Turkey	6.1	-	-	-	-	-		-								+	-			36
UK	5.8			-		-						+					+			31
US	10.0	+					+		+			+	+	+	+	+	+	+	+	49

† A '+' indicates a strength, a '-' indicates a weakness, while a blank box indicates a 'neutral' factor - neither a strength or a weakness.

Table 2.17 Government Policies: Strengths and Weaknesses, Key Informants, 2006†

	Early Stage Entrepreneurial Activity (TEA) Rate (%)	Government Policy	Government Programmes	Government Regulations and Institutions	Intellectual Property Protection	Market Openness (Anticompetition)	Technology Transfer (Commercialisation)	High Growth Firms	Support for Women Entrepreneurship	Number of Experts
Australia	12.0	-			+				+	37
Belgium	2.7			-	+				+	36
Czech Republic	7.8	-		-			-	-		37
Denmark	5.3				+				+	37
Finland	5.0	-		-		-	-			36
Germany	4.2			-	+					71
Greece	7.9	-		-						35
Hungary	6.0	-	-	-					-	22
Iceland	11.3			+					+	31
Ireland	7.4				+			+		54
Italy	3.5	-		-	-	-	-			20
Latvia	6.6	-	-	-			-			21
Mexico	5.3			-		-	-			18
Netherlands	5.4				+		-			23
Norway	9.1	-							+	58
Slovenia	4.6	-	-	-		-	-			53
Spain	7.3									36
Turkey	6.1	-	-	-	-		-			36
UK	5.8			-	+					31
US	10.0				+			+	+	49

† A '+' indicates a strength, a '-' indicates a weakness, while a blank box indicates a 'neutral' factor - neither a strength or a weakness.

Table 2.18 Education System: Strengths and Weaknesses, Key Informants, 2006†

	Early Stage Entrepreneurial Activity (TEA) Rate (%)	Education Systems (Primary & Secondary)	Education Systems (Higher)	Number of Experts
Australia	12.0			37
Belgium	2.7	–		36
Czech Republic	7.8	–		37
Denmark	5.3		–	37
Finland	5.0	–		36
Germany	4.2	–	–	71
Greece	7.9	–		35
Hungary	6.0	–		22
Iceland	11.3	–		31
Ireland	7.4	–		54
Italy	3.5	–		20
Latvia	6.6			21
Mexico	5.3	–		18
Netherlands	5.4	–		23
Norway	9.1			58
Slovenia	4.6	–		53
Spain	7.3	–		36
Turkey	6.1	–		36
UK	5.8	–		31
US	10.0	–	+	49

† A '+' indicates a strength, a '-' indicates a weakness, while a blank box indicates a 'neutral' factor - neither a strength or a weakness.

Table 2.19 Selected Environment for Entrepreneurship: Strengths and Weaknesses, Key Informants, 2006†

	Early Stage Entrepreneurial Activity (TEA) Rate (%)	Are there opportunities?	Should people exploit these opportunities?		Can people exploit these opportunities?		Number of Experts
		Availability of Opportunities	National Entrepreneurial Culture	Respect for Entrepreneurs	Availability of funding	Population Entrepreneurial Competencies	
Australia	12.0	+					37
Belgium	2.7						36
Czech Republic	7.8		-		-	-	37
Denmark	5.3	+					37
Finland	5.0		-			-	36
Germany	4.2		-			-	71
Greece	7.9						35
Hungary	6.0		-			-	22
Iceland	11.3	+	+	+		+	31
Ireland	7.4	+		+			54
Italy	3.5	-	-			-	20
Latvia	6.6		-		-	-	21
Mexico	5.3						18
Netherlands	5.4	+					23
Norway	9.1						58
Slovenia	4.6		-		-		53
Spain	7.3				-		36
Turkey	6.1			+	-		36
UK	5.8						31
US	10.0	+	+	+	+	+	49

† A '+' indicates a strength, a '-' indicates a weakness, while a blank box indicates a 'neutral' factor - neither a strength or a weakness.

SECTION 3

Does Gender Matter?

3.1 Introduction

Irish policy makers recognise that a much greater number of competitive and innovative Irish companies will be needed as an integral part of a robust and well balanced economy in the years ahead. In order to meet this requirement, many entrepreneurs will be needed to create new businesses. The challenge is not only to generate a high level of new businesses being started, but to maximise the number of innovative businesses among them that subsequently develop to achieve high growth. To meet this challenge, Ireland needs to be able to draw on the entrepreneurial talents of all of its population – men and women.¹²

Anne Heraty is one of a number of dynamic Irish entrepreneurs that have achieved significant growth in recent years. The great majority of these, however, are men as Ireland's early stage entrepreneurial activity is driven by well educated men in their early thirties.

In 2006 as Chief Executive of Cpl Resources plc, Anne Heraty won the Ernst & Young Entrepreneur of the Year Award. She is the first woman to have won the Award within Ireland and is the first female CEO of a publicly quoted company.

Anne did not start out with a dream of creating a company with a €150 million turnover: she spotted a gap in the recruitment services market for a specialised approach and acted on it. Having carved out an initial niche in IT recruitment, opportunities for similar services in other sectors were identified and followed through.

Founded in 1989, Cpl Resources plc has grown both organically and by acquisition. A leading provider of specialist recruitment and HR outsourcing services, the company now has a turnover of €150 million, is listed on the DCM and AIM stock markets, employs an internal workforce of 250 employees, and offers long and short term work to over 15,000 people each year.

Anne Heraty is also giving back to the economy through her work in the policy area as the Chair of the Expert Group on Future Skills Needs. The Expert Group advises the Government on future labour market and manpower requirements needed to underpin a modern, sophisticated, knowledge based economy.

Ireland's challenge is that it needs to empower more women like Anne Heraty.

In this section we outline the context which forms the backdrop against which gender issues related to entrepreneurship in Ireland should be considered. The level and nature of entrepreneurial activity for men and women in Ireland is then described. We include this analysis as over recent years the rate of entrepreneurship among men has been much higher than that for women.

¹² This section was sponsored by the NDP Gender Equality Unit, Department of Justice, Equality and Law Reform, which is part funded from EU Structural Funds. The authors gratefully acknowledge this support. A shorter version of this section written by the Irish GEM team appeared in the 2006 GEM Report on Women and Entrepreneurship, Allen I.E. Langowitz N and Minniti M (2006) available for download from www.gemconsortium.org

3.2 Context

The past decade has seen a rapid and economically significant change in the composition of the workforce in Ireland. The overall number of women employed in Ireland has increased by 43% since 1997, and women now represent 42% of the working population. Moreover, the very strong performance by young women in examinations and their tendency to stay longer in the educational system suggest that a feedstock of talented women are emerging in increasing numbers in the economy.

At this point, however, the proportion of women who are deciding to become entrepreneurs in Ireland is considerably lower than it is for men and among those women that decide to become entrepreneurs, fewer have an aspiration for growth. This leaves a wide gender divide on both counts.

There are a higher proportion of women in the adult population actively planning and setting up new businesses (4.2%) than they are women who are the owners of longer established businesses (3.4%). There has been, however, no real sustained increase in the number of new women entrepreneurs over the last few years. The narrowing or the widening of the entrepreneurial gender gap from year to year is more a function of an increase or decrease in the proportion of adult men, who are actively planning or have set up new businesses, than it is a result of any major change in the number of women active as entrepreneurs.

While internationally women tend to set up new businesses less frequently than do men, it is noteworthy that in the most entrepreneurial of the developed OECD countries, women are much more active in setting up new businesses than they are in Ireland. This is true in the US, Canada and Australia. Ireland is out of line with the gender balance of those who have recently set up new businesses, compared to these other countries.

This is simply a lost resource as it reduces the number of new businesses that are being started in Ireland and shrinks the pool from which significant businesses can emerge in the future. If women were to establish new enterprises at the same rate as men in Ireland, there would be as many new businesses being set up in Ireland per capita as there are in the United States.

3.3 Entrepreneurial Activity by Gender

Entrepreneurship is much more common among Irish men than Irish women (Table 3.1).

- One in ten Irish men (10.5%), as compared to one in twenty four Irish women (4.2%) are early stage entrepreneurs.
- There were 145,000 male early stage entrepreneurs and 57,000 female early stage entrepreneurs in 2006.
- For every 100 male early stage entrepreneurs in Ireland there are 39 female early stage entrepreneurs. Men are 2.5 times more likely than women to be early stage entrepreneurs.

In terms of nascent entrepreneurial activity:

- There were 86,000 male nascent entrepreneurs and 36,000 female nascent entrepreneurs in Ireland in 2006.
- Men are 2.3 times more likely than women to be a nascent entrepreneur (6.2% of men compared to 2.7% of women).

In terms of new firm entrepreneurial activity:

- There were 60,000 male new firm entrepreneurs and 21,000 female new firm entrepreneurs.
- Men are nearly three times (2.9 times) more likely than women to be new firm entrepreneurs (4.3% of men compared to 1.5% of women).

In terms of established entrepreneurs:

- There were 169,000 men and 46,000 women actively involved in businesses they established prior to 2003.
- Men are more than three and half times (3.6 times) more likely than women to be established entrepreneurs (12.2% of men compared to 3.4% of women).

Looking back over the previous five years (2002-2006) GEM has reported a difference between the number of men entrepreneurs and women entrepreneurs in each of the last five years (Table 3.1). The average rate of early stage entrepreneurship for the five year period was 12.0% for men and 4.8% for women.

Table 3.1 Entrepreneurial Activity by Gender: 2002-2006

YEAR	MEN Early stage entrepreneurial activity (TEA)	WOMEN Early stage entrepreneurial activity (TEA)	MEN Nascent entrepreneurs	WOMEN Nascent entrepreneurs	MEN New firm entrepreneurs	WOMEN New firm entrepreneurs
2002	12.4%	5.5%	5.5%	2.7%	7.8%	3.3%
2003	12.5%	3.7%	7.7%	2.5%	6.0%	1.5%
2004	10.4%	5.0%	5.4%	3.4%	5.3%	1.9%
2005	14.2%	5.5%	8.4%	3.0%	6.8%	2.7%
2006	10.5%	4.2%	6.2%	2.7%	4.3%	1.5%

3.4 International Comparison: Entrepreneurial Activity

Rates of entrepreneurship by men and women differ across countries (Table 3.8 at end of section). Relative to other OECD and EU countries the rate of entrepreneurial activity for women is similar or higher than average.

- OECD. The rate of early stage entrepreneurship by Irish women (4.2%) is broadly similar to the average rate in OECD countries (4.3%). Ireland ranks tenth of the OECD countries in the rate of early stage entrepreneurship by women.

Therefore, the difference in the rate of early stage entrepreneurship in Ireland compared to the OECD average (7.35% in Ireland compared to 6.4% OECD average) is explained almost entirely by the higher rate of early stage entrepreneurship by Irish men (10.5% in Ireland compared to an OECD average of 8.4%).

- EU. The rate of early stage entrepreneurship by Irish women (4.2%) is higher than the average rate in the EU (3.5%). Ireland ranks fourth in the EU.

The higher rate of early stage entrepreneurship in Ireland compared to the EU (7.35% compared to an EU average of 5.46%) is explained by both higher rates of entrepreneurship by Irish men and Irish women, though the difference is much higher for men than it is for women.

In addition to comparing the absolute rate of activity, it is possible also to explore the extent of the difference in rates between men and women. For example, while Ireland, Spain and Canada have similar total rates of early stage entrepreneurship, 7.35%, 7.3% and 7.1% respectively, there are differences between rates for men and women in each of these countries.

Rates of entrepreneurship by gender are more similar in Canada (8.3% for men and 6.0% for women), than either in Spain or Ireland. Rates in Spain are more similar (8.8% for men and 5.7% for women) than they are for Ireland (10.5% for men and 4.2% for women). Men are 2.5 times more likely than women in Ireland to be early stage entrepreneurs, while in Spain men are only 1.6 times more likely, and in Canada they are only 1.4 times more likely.

- Ireland ranks third highest in the difference between men and women in terms of relative rates of early stage entrepreneurship (2.5 times). Belgium (4.2 times) and Iceland (2.9 times) are higher. The countries with the most even spread of entrepreneurship among men and women are Japan, Italy, Mexico, Canada and Australia. While four of these have total rates of entrepreneurship lower than Ireland, Australia has a much higher rate.

The rate of established entrepreneurs for women in Ireland is 3.4% (owner managers of businesses founded before 2003). This is slightly lower than the OECD average (3.6%) and slightly higher than the EU average (3.2%) (Table 3.9 at end of section). However, the rate of established entrepreneurship for men in Ireland (12.2%) is significantly higher than the OECD average (7.7%) and the EU average (7.2%). Ireland is ranked second highest in the OECD and EU for the rate of established entrepreneurship among men.

- Ireland has the second highest difference between males and females in terms of relative participation rates in established business activity by men and women (3.6 times). The OECD average and the EU average is 2.2 times.

3.5 Who Becomes an Entrepreneur? The Influence of Gender

While men are more likely than women to be early stage entrepreneurs, we can explore if factors such as age, education, work status and income levels influence men and women differently (Table 3.2).

- **AGE.** Men and women are similar in that rates of early stage entrepreneurship are highest in the 25-34 age groups.
- **EDUCATION.** Rates of entrepreneurship increase as the level of educational attainment increases for women.
- **WORK STATUS.** Entrepreneurial activity rates are higher for men even when women describe themselves as working- whether it is fulltime or part-time.
- **INCOME.** As income levels increase for men, rates of entrepreneurship also increase. This is not the case for women. Women in the middle third of income groups have the highest rate of early stage entrepreneurship.

Table 3.2 Age, Education, Work Status and Income by Gender, 2006

	Men	Women
	Early stage entrepreneurial activity (TEA) rate	Early stage entrepreneurial activity (TEA) rate
Age		
- 18 to 24 years	7.8%	2.4%
- 25-34 years	15.7%	6.1%
- 35-44 years	14.0%	5.5%
- 45-54 years	9.2%	3.3%
- 55 -64 years	1.8%	2.3%
Education		
- Some secondary	5.8%	0.8%
- Secondary (Leaving Cert or equivalent)	11.1%	3.6%
- Post secondary (Third Level)	13.6%	5.4%
- Graduate experience (Postgraduate)	11.0%	11.2%
Work Status		
- Fulltime	13.8%	6.7%
- Part-time	7.6%	3.4%
- Homemaker	0.0%	1.7%
- Not working or 'other'	3.2%	4.9%
- Student	1.0%	0.9%
- Retired or disabled	0.0%	4.8%
Income		
- Lowest 33% of population	7.2%	2.3%
- Middle 33% of population	10.2%	5.6%
- Highest 33% of population	14.0%	3.5%

3.6 Entrepreneurial Role Models, Opportunities and Skills of Irish Men and Women

Irish people differ in terms of their personal context for entrepreneurship (Table 3.3).

- Men are more likely to know a recent entrepreneur. More than four out of ten Irish men (45%) know a recent entrepreneur, compared to about three in ten Irish women (33%).

Men that know an entrepreneur are twice as likely to be early stage entrepreneurs compared to men who don't know a recent entrepreneur. Women who know an entrepreneur are five times more likely to be an entrepreneur.

- Men (45%) and women (43%) are equally likely to perceive opportunities in their local environment.

While perception of local opportunities does not appear to impact on whether men become entrepreneurs, women who perceive opportunities in their local area are more than three times more likely to be entrepreneurs.

- Men are more likely to believe they have the skills and knowledge to start a business. Six out of ten men (59%), compared to four out of ten women (43%), believe they have the knowledge and skills to start a business.

Men who believe they have the skills and knowledge to start a business are nearly four times more likely to be early stage entrepreneurs. For women, we report no entrepreneurs among women who believe they don't have the skills and knowledge to start a new business.

- Men are less likely to be inhibited by 'fear of failure'. Three out of ten (31%) men, compared to four out of ten women (39%), report that the fear of failing would prevent them from starting a business.

Men who don't have a 'fear of failure' are nearly three times more likely to be entrepreneurs. For women, a 'fear of failure' is associated with very low levels of entrepreneurial activity. Women who say that 'fear of failure' would prevent them starting a business are nine times less likely to start a business.

Table 3.3 Entrepreneurial Role Models, Opportunities, Skills and Fear of Failure by Gender, 2006

	Irish Men	Irish Women	Irish Men	Irish Women
	% of all Irish Men	% of all Irish Women	Early stage entrepreneurial activity (TEA) rate	Early stage entrepreneurial activity (TEA) rate
Know a recent entrepreneur				
- Yes	45%	33%	15.3%	10.4%
- No	55%	67%	8.5%	2.1%
Opportunities in the local area				
- Yes	45%	43%	13.3%	8.6%
- No	55%	57%	11.5%	2.4%
Has the knowledge and skills to start-up				
- Yes	59%	43%	16.4%	11.7%
- No	41%	57%	4.3%	0.0%
'Fear of failure' would prevent start-up				
- Yes	31%	39%	5.1%	0.8%
- No	69%	61%	14.3%	7.5%

Irish men and Irish women have a better personal context than the EU and OECD average (Table 3.10 and Table 3.11 at end of section).

- **ROLE MODELS.** Relative to OECD and EU countries, Irish men and women are similar in terms of whether they know a recent entrepreneur. 45% of Irish men know a recent entrepreneur, compared to OECD average of 42% and EU average of 43%. One in three Irish women (33%) knows a recent entrepreneur, compared to OECD and EU averages of 32%.
- **OPPORTUNITIES.** Relative to OECD and EU countries both Irish men and women are more likely to perceive opportunities in the local environment. 45% of men in Ireland perceive opportunities, compared to an OECD average of 39% and an EU average of 38%. Irish men are ranked ninth in the OECD and third in the EU. 43% of Irish women perceive opportunities, compared to an average of 31% in the both the EU and the OECD. Irish women are ranked sixth in OECD and third in EU.
- **SKILLS AND KNOWLEDGE.** Relative to OECD and EU countries Irish men and women are more likely to believe they have the skills and knowledge to start a business. 59% of Irish men believe they have the knowledge and skills to start a business, compared to OECD and EU averages of 50%. Irish men rank fourth in the OECD and second in EU.

43% of Irish women believe they have the skills and knowledge to start a business, compared to an OECD average of 34% and an EU average of 33%. Irish women rank fourth in the OECD and first in EU.

- **FEAR OF FAILURE.** Irish men and women are similar to other OECD and EU countries in terms of whether fear of failure would prevent them starting a business. Three out of every ten Irish men

(31%) report that fear of failure would prevent them starting a business, compared to 32% OECD average and a 33% EU average. Four of every ten Irish women (39%) report that fear of failure would prevent then starting a business, compared to an OECD average of 38% and an EU average of 33%.

3.7 Cultural Context of Irish Men and Women

Irish people differ in terms of their cultural context for entrepreneurship, though men and women do not differ on two of the three aspects of culture (Table 3.4). As noted earlier, Irish adults are very positive on these factors compared to other countries.

- **CAREER CHOICE.** Men are more positive about entrepreneurship as a good career choice (77%), though it should be noted that two thirds of women believe entrepreneurship is a good career choice.

An answer of 'yes' or 'no' on this factor does not seem to influence the rate of entrepreneurship for men or women.

- **RESPECT.** Men and women are similar in terms of their perceptions about the status of entrepreneurs, with eight in every ten men and women reporting that success in starting and growing a business leads to status.
- **MEDIA COVERAGE.** Men and women are similar in terms of their perceptions about the amount of media coverage of entrepreneurs.

For men, this factor doesn't impact on rates of entrepreneurship. Women who believe that there is a great deal of positive media coverage about entrepreneurs are much more likely to be entrepreneurs.

Table 3.4 Cultural Context and Rates of Entrepreneurship by Gender, 2006

	Irish Men	Irish Women	Irish Men	Irish Women
	% of all Irish people	% of all Irish people	Early stage entrepreneurial activity (TEA) rate	Early stage entrepreneurial activity (TEA) rate
Starting a business is a good career choice				
- Yes	73%	66%	12.9%	4.1%
- No	27%	34%	11.0%	4.8%
Successful new business leads to status				
- Yes	83%	81%	11.0%	5.2%
- No	17%	19%	19.6%	5.1%
Lots of media coverage of new businesses				
- Yes	83%	86%	11.7%	6.1%
- No	17%	14%	12.9%	0.1%

3.8 Irish Entrepreneurs

Rates of entrepreneurship differ for men and women. We now examine if, and how, those men and women entrepreneurs studied in GEM in the period 2002 to 2006 differ. These figures relate to both nascent entrepreneurs and new firm entrepreneurs.

Table 3.5 profiles men and women entrepreneurs in terms of age, education and work status.

- Men and women entrepreneurs are similar in terms of age.
- Men and women entrepreneurs are similar in terms of education – with four in ten having third level education and three in ten having just secondary education. There are some small differences at the extremes – two in ten men compared to less than one in ten women have less than secondary education. At the other extreme, more women entrepreneurs have post graduate experience – two in ten (20%) for women compared to 14% for men.
- The work status of men and women varies. More than eight of every ten men describe their status as fulltime employment – meaning that for men they are currently in fulltime employment while actively starting a business or they are fulltime involved in starting or running the new business. In contrast only six of every ten women describe their work status as fulltime. Nearly two in every ten women are working part-time and one in every ten is a homemaker.

Table 3.5 Characteristics of Men and Women Entrepreneurs, 2002-2006

	Men entrepreneurs	Women entrepreneurs
Age (mean)	35 years	36 years
Education		
- Some secondary	14%	7%
- Secondary (Leaving Cert or equivalent)	30%	28%
- Post secondary (Third Level)	42%	45%
- Graduate experience (Postgraduate)	14%	20%
Work Status		
- Fulltime	84%	61%
- Part-time	5%	18%
- Homemaker	0%	10%
- Not working, student, retired, disabled or 'other'	11%	11%

Table 3.6 profiles the nature of entrepreneurial activity for men and women entrepreneurs.

- **SECTOR.** Men and women have different preferences for sectors of activity. Two sectors are particularly common for both men and women. For men and women two in every ten entrepreneurs are in Business Services. For men 14% are in Retail Trade, Hotels and Restaurants, while 24% (one in every four) women are in Retail Trade, Hotels and Restaurants.
- **JOBS GROWTH.** Two thirds of men and women expect to grow to employing between one and nineteen employees in five years time. 17% of men and 11% of women expect to employ more than twenty in five years time.
- **INTERNATIONALISATION.** Six of every ten men expect to have some export activity, while seven in every ten women expect to have some export activity. For both men and women, two in every ten expect that more than one quarter of their customers will be in overseas markets.

Table 3.6 Nature of Activity: Men and Women Entrepreneurs 2002-2006

	Men entrepreneurs	Women entrepreneurs
Sector		
- Agriculture, Forestry, Hunting, Fishing	6%	6%
- Mining, Construction	14%	6%
- Manufacturing	9%	6%
- Utilities, Transport, Storage, and Communications	10%	2%
- Wholesale Trade	6%	2%
- Retail Trade, Hotels, and Restaurants	14%	24%
- Financial Intermediation, Real Estate Activities	6%	2%
- Business Services	21%	20%
- Government, Health, Education, Social Services	3%	16%
- Personal/Consumer Service Activities	10%	17%
Growth Expectation (Jobs in 5 years)		
- No jobs	16%	24%
- 1 to 5 jobs	43%	44%
- 6 -19 jobs	24%	21%
- 20 or more jobs	17%	11%
Internationalisation (Customers in overseas markets)		
- 75% to 100%	11%	7%
- 25% to 74%	10%	13%
- 1 to 24%	38%	50%
- None	42%	31%

For those starting with an anticipated *total* investment of less than €100,000,¹³ which is about three quarters of all entrepreneurs, there are differences in the anticipated total funding required between men and women entrepreneurs. Men anticipate needing more finance than women (€27,600 for men compared to €18,600 for women). For men and women starting with a planned *personal* investment of less than €100,000 there are also differences in the average planned personal investment. Men anticipate investing more of their own finance (€20,200 for men compared to €12,000 for women).

Table 3.7 profiles the personal context of men and women entrepreneurs.

- Men and women entrepreneurs have very similar personal contexts in terms of perception of opportunities, the knowledge and skills to start a business and whether 'fear of failure' would prevent start-up.
- Men and women entrepreneurs differ in terms of knowing a recent entrepreneur. Three quarters of men report knowing a recent entrepreneur (76%) compared to approximately two thirds of women (64%).

Table 3.7 Personal Context: Men and Women Entrepreneurs 2002-2006

	Men entrepreneurs	Women entrepreneurs
Know a recent entrepreneur (who started in last 2 years)	76%	64%
Perceive good opportunities	62%	62%
Knowledge and skills to start up	90%	89%
'Fear of failure' would prevent start-up	19%	20%

¹³This analysis is based on the *mean* financial requirement of men and women entrepreneurs.

3.8 Ireland's Challenge to Increase the Number of Women Entrepreneurs

Irish policy makers have been considering matters related to entrepreneurship in recent years. The Enterprise Strategy Group¹⁴ report placed major emphasis on the need to grow the base of indigenous firms in Ireland in order to balance and complement the contribution of foreign direct investment in the country. This requirement was taken up and further examined by the Small Business Forum.¹⁵ The Small Business Forum, while recognising that there were many supporting factors fostering entrepreneurship within Ireland, recommended that the Government should formally adopt a national entrepreneurship policy focused on optimising the number of start-up businesses, and in particular, focused on maximizing the number of start-ups aspiring to and achieving high growth. As part of this policy, the Small Business Forum recommended that measures should be adopted to stimulate the latent entrepreneurial potential among women.¹⁶

A national entrepreneurship policy is currently being developed. The challenge to foster a greater level of entrepreneurial activity among women will be an integral part of this policy. Experience in Finland and the US demonstrates that when targeted measures are introduced to increase the number of women entrepreneurs, they have been particularly successful.

Anne Hearty believes that there is no better time than the present to be considering entrepreneurship in Ireland: ‘ ‘ *The buoyancy of the Irish economy offers great opportunities. It is a great time to be starting out for both men and women.*’ Anne personally never encountered any barriers to being a women entrepreneur and believes that entrepreneurship provides an opportunity for women to reap great personal and financial benefits and to be economically independent. ‘ ‘ *There is no reason that women cannot succeed as entrepreneurs. I am convinced that in Ireland we have very many women with the knowledge and skills to develop sustainable, profitable businesses.*’ ’

To release the full entrepreneurial potential that she believes exists among women, Anne Hearty is of the opinion that as a country, ‘ ‘ *we must ensure that the developmental support infrastructure is in place to encourage more women to take the plunge and to appropriately support those who do become entrepreneurs to achieve the full potential of their new ventures.*’ Initiatives flowing from the national entrepreneurship policy will be designed to do exactly that.

Time will tell whether more women become active as entrepreneurs in Ireland and whether the entrepreneurial gender gap is narrowed. GEM will continue to monitor and report on the changes as they happen.

¹⁴ *Ahead of the Curve*, Enterprise Strategy Group Report, 2003 (www.forfas.ie/esg)

¹⁵ *Small Business is Big Business*, Report of the Small Business Forum, 2006 (www.smallbusinessforum.ie)

¹⁶ Section 5.6.1 page 55

Table 3.8 Early Stage Entrepreneurs by Gender

	Early Stage Entrepreneurial Activity (TEA) Rate (%)	Men (Early Stage Entrepreneurial Activity (TEA) Rate) (%)	Women (Early Stage Entrepreneurial Activity (TEA) Rate) (%)	Rates as ratio (men/women)***	Women rate as percentage of men rate
Australia	12.0	14.0	9.9	1.4	70%
Belgium *	2.7	4.4	1.0	4.2	24%
Canada	7.1	8.3	6.0	1.4	73%
Czech Republic *	7.8	10.7	4.9	2.2	46%
Denmark *	5.3	7.3	3.3	2.2	45%
Finland *	5.0	5.9	4.0	1.5	68%
France *	4.4	6.3	2.5	2.5	40%
Germany *	4.2	5.8	2.6	2.2	45%
Greece *	7.9	11.1	4.7	2.4	42%
Hungary *	6.0	8.1	4.1	2.0	50%
Iceland	11.3	16.7	5.7	2.9	34%
Ireland *	7.4	10.5	4.2	2.5	40%
Italy *	3.5	3.9	3.1	1.3	79%
Japan	2.9	3.2	2.6	1.2	81%
Latvia *	6.6	9.4	3.9	2.4	42%
Mexico	5.3	6.1	4.5	1.4	73%
Netherlands *	5.4	7.2	3.6	2.0	50%
Norway	9.1	12.3	5.9	2.1	48%
Slovenia *	4.6	6.9	2.3	3.0	33%
Spain *	7.3	8.8	5.7	1.5	65%
Sweden *	3.4	4.4	2.4	1.8	55%
Turkey	6.1	8.5	3.5	2.4	41%
UK *	5.8	7.9	3.6	2.2	46%
US	10.0	12.7	7.4	1.7	58%
EU average	5.5	7.4	3.5	2.1	47%
OECD average**	6.4	8.4	4.3	1.9	52%

* EU member state

** Excludes Latvia and Slovenia

*** The number of times a man is more likely to be an early stage entrepreneur relative to a women

Table 3.9 Established Entrepreneurs by Gender

	Established entrepreneurs (%)	Men (Established entrepreneurs rate) (%)	Women (Established entrepreneurs rate) (%)	Rates as ratio (men/women)***	Women rate as percentage of men rate
Australia	9.1	9.7	8.6	1.1	89%
Belgium *	2.1	3.4	0.9	3.9	26%
Canada	5.1	6.2	4.0	1.6	64%
Czech Republic *	5.4	7.7	3.1	2.4	41%
Denmark *	5.3	7.8	2.7	2.9	34%
Finland *	8.2	11.6	4.8	2.4	42%
France *	1.3	1.3	1.4	1.0	103%
Germany *	3.0	3.9	2.1	1.9	54%
Greece *	8.2	9.3	7.2	1.3	77%
Hungary *	6.7	9.0	4.5	2.0	50%
Iceland	7.4	10.1	4.7	2.2	46%
Ireland *	7.8	12.2	3.4	3.6	28%
Italy *	3.0	4.3	1.7	2.5	40%
Japan	4.8	6.6	2.9	2.3	44%
Latvia *	5.7	8.1	3.4	2.4	42%
Mexico	2.3	2.7	1.9	1.4	71%
Netherlands *	6.6	9.3	3.8	2.4	41%
Norway	6.0	8.7	3.2	2.7	37%
Slovenia *	4.4	6.4	2.4	2.6	38%
Spain *	5.5	7.6	3.3	2.3	43%
Sweden *	5.0	6.0	4.0	1.5	67%
Turkey	11.5	16.7	6.0	2.8	36%
UK *	5.4	7.9	2.9	2.8	36%
US	5.4	7.7	3.2	2.4	41%
EU average	5.2	7.2	3.2	2.3	44%
OECD average**	5.7	7.7	3.6	2.1	47%

* EU member state

** Excludes Latvia and Slovenia

*** The number of times a man is more likely to be an early stage entrepreneur relative to a women

Table 3.10 Personal Context of Male Population

	Men: Early Stage Entrepreneurial Activity (TEA) Rate (%)	Personal context (percentage responding Yes)			
		Know a recent entrepreneur	Opportunities in local area	Skills and knowledge to start-up	Fear of failure prevent start-up
Australia	14.0	43	57	56	32
Belgium *	4.4	35	19	46	26
Canada	8.3	34	48	61	21
Czech Republic *	10.7	40	33	47	32
Denmark *	7.3	49	69	48	38
Finland *	5.9	50	50	42	36
France *	6.3	54	26	43	46
Germany *	5.8	39	25	48	40
Greece *	11.1	37	26	56	56
Hungary *	8.1	30	18	50	26
Iceland	16.7	67	59	61	31
Ireland *	10.5	45	45	59	31
Italy *	3.9	44	27	54	34
Japan	3.2	31	14	21	28
Latvia *	9.4	52	41	38	42
Mexico	6.1	34	28	42	24
Netherlands *	7.2	36	49	48	25
Norway	12.3	50	57	47	29
Slovenia *	6.9	53	44	56	26
Spain *	8.8	39	36	52	43
Sweden *	4.4	50	50	49	26
Turkey	8.5	42	39	67	27
UK *	7.9	32	41	59	33
US	12.7	36	31	57	19
EU average	7.4	43	38	50	35
OECD average**	8.4	42	39	50	32

* EU member state

** Excludes Latvia and Slovenia

Table 3.11 Personal Context of Female Population

	Women: Early Stage Entrepreneurial Activity (TEA) (%)	Personal context (percentage responding Yes)			
		Know a recent entrepreneur	Opportunities in local area	Skills and knowledge to start-up	Fear of failure prevent start-up
Australia	9.9	38	53	45	37
Belgium *	1.0	20	11	23	28
Canada	6.0	27	41	45	27
Czech Republic *	4.9	27	21	29	37
Denmark *	3.3	37	60	26	43
Finland *	4.0	43	49	31	46
France *	2.5	40	17	24	52
Germany *	2.6	29	15	29	53
Greece *	4.7	27	18	36	60
Hungary *	4.1	23	14	37	30
Iceland	5.7	54	61	38	46
Ireland *	4.2	33	43	43	39
Italy *	3.1	30	19	35	43
Japan	2.6	25	4	10	24
Latvia *	3.9	45	42	35	46
Mexico	4.5	32	26	41	26
Netherlands *	3.6	22	42	27	33
Norway	5.9	36	45	31	24
Slovenia *	2.3	37	34	39	38
Spain *	5.7	30	30	41	50
Sweden *	2.4	42	42	35	33
Turkey	3.5	26	28	42	39
UK *	3.6	23	32	40	39
US	7.4	33	18	43	23
EU average	3.5	32	31	33	42
OECD average**	4.3	32	31	34	38

* EU member state

** Excludes Latvia and Slovenia

SECTION 4

Profiles of Selected Other Countries at a Glance

4.1 Introduction

Readers of Ireland's GEM national report have commented that they have found the comparisons with other countries particularly interesting. For this reason we have included detailed tables at the end of each section to facilitate readers making comparisons across the participating OECD countries for each variable.

These comparisons are made possible because GEM research is carried out in exactly the same way in each of the participating countries and is coordinated by the Global Entrepreneurship Research Association (GERA) based in London Business School. In 2006, 42 countries participated in GEM research and the level of entrepreneurial activity in each of these countries is set out in Appendix 1.

In this section we have selected six countries and have asked the national GEM teams in each of these countries to write a short summary of the state of entrepreneurship in their country in 2006. For each we have included a table which sets out the headline results for each of these countries side by side with the results for Ireland. In this way comparisons can be made between each of these countries and Ireland at a glance.

We have selected countries that we consider may be of particular interest to our readers. The countries selected are Australia, Canada, Denmark, Norway, the UK and the US. We are very grateful to our GEM colleagues for their co-operation in contributing profiles about their countries.

Other country summaries, together with the global executives report, special topic reports and a range of national reports may be found on www.gemconsortium.org

4.2 Australia¹⁷

Key Results

2006 has seen an increase in start-up and young business participation rates and a decrease in established business rates. Early-stage business ownership increased from 10.9% to 12.0%. Informal investor participation remains around the 3% level and 49.1% of those people do not expect to get any payback within the next ten years. The female to male early stage participation rate ratio increased by 17% to 70%. This unexplained fluctuation in the level of females participating in entrepreneurship is now confirmed as a key area where focused research is urgently needed. This year, a higher proportion of early stage business owners are involved in entrepreneurship for reasons of opportunity rather than necessity. They are motivated more by a desire to increase income rather than by a desire for independence. Most new firms introduce products or services that do not differentiate from their customers and use old technology. Growth aspirations have increased substantially among owner-operated businesses this year, with an increase in business owners who are exporting or intending to export, and a rise in the numbers expected to be employed in the next five years.

Positive and Negative Influences On Entrepreneurial Activity

Commercial infrastructure, physical infrastructure, financial conditions and cultural-social norms were the four factors considered to have the most positive impact on Australian entrepreneurial activity. Whilst the experts considered government policies, government programmes, R&D transfer, education and training to be among the most negative framework conditions.

Recent Initiatives for Encouraging Entrepreneurial Activity

There have been no recent initiatives affecting the direction or the prioritising of entrepreneurship in Australia.

Entrepreneurial Culture

In 2005, Australia's culture, values and social norms were generally perceived by commentators as having a negative impact on entrepreneurship. In contrast, this year's expert consensus is more optimistic. However, values and social norms change slowly in the general population and the views expressed this year may have been influenced by relatively small-scale tendencies in certain atypical communities: the positive trend in expert opinion will probably take some years to be reflected in the general population.

Current Entrepreneurial Policy

Expert opinion suggests that now is a good time for policies aimed at enhancing and fostering entrepreneurial spirit. Ever since 2000, GEM Australia has argued that the battle to create a uniquely Australian entrepreneurial culture can only be achieved through the education system at all levels. As a high proportion of Australians are involved in early stage business participation (compared to most other developed countries), but the innovativeness of this involvement is relatively low, all educational initiatives should focus particularly on increasing the innovative propensities of Australians involved in early stage businesses.

¹⁷ The Irish GEM team gratefully acknowledges the co-operation of the members of the Australian GEM team who wrote this summary.

Table 4.1 Headline Results for Australia and Ireland

	Ireland % of adult population	Australia % of adult population
Entrepreneurial Activity		
Early Stage Entrepreneurs (TEA)	7.4	12.0
Nascent entrepreneurs	4.5	7.3
New firm entrepreneurs	2.9	5.7
Established business owners	7.8	9.1
Exit of entrepreneurs	1.8	3.9
Personal Context		
Know an entrepreneur (% YES)	39	41
Perceive good opportunities (% YES)	44	55
Knowledge and skills to start a business (% YES)	51	51
'Fear of failure' would prevent start-up (% YES)	35	35
Cultural Context		
Entrepreneurship is considered a good career choice (% YES)	70	57
Successful entrepreneurs are held in high regard (% YES)	82	72
Positive media coverage of successful entrepreneurs (% YES)	84	64
Gender		
Early Stage Entrepreneurs: Men	10.5	9.7
Early Stage Entrepreneurs: Women	4.2	8.6
Informal Investing		
Informal Investment Activity	1.7	3.0
Exporting activity		
Expect more than 50% of customers to be outside country	0.9	1.1
More than 50% of customers outside country (established entrepreneurs)	1.1	0.7
Growth Expectations		
Any jobs now or in 5 years	5.5	7.5
Expects more than 19 jobs in 5 years time	1.3	1.0

4.3 Canada¹⁸

Key Results

Early-stage entrepreneurial activity fell from 12.4% in 2005 to 10% in 2006: a 19% year-on-year decrease. This means that 1.5 million adults (18-64 years of age) were actively creating a business or managing one for a period of up to 42 months, compared with 1.9 million adults in 2005. The reduction in entrepreneurial activity in Canada is comparable to the USA where early-stage entrepreneurship fell from 12.4% in 2005 to 10% in 2006: a 21% year-on-year decrease. The greater part of the decline is attributable to a fall in nascent entrepreneurship (from 6.6% in 2005 to 4.1% in 2006); the prevalence rate of entrepreneurs in young firms fell by rather less (from 3.6% to 3.2%).

The results for 2006 also show changes in relative male and female participation. Early entrepreneurial activity increased slightly for females from 5.5% in 2005 to 6.0% in 2006, whilst it decreased significantly for males from 13.1% to 8.3%, a year-on-year decrease of 37%.

The reduction in entrepreneurial activity was accompanied by a significant decrease in financial resources from informal investors: the proportion of informal investors shrank significantly from 4.2% in 2005 to 2.8% in 2006: a year-on-year decrease of 33%. This marks a major turn-around from the previous year's 55% increase and may have been a constraining factor on entrepreneurial activity.

The annual rate of business closures has remained the same since 2004 at the 2% level.

Positive and Negative Conditions Affecting Entrepreneurial Activity

Canada ranked first regarding the ease of creating a business in the World Bank's 'Doing Business Report 2007'.

Very strong economic growth in Western Canada (in particular, Alberta) means that new businesses are facing problems in terms of recruiting and retaining employees; thus constraining their growth prospects and threatening their survival. This may explain a regional decrease in entrepreneurship outside the oil/gas sector.

Recent Initiatives for Encouraging Entrepreneurial Activity

In Quebec, a programme called 'The Challenge for Youth Entrepreneurship', established in 2004, is mobilizing all stakeholders (education, business, and government agencies) in the field with very positive results.

Entrepreneurial Culture

Canadian culture is very supportive for entrepreneurship, especially in Ontario and in the Western Provinces.

Current Entrepreneurial Policy

There have been no new policies at the federal level during 2006; however, many provinces have programmes that actively support entrepreneurship, especially in the high-tech sector.

¹⁸ The Irish GEM team gratefully acknowledges the co-operation of the members of the Canadian GEM team, particularly Nathaly Riverin and Ian Vertinsky, who wrote this summary.

Table 4.2 Headline Results for Canada and Ireland

	Ireland % of adult population	Canada % of adult population
Entrepreneurial Activity		
Early Stage Entrepreneurs (TEA)	7.4	7.1
Nascent entrepreneurs	4.5	4.1
New firm entrepreneurs	2.9	3.2
Established business owners	7.8	5.1
Exit of entrepreneurs	1.8	2.4
Personal Context		
Know an entrepreneur (% YES)	39	31
Perceive good opportunities (% YES)	44	45
Knowledge and skills to start a business (% YES)	51	53
'Fear of failure' would prevent start-up (% YES)	35	24
Cultural Context		
Entrepreneurship is considered a good career choice (% YES)	70	71
Successful entrepreneurs are held in high regard (% YES)	82	70
Positive media coverage of successful entrepreneurs (% YES)	84	76
Gender		
Early Stage Entrepreneurs: Men	10.5	8.3
Early Stage Entrepreneurs: Women	4.2	6.0
Informal Investing		
Informal Investment Activity	1.7	3.6
Exporting activity		
Expect more than 50% of customers to be outside country	0.9	0.6
More than 50% of customers outside country (established entrepreneurs)	1.1	0.5
Growth Expectations		
Any jobs now or in 5 years	5.5	5.0
Expects more than 19 jobs in 5 years time	1.3	0.7

4.4 Denmark¹⁹

Key Results

The trend in entrepreneurship in Denmark was one of decline in the early years of the decade, but then it turned and now entrepreneurship in Denmark is experiencing an upward turn.

Denmark is among the wealthiest countries in the world, and currently is experiencing an unusually fast economic growth. This growth of itself, however, is not a simple or direct consequence of entrepreneurship, because entrepreneurship which was previously in decline has only now begun to increase. Rather it may be explained as an indirect consequence of the growth, which has the effect of making people more optimistic and specifically they perceive more opportunities for starting a business. Moreover, the economic growth makes more capital available for investment in new businesses.

Entrepreneurs are intensely innovative in Denmark, on average. In this they are ahead of entrepreneurs in other developed countries.

The capital region of Denmark has the highest level of entrepreneurial activity of all regions in Denmark. The cultural prestige of the entrepreneurial vocation, adults' perception of opportunities and their networking with those that have recently started a new business is especially high in the capital region and may explain the high level of entrepreneurship there. The capital also has higher per capita educational attainment levels than the other regions. Given the positive association of education and increased entrepreneurial activity in Denmark, this is also likely to have an impact on the higher levels of entrepreneurship that is present in the capital region. The degree of innovation among entrepreneurs, their export propensity and their growth aspirations are all higher in the capital than in other regions.

The Impact of Gender

Women become entrepreneurs in Denmark at half the rate of men and this situation has not changed in recent years. Denmark has a lower ratio of women's participation to men's participation than is typical for a developed country. This occurs in spite of considerable policy efforts at more equal participation. These efforts are more extensive than are typical in other developed countries.

Policy Considerations

The Danish Government aims to catch up with the elite in entrepreneurship in Europe. Given that Denmark is now ranked about half way among the participating European countries, it is a long way up to the elite! Ambitions to increase the rate of entrepreneurial activity are not unique to Denmark, however. They characterise most developed countries – including those who would be considered already among the entrepreneurial elite.

The concentration by Government should be on further increasing the level of education and training that is oriented towards entrepreneurship and on further improving institutional framework conditions as these have been stable in recent years and are only at the average across the developed countries.

¹⁹ The Irish GEM team gratefully acknowledges the co-operation of the members of the Danish GEM team, particularly Dr. Thomas Shott, of the University of Southern Denmark, who wrote this summary.

Table 4.4 Headline Results for Denmark and Ireland

	Ireland % of adult population	Denmark % of adult population
Entrepreneurial Activity		
Early Stage Entrepreneurs (TEA)	7.4	5.3
Nascent entrepreneurs	4.5	2.9
New firm entrepreneurs	2.9	2.7
Established business owners	7.8	5.3
Exit of entrepreneurs	1.8	1.8
Personal Context		
Know an entrepreneur (% YES)	39	43
Perceive good opportunities (% YES)	44	65
Knowledge and skills to start a business (% YES)	51	36
'Fear of failure' would prevent start-up (% YES)	35	40
Cultural Context		
Entrepreneurship is considered a good career choice (% YES)	70	52
Successful entrepreneurs are held in high regard (% YES)	82	74
Positive media coverage of successful entrepreneurs (% YES)	84	33
Gender		
Early Stage Entrepreneurs: Men	10.5	7.3
Early Stage Entrepreneurs: Women	4.2	3.3
Informal Investing		
Informal Investment Activity	1.7	2.5
Exporting activity		
Expect more than 50% of customers to be outside country	0.9	0.8
More than 50% of customers outside country (established entrepreneurs)	1.1	0.6
Growth Expectations		
Any jobs now or in 5 years	5.5	3.9
Expects more than 19 jobs in 5 years time	1.3	0.7

4.5 Norway²⁰

Key Results

In 2006 Norway was one of the most entrepreneurial countries in Europe, only behind Iceland. Moreover, the regression line indicating the expected entrepreneurship level at different GDP levels, suggests that Norway's early stage entrepreneurship level is at an optimum level.

The current situation reflects an improved position in 2005 and again in 2006, after declining levels of early stage entrepreneurship were recorded by GEM research in the years to 2004. Economic growth, low interest rates and changes in the fiscal regime characterised the environment in Norway since 2005 and have contributed to the higher prevalence rates in these years. In 2006, the early stage entrepreneurial activity levelled out at 9.1%.

As early stage entrepreneurial activity remains high, the key informant data for 2006 does not indicate any major changes in the framework conditions for entrepreneurship. The entrepreneurs on the other hand, reveal that in recent years, necessary technology has become more and more available. Individuals in Norway are also almost entirely motivated to become entrepreneurs in order to pursue business opportunities. The 2006 GEM research indicates that the need for funding when starting the business has increased, partly explained by the fact that the new ventures being started are of a greater size than was previously the case.

Fewer people in Norway in rural areas are involved in early stage entrepreneurial activity than is the case in urban areas. Moreover, rural based new businesses are often less innovative than is the case with new businesses in urban areas. More rural based businesses report that they are competing with existing businesses, serving nearby customers with well known products produced with established technology. This can partly be explained by early stage entrepreneurs in rural areas reporting fewer entrepreneurial opportunities than early stage entrepreneurs in urban areas.

While the prevalence rate of business angels is above the average across participating GEM countries, the average amount invested is lower than the GEM average. The rate at which women are involved in early stage entrepreneurial activity suggests that there is a substantial entrepreneurial potential still untapped in Norway.

Policy Recommendations

- Policy makers should continue encouraging women to become entrepreneurs.
- Since business angels are very important to the early stages of a new ventures life, a broader perspective should be applied in the development of tax-incentives for business angels.
- To facilitate entrepreneurship in rural areas, the government should try to develop new industries through research and development. One example is the promising prospects for nuclear plants based on the unique Thorium resources, and new bio medical discoveries about to be commercialized.

²⁰ The Irish GEM team gratefully acknowledges the co-operation of the members of the Norwegian GEM team, particularly Professor Lars Kolvereid, of the Bodø Graduate School of Business, who wrote this summary.

Table 4.5 Headline Results for Norway and Ireland

	Ireland % of adult population	Norway % of adult population
Entrepreneurial Activity		
Early Stage Entrepreneurs (TEA)	7.4	9.1
Nascent entrepreneurs	4.5	5.2
New firm entrepreneurs	2.9	4.3
Established business owners	7.8	6.0
Exit of entrepreneurs	1.8	2.8
Personal Context		
Know an entrepreneur (% YES)	39	43
Perceive good opportunities (% YES)	44	51
Knowledge and skills to start a business (% YES)	51	39
'Fear of failure' would prevent start-up (% YES)	35	27
Cultural Context		
Entrepreneurship is considered a good career choice (% YES)	70	61
Successful entrepreneurs are held in high regard (% YES)	82	69
Positive media coverage of successful entrepreneurs (% YES)	84	77
Gender		
Early Stage Entrepreneurs: Men	10.5	12.3
Early Stage Entrepreneurs: Women	4.2	5.9
Informal Investing		
Informal Investment Activity	1.7	4.0
Exporting activity		
Expect more than 50% of customers to be outside country	0.9	1.2
More than 50% of customers outside country (established entrepreneurs)	1.1	0.3
Growth Expectations		
Any jobs now or in 5 years	5.5	7.1
Expects more than 19 jobs in 5 years time	1.3	0.7

4.6 The UK²¹

Key Results

In 2006, the early-stage entrepreneurship rate was 5.8%: a small (and not statistically significant) fall from the 6.2% reported in 2005. However, the reduction is smaller than that for the USA (12.4% to 10%), Germany (5.4% to 4.2%) or France (5.4% to 4.4%). Male early-stage entrepreneurial activity declined slightly to 7.9% (from 8.2%) while that for females remained roughly constant at 3.6%. Some 5.4% of the adult population owns or manages an established business (older than 42 months) bringing the level of overall business ownership to 10.9%; compared to 14.7% in the USA. 23% of all early-stage activity is in new product market areas and 7.8% of all early-stage entrepreneurs have 75-100% of their markets abroad. 10.2% of early-stage activity and 9.6% of established business activity is in new technology areas.

The Most Positive and Negative Conditions Affecting Entrepreneurial Activity

Macroeconomic performance in the UK has remained strong, with forecast GDP growth at 2.6% and labour market participation now at 74%. Inflationary pressures have led to rising interest rates, which may impact on the propensity of entrepreneurs to borrow start-up finance.

Increased university tuition fees has injected additional pressures on the Retail Price Index which will, according to some surveys, take three years to work through and may have an impact on the confidence of households, students and graduates to incur additional debt. Although these changes occurred after the completion of the adult population survey in 2006, their anticipation may have had a dampening effect on overall early stage activity.

Recent Initiatives for Encouraging Entrepreneurial Activity

The lower level of entrepreneurial activity and entrepreneurship in deprived areas is being addressed through the local enterprise growth initiative (LEGI). In terms of Enterprise Education, significant funding is supporting enterprise education for 14-16 year olds. Two new Enterprise Capital Funds have been launched (mixed public and private capital) to provide growth finance: with one of these focused on clean technology investments.

Entrepreneurial Culture

The attitudinal factors driving UK early-stage entrepreneurial activity continue to be positive, although indicators have slipped slightly on their 2005 levels. Among UK adults, 7.8% expect to start a business over the next three years, 27.2% know an entrepreneur, 36.8% see good business opportunities and 49.6% think that they have the skills to start a business. Fear of failure remains high at 35.8% of the population.

Current Entrepreneurial Policy

Current policy continues to see entrepreneurship as one of the major drivers behind the UK further improving its productivity. There is now a major emphasis on reducing the number of business support schemes from 3000 to 100 in the interests of clarifying for potential users what support is available. Business Link Operators are now the responsibility of the Regional Development Agencies. Specific, national initiatives, such as the Women's Enterprise Task Force ensure that best practice is shared across different areas and interest groups.

²¹ The Irish GEM team gratefully acknowledges the co-operation of the members of the UK GEM team, particularly Dr. Rebecca Harding, who wrote this summary.

Table 4.6 Headline Results for the UK and Ireland

	Ireland % of adult population	UK % of adult population
Entrepreneurial Activity		
Early Stage Entrepreneurs (TEA)	7.4	5.8
Nascent entrepreneurs	4.5	3.2
New firm entrepreneurs	2.9	2.8
Established business owners	7.8	5.4
Exit of entrepreneurs	1.8	2.0
Personal Context		
Know an entrepreneur (% YES)	39	27
Perceive good opportunities (% YES)	44	37
Knowledge and skills to start a business (% YES)	51	50
'Fear of failure' would prevent start-up (% YES)	35	36
Cultural Context		
Entrepreneurship is considered a good career choice (% YES)	70	54
Successful entrepreneurs are held in high regard (% YES)	82	73
Positive media coverage of successful entrepreneurs (% YES)	84	55
Gender		
Early Stage Entrepreneurs: Men	10.5	7.9
Early Stage Entrepreneurs: Women	4.2	3.6
Informal Investing		
Informal Investment Activity	1.7	1.6
Exporting activity		
Expect more than 50% of customers to be outside country	0.9	0.8
More than 50% of customers outside country (established entrepreneurs)	1.1	0.4
Growth Expectations		
Any jobs now or in 5 years	5.5	3.9
Expects more than 19 jobs in 5 years time	1.3	0.7

4.7 The US²²

Key Results

Early stage entrepreneurial activity in 2006 measures 10%, a combination of nascent entrepreneurs at 7.5% and new business owners at 3.3%. This represents a decline from the 12.4% reported in 2005. The Overall Business Owners (OBO) index, the count of early-stage plus established business, is at 14.7%.

Over 30% of early stage companies plan to offer products that are new to some customers contrasting with only 20% of established business owners making this claim. More than 32% of early-stage companies will use the very latest or new (1-5 years old) technology in their business as compared to 16% of established businesses.

Early-stage entrepreneurs in the United States believe that their businesses have high potential with 20.1% expecting to create more than ten jobs and over 50% growth in five years compared to only 7.5% of established business owners.

The Most Positive and Negative Conditions Affecting Entrepreneurial Activity

Classic venture capital investing in the USA has levelled out at an annual amount of about \$22 to \$24 million billion in the last three years. This is way off its 2000 peak of more than \$100 billion at the height of the internet boom; but put in the context of long-term trends, it is a five-fold increase over the level in the early 1990s. Here are interesting recent trends:

In the second quarter of 2006, biotech investments overtook software investments as the industry category in which the most classic venture capital was invested. Investment in the wireless sector of telecommunications hit a four-year high in 2005 and continued strong in 2006. First-time investments in internet-related companies almost doubled in 2005.

On the downside, the initial public offering market for companies backed by venture capital is still in the doldrums.

Entrepreneurial Culture

Buoyed by a booming economy, entrepreneurial activity continues at a high level. From August 2003 to October 2006, 6.8 million new jobs have been created in the USA—the majority of them coming from small businesses. Young, educated Americans continue to choose entrepreneurship as their career: 52% of early-stage entrepreneurs in the United States are under 35 years old and 64% of them have some college education with 52% having one or more degrees.

Current Entrepreneurial Policy

Overall, public policy for entrepreneurship is positive. Probably the biggest concern is the cost of health care, which is an increasing burden for businesses of all sizes, but hits start-up and young businesses particularly hard.

²² The Irish GEM team gratefully acknowledges the co-operation of the members of the US GEM team, particularly Professor William Bygrave of Babson College who wrote this summary.

Table 4.7 Headline Results for the US and Ireland

	Ireland % of adult population	US % of adult population
Entrepreneurial Activity		
Early Stage Entrepreneurs (TEA)	7.4	10
Nascent entrepreneurs	4.5	7.5
New firm entrepreneurs	2.9	3.3
Established business owners	7.8	5.4
Exit of entrepreneurs	1.8	2.6
Personal Context		
Know an entrepreneur (% YES)	39	34
Perceive good opportunities (% YES)	44	24
Knowledge and skills to start a business (% YES)	51	50
'Fear of failure' would prevent start-up (% YES)	35	21
Cultural Context		
Entrepreneurship is considered a good career choice (% YES)	70	51
Successful entrepreneurs are held in high regard (% YES)	82	50
Positive media coverage of successful entrepreneurs (% YES)	84	54
Gender		
Early Stage Entrepreneurs: Men	10.5	12.7
Early Stage Entrepreneurs: Women	4.2	7.4
Informal Investing		
Informal Investment Activity	1.7	6.0
Exporting activity		
Expect more than 50% of customers to be outside country	0.9	0.9
More than 50% of customers outside country (established entrepreneurs)	1.1	0.3
Growth Expectations		
Any jobs now or in 5 years	5.5	7.5
Expects more than 19 jobs in 5 years time	1.3	1.4

SECTION 5

Pen Pictures of Recent Entrepreneurs Featured on the Cover

5.1 Catherine Sproule

Coming from a farming background in Donegal, Catherine Sproule was brought up in a family that had a strong work ethic.

She describes herself as not being inclined towards business in her formative years as her aspiration was to be a teacher. She holds a degree in economics and geography and was awarded top marks in her H Dip. Never in my wildest dreams did I think that I would ever become an entrepreneur. I was a natural teacher. I was involved almost from the beginning of my teaching career in an education initiative in Northern Ireland called Integrated Education and was Head of Department in one of the first integrated schools there. I held that post until last June.

Catherine's life suddenly changed in 1999, the year she got married. Within a few months of her getting married both her parents became seriously ill and she and her husband became carers, while trying to hold down full time jobs. In 2004 her brother John returned from the United States, where he worked as a chef, to help look after their parents. By that time her husband Donal, an engineer, had been made redundant from a US multinational. With John back from the US and Donal with time on his hands, their thoughts began to turn to taking some sort of joint initiative together. John had seen the emergence of juice bars in the US and was convinced that they had great potential within the Irish market. Putting the idea together while one parent was critically ill in hospital became almost therapeutic for the three of them, as it proved a distraction from the difficult circumstances which they faced.

The first Guava Juice Bar was set up in the Courtyard Shopping Centre in Letterkenny in April 2004 and was a success from the very beginning. *Everyone was talking about it. News of its opening spread like wildfire.* This gave the three the confidence to investigate suitable locations in Derry, which was relatively close being just across the border. Within four months the second Guava Juice Bar was opened there.

We spent hours brainstorming a suitable name for the new juice bar and eventually settled on Guava (a pink pear from South America) because it is supposed to be the best fruit a person can have and we wanted to be the best.

After the success of the juice bars in Letterkenny and Derry, a third Guava Juice Bar was opened in May 2006 in Belfast. This bar has grown week on week since it was opened. *We are now actively looking for more sites in the Belfast and surrounding areas in order to expand there. In our business, location is critical and so we are taking our time to get the choice of location just right.*

At the beginning, Donal concentrated on finding the locations, setting up the systems and managing the unit costs, while John having a background in food was able to put HASSP systems in place and handle all the Health and Safety requirements. Catherine became involved in the accounts and the administration.

At the start I did not know anything much about running a business but the Donegal County Enterprise Board gave me tremendous support. I attended various courses with them including manual accounts and advanced excel accounts and now can do all our own accounts without having to bring a professional in from the outside. I found the mentors particularly helpful as their advice was tailored exactly for our business and the various challenges it was facing in getting off the ground.

Last year, there was a change of positions. Donal went back to being a paid employee as an engineer with Abbott Ireland in Donegal Town, while Catherine left the teaching that she loved so well to dedicate herself full time to the rapidly growing business.

With this change in personnel within the business came an aspiration for a strategic change in direction. Catherine is determined to move the business from being a generic juice-snack bar towards one that would be positively associated with a healthy lifestyle. In this Catherine had been very influenced by Bernadette Bohan author of The Choice Programme. She wants to move towards organic fruit and vegetable juices and inform people about the things that she has learned from Bernadette.

I decided to nominate a different juice of the week and to provide detailed information on the calories, vitamins and the positive health benefits that could be expected from this juice. This information was gathered through Loughery College in Cookstown. I wanted to produce a double sided A4 sheet on a different juice each week and to build these up over time to a full collection so that detailed information would be available on all our juices. I also wanted to inform people as to the hidden dangers in everyday drinking water and personal care products and provide them with safe alternatives. You have heard of a health food shop: ours would be a health juice bar.

Catherine has a range of plans for the expansion of the business. With 15 people already employed and actively seeking other locations for juice bars, the phenomenon that started in Letterkenny in response to difficult circumstances, looks likely to spread much further as the promoters are also looking at franchise possibilities for their health juice bar concept. She is also considering the possibility of a mobile juice bar which she would hope to get on the road next summer.

Catherine Sproule has almost a missionary zeal in her desire both to build the new business and through this to bring the benefits of a healthy lifestyle to others. *I want Guava Juice Bars to be associated with providing the best freshly extracted fruit and vegetable juices and smoothies available, while informing people of simple steps they can take towards overall good health, hence our motto Health and Pleasure.*

Having never considered a career other than teaching until she became involved almost by accident in the start-up of the juice bars in 2004, she now finds that the year has flown past and she doesn't miss teaching at all. With a rapidly growing new business and three children under seven, Catherine Sproule admits that since becoming an entrepreneur *I never worked so hard in my life but I would happily do it all again. I enjoy being my own boss, even if I have no free time any more!*

5.2 David Seavers

David Seavers is an example of an entrepreneur who gained his experience and desire for entrepreneurship by working for other Irish entrepreneurs. Having spent 20 years working for small Irish technology companies and, seeing their success, David took the view that he would always regret it if he did not try entrepreneurship for himself. He recognised a gap in the teleconferencing equipment market, due to industry consolidation, and decided to take the plunge.

Many entrepreneurs start business in areas in which they have a deep knowledge. David was no exception. He was familiar with the teleconferencing equipment market having previously worked in the area. He knew the market well and was known to potential customers. He was also familiar with the main competitors and their offerings.

Fascinated by electronics from a young age and interested in building such devices himself, David decided to study electronic engineering in Dublin Institute of Technology (Kevin Street). Following graduation, he gained a broad range of experience over 20 years in operations, sales, business development and technology with Irish technology companies focused on export markets. He resigned from a well paid, secure job as a Chief Technical Officer (CTO) with one such company and set up Aonta Technologies in September 2005.

In deciding on the name for the new business, David and his partner decided to look for a short name beginning with A in order to secure a preferential position in industry directory listings. After exhausting the English directory, they came across Aonta in the Irish directory. The word Aonta is derived from Aontaigh meaning “unify or consensus.” This word seemed absolutely perfect for the new as this was what they wanted their customers to achieve using Aonta Technology’s conferencing solution. The name was firmly decided upon when they verified that the website was available.

Starting a business at any time is not without its risks. David comments: *Fortunately I had no economic dependents, so that complication was not in the mix. Having said that, no matter how confident I was about my own ability and the opportunity presented, I fully realised that committing my savings to this new venture was not without risk.*

David believes that a business with more than one founder is more likely to succeed and considers himself fortunate to have Derek Moore a former colleague join Aonta at an early stage, thereby reducing the workload and providing additional financial investment. Derek took on the role of COO and manages the development team and the minutia of the design, which frees up David’s time to work with potential customers and investors, as well as the strategic direction of the company. This provides a great mix of complimentary skills.

Family and friends thought I was completely mad to give up a high flying, well paid job. They have since changed their minds and are very proud of our early achievements. They are also convinced by my improved positive outlook. Being an entrepreneur gives a different perspective than being an employee and you become much more positive about what you are doing, even if you are working much harder.

David began to research what support was available for a tech start-up. His first port of call was Enterprise Ireland (EI), where a development advisor, David Smith, was immediately allocated to the fledgling business and provided the new entrepreneurs with a raft of information, including details of the M50 Enterprise Platform Programme. Applications for participation in the next M50 Enterprise Platform Programme were closing the next day and, perhaps an omen of things to come, David was successful with his rushed application.

David is full of praise for Patricia O’Sullivan and her team on the M50 Enterprise Platform Programme at the Institute of Technology, Tallaght: *I found their enthusiasm infectious. The support of the M50 Enterprise Platform Programme was invaluable in the beginning when I was undertaking a feasibility study and preparing a business plan. The supportive environment allowed me to take the time to think through all facets of the business from scratch and to get the funding in place before recruiting employees.*

Participation on the Programme led to a robust business plan which garnered Aonta Technology “High Potential Start-up” (HPSU) status with Enterprise Ireland and a subsequent equity investment by them in the company.

Enterprise Ireland was very supportive and provided much needed seed funding of €450,000 to match the significant investment from myself and Derek. The Seed Capital Scheme further helped to take the sting out of the initial investment of hard earned cash.

David had heard of the Seed Capital Scheme from their development advisor in Enterprise Ireland and was delighted to be able to avail of the Scheme as a boost to the initial seed funding. He found the staff at Revenue most helpful but has a definite suggestion as to the manner in which the management of the Scheme could be further improved: *The staff at the relevant department in the Revenue were very helpful. The process was complicated by the fact that it entails claiming back tax paid in the previous six years, whereas normal tax refunds only allow four years to be claimed. This was problematic for the regular PAYE office and it took a series of appeals over six months to get all refunds paid.* In David’s opinion it would be preferable if the Seed Capital Scheme department kept control of the process and did not just hand the last stage to the PAYE section.

The M50 inspired business plan was also duly submitted to the InterTrade Ireland Seedcorn Competition winning the Dublin region final and joining seven other regional winners in the all Ireland final. *Coming through to the top 8 from 143 entrants was a significant boost for the company. Although the prize of €20,000 was welcome, the experience we gained and the relationships we formed were the real prize. We now had potential investors knocking on our door. I would highly recommend the Seedcorn competition and the effort is not that significant.*

Aonta Technologies provides the software solutions necessary for telecommunications companies and enterprises to provide business grade voice, data and video conferencing services. Potential customers include telcos such as Deutsche Telecom and Singapore Telecom and specialised service providers such as Arkadin and Intercall. The solution can also be sold to enterprise customers via a number of potential channels. Traditionally these would have been telephony equipment manufacturers (TEMs) such as Siemens, Avaya and Ericsson, but with the migration to Voice over Internet Protocol (VoIP) they now potentially include IBM, Microsoft and Oracle.

Aonta is still in the product development phase working in close association with its potential customers in achieving a solution that exactly fits their individual needs. At present, Aonta has six employees, including the two founders. They have an aspiration to develop the company into a major player in the conferencing infrastructure equipment market within five years.

David Seavers while recommending an entrepreneurial career to others is very clear about the challenges that this involves: *Building a business from scratch can be daunting. Suddenly you are doing everything yourself – dealing with accountants, lawyers, revenue, etc etc! No matter how conservative we thought we were with our projections, most things took longer than we expected.*

David has no regrets about having chosen entrepreneurship over paid employment: *There is great satisfaction in doing it your own way, while learning something new every day.*

His advice to anyone thinking about setting up their own businesses is very simple: *Regret is a terrible thing. If you have any inclination towards setting up a business, go for it wholeheartedly. Life is too short not to give entrepreneurship a go!*

5.3 Dearbhaill Standún

Dearbhaill Standún was born and reared a native Irish speaker in An Spidéal, Co Galway. Her parents had come to An Spidéal early in their married life, arriving on two bicycles, full of dreams and unspecified possibilities, to buy a tiny local shop. The shop thrived and developed into a focal point for locals and tourists alike, combining groceries, hardware and smoked fish for sale along with crafts, souvenirs and other memorabilia. The shop was also the central point of an extensive cottage hand knitting industry and served as a contact point for the local undertaker (Dearbhaill's father). An invitation was extended to all who visited the shop to come into the kitchen to join the family for a cup of tea, some good Ceili music and authentic craic. In this way, Dearbhaill was imbued from an early age with a love for Irish music and culture and a good head for business.

Dearbhaill studied Irish and Italian in NUI Galway while spending her summers employed as an entertainer in Bunratty Castle. Time spent as a teacher in different types of schools around Ireland and in a native Indian reservation in Canada, developed in her a particular interest in special needs education and the challenges associated with slow learners. Frustrated with the system, she gave up teaching in the late 1970s and made her first foray into the world of the entrepreneurship by opening a shop in Galway. The shop specialised in supplying equipment and teaching aids to those engaged in special needs education, while also carrying a range of educational toys for the more general market. As well as having the shop in Galway, Dearbhaill travelled up and down the country bringing her merchandise to other customers, including Health Boards, in different parts of the country.

In many ways this retail concept was ahead of its time and the high interest rates were taking their toll on the profitability of the business. Moreover, the travelling and long hours did not combine well with the life of a young married couple with small children. Dearbhaill closed the shop, sold the premises and stayed at home to mind her children.

During this time, Dearbhaill fell back on her great love of the violin and her excellent early training in classical and traditional music and began to teach from home. This gave her a way to combine work with family responsibilities. Simultaneously, she went back to college and studied for a Diploma in music education.

Dearbhaill's early love of music had been nurtured by her mother, who was also a performer, putting away her shop apron at ten o'clock at night to take up the fiddle and join a Ceili group making music until the small hours. This love of performance found Dearbhaill together with some friends forming a music group, Dordán. The musicians were three, later four mothers with small children who shared a great love of music with a wish to balance their musical career with their family responsibilities. This brought with it a definite decision only to travel abroad no more than twice a year and for no longer than 12 days at a time. This forced them to pick carefully what opportunities they pursued. Success followed. They won the National Entertainment Award for Traditional Music in 1993, recorded 4 CDs, performed at state functions and travelled abroad with Presidents Mary Robinson and Mary McAleese. They still continue to perform together, while also pursuing their own individual music projects.

When Dearbhaill married Charlie Troy in 1981 her love of music and culture was joined with his great interest in natural heritage, the environment and organic gardening and the two shared an ambition to set up some sort of business that would combine all their interests and talents.

The idea was nurtured through endless conversations over the years. Twelve years ago with the death of their parents, Dearbhaill and Charlie found themselves with an inheritance which would allow them to start taking active steps to fulfil their dreams. They bought a farm of 200 acres, just a short drive from An Spidéal,

the day after they saw it. Although only a short distance from the town, it was like another world. There were no mains water and none of the facilities that in the 21st century Ireland are taken for granted. It had a derelict thatch cottage reached by a third of a mile bog track. But Dearbhail and Charlie saw in this wilderness the setting for their dream enterprise.

It has taken almost twelve years for that wildness to be tamed and the old buildings restored and new ones built in the traditional manner, with modern comforts. The result is Cnoc Suain, an enchanting pre-famine village of thatched and slated stone cottages dating back to 1691 in a Gaeltacht area in the wild and beautiful Connemara landscape. All of this would not have been possible without the support and encouragement of family and friends.

Dearbhail and Charlie believed that visitors to Ireland and indeed Irish people alike hungered for an authentic Irish experience. They felt that many visitors to Ireland went away without ever sampling true Irish culture and an understanding of the Irish heritage and landscape. They worked tirelessly over many years to develop Cnoc Suain into a place that would provide a quality holiday experience and fill the gap in the market that they had identified. The idea was to offer much more than accommodation but a whole cultural and aesthetic experience steeped in the Gaelic tradition and the uniqueness of the Connemara landscape. *We wanted to offer a memorable cultural and educational experience in an atmosphere of warm hospitality, learning and fun. We wanted this to be a place that people could come to in groups or as independent travellers. The idea was to provide accommodation in the stone cottages, with traditional home cooking and open fires where everyone would eat their evening meal together in a sense of friendship and traditional Irish hospitality.*

The first visitors to Cnoc Suain were a group of Americans who immediately booked a return visit bringing some more friends with them. Their reaction confirmed for Dearbhail and Charlie that they had something special to offer.

This year is the first that Cnoc Suain is fully open for business. *Our vision of what could be achieved has sustained us through the long years of development, when others thought we were mad to bring our children to what appeared a desolate and wild place. Now everyone can see what we had in mind all along and the complements are flying.* The challenge that Dearbhail and Charlie now face is to let those, who would enjoy this type of cultural holiday, know about its availability. With this in mind they have prepared a DVD which is available on their website with a link to youtube (www.cnocsuain.com).

5.4 Derek Quinn

Now a serial entrepreneur, Derek Quinn caught the entrepreneurial bug early. He was always on the look out to turn ideas and opportunities into businesses. At the age of seven he was selling clothes hangers door to door, which he got for free from a drapery store where his mother worked. In his mid teens, during his holidays, he was making souvenirs and selling them to tourist shops around the country. They were also stocked in Eason's and Cleary's. The business was called "The Ha'penny House" and was highly profitable as the costs of the materials were a fraction of the selling price. He was never quite sure how he was going to get into business and make his fortune. He just knew that that was what he was going to do. *At an early stage, owning a newsagent was my dream, than the Internet came along and it seemed a much cheaper and easier way to get into business!*

Growing up, his heroes were Michael Smurfit, Tony O'Reilly and Tony Ryan. In more recent years, he admired Michael O'Leary, Sean Quinn and Denis O'Brien for their pure energy, determination and creativity. He was determined to emulate them. Now those he admires from the new wave of Irish internet based entrepreneurs are Frank O'Grady (ex-Screenlick.com), Vinnie Quinn (ex-nixers.ie) and the Fallon brothers (daft.ie) for their innovation and pure entrepreneurship.

Derek Quinn followed his passion for selling and marketing, by taking a degree in marketing from the College of Marketing (now DIT) and followed this with a Masters in Strategic Management Planning from UCD's Smurfit School. Several years followed working in the private sector, finally working for OCEANT Telecoms / ESAT Telecom. While his career was progressing, he still hankered to be his own boss and to set up his own business. He decided that he would have to take time out to do just that and not try to work it through while being employed for someone else. *I announced my decision to resign from ESAT. Everyone was quite shocked when I responded to their questions by saying that I did not have another job to go to and was not quite sure what it was I was going to do. But my family was very supportive, though anxious about where the next cheque would come from!*

After a couple of telecom consultancy projects, Derek then dedicated himself to working on a plan for a new business. As he researched it further, he realised that it would need about £1 million punts to get it off the ground and he did not feel that anyone was going to give him that much money at that stage. So he scrapped that particular idea. He was down but not out!

At this stage his antennae were fully active in looking for ideas that he could turn into a business. Seeing an advertisement looking for extras for the film *Veronica Guerin*, he decided to go along for the fun of it. *It beat sitting in an office trying to dream up ideas.* The recruitment process involved hours of queuing and he thought there had to be a better way. He got 10 days work on the film and an idea for a new business out of the experience. *I queued for hours to be an extra on the film ' Veronica Guerin ' and realised that a lot of people were doing this again and again for various productions, thus it would make sense if you could register once on the Internet and than any production can cast and book you.* This was the kernel of the idea that would be turned into MovieExtras.ie.

He partnered with Kevin Gill, a *technical wizard*, who he knew through a work associate, to make the concept a reality. *I wasn't technical and, while I had the idea, I could not have made it work without Kevin.* By involving Kevin as a partner in the project from the outset, the start-up costs were reduced considerably. Developing and launching the MovieExtras.ie business cost less than €10,000 and a lot of sweat. Ireland's only online directory for the casting and booking of extras, models, doubles and actors was launched in December 2002. In its first year the business went very well and about 20 production companies/casting directors signed up to recruit from the site.

Some time later, Derek had occasion to move apartment and found himself spending ages notifying all the relevant utility companies, insurance companies, banks etc of his new address. Again his experience gave him an idea for a new business: *Thousands of people are moving each year in Ireland. They all have to go through this hassle. I felt that there must be a better way through the Internet to enable people to change address details with all the companies with whom they have a relationship.* And so the concept behind NewAddress.ie was born.

The earlier experience of MovieExtras.ie stood Derek in good stead as he went about setting up what would be a more ambitious project. Again Kevin Gill was involved as the technical brains behind the new project and a previous colleague, Bob Hoffman (ex Corporate Sales person with O2), also joined the fledgling company to roll the service out to Corporate Ireland.

Derek was given the opportunity to participate in a PDC HotHouse Programme and was delighted to do so. He found the monthly sessions particularly useful when the 16 participants would gather together over two days and hear an expert talk about one aspect of setting up a new business. This was followed by a practitioner who had gone through the experience themselves. The second day the participants themselves were encouraged to share their experiences with each other and to act as a sounding board for each others' ideas. Derek found the facilitated peer learning particularly useful. It was in this environment that he fully fleshed out the concept of NewAddress.ie with his partners into a robust business.

NewAddress.ie is Ireland's only change of address service where people who move can change their address details with banks, utilities, telecoms etc online in one go for free. It was launched in September 2005. The sales and marketing requirements were at a much higher level than had been the case with MovieExtras.ie, as the service required blue chip companies to pay for the service. Building credibility was the big challenge. The need to build a brand and a professional communications were also necessary but very expensive. All in all the start-up costs were twenty times that of the first venture.

Derek considers himself extremely fortunate that MyHome.ie became an early investor in the new company. As part of the HotHouse Programme, Derek had been given a mentor from the EI panel, Manus Bray. Manus, who had previously set up a very successful software company Millennium Software, was a terrific help to Derek and his partners during the negotiations with MyHome.ie. This company invested over €1m in the early days and gave the new business not only an important injection of cash and marketing expertise but also a significant boost to their credibility.

Another great support has been Dan O'Donoghue, who has been a valued business adviser to both the company and Derek, and has given tirelessly of his corporate and entrepreneurial experience.

A continuing challenge for NewAddress.ie is to change consumer behaviours and to convince more people to trust a service of this nature provided over the internet. The existence of partnership relationships with major corporate organisations (for example ESB, Eircom, Bord Gais, Bank of Ireland, Quinn Direct) has been of great assistance. Derek estimates that the service has captured about 15% of those moving, and that there is still a considerable market out there to be convinced of the merits of the service.

Derek describes NewAddress.ie as still being in the embryonic stage, and expects to break even in the next quarter. *Awareness of the brand is good in our marketplace, but convincing consumers to do things differently is difficult.* The company now has three people employed full time and three part time employees with the accounts and operations function outsourced to the TICo Group (now a shareholder in the Company).

In five years time, Derek Quinn sees NewAddress.ie as being the de facto way to change address details with companies in Ireland. By that time, he expects to have set up at least two other new businesses – *using my experience to even greater effect!*

Derek's advice to those thinking of setting out is quite simple: *Start somewhere. Even set up a basic internet business using it as a basis to learn and experience. If you wait until you have everything lined up, you'll never start!*

5.5 Enda Keane

Setting up and running his own business is something that Enda Keane always wanted to do. But for several years it was just a vague aspiration in the back of his head. Now he is a serial entrepreneur.

He obtained a degree in forestry from UCD and, after some time working for the private sector, joined Teagasc, as a forestry advisor. *And so I found myself a civil servant, which may seem a million miles from starting my own business, but as my job entailed providing those within the private sector with advice about the merits of investing in forestry I found myself in a technical sales and marketing function.*

After a certain point, Enda found the job less challenging than he wanted and, as the idea of starting his own business had not gone away, he began to research available opportunities. He was well used to looking at aerial photography of forestry developments and had seen golf courses from this perspective when looking at nearby forests. He saw the possibilities offered by aerial photography for a range of applications including golf courses. And so his first new business, 3D Eagleview, began to take shape. He

saw the possibilities of using aerial photography to simulate a perspective of golf courses which was new and for which he could envisage considerable demand.

Now this was in 2000 and he was about to get married. As his wife had a good job, she was prepared to back him to enable him to follow his dream. He started the business with a friend Declan Hayes, a graduate of Computer Science from the Limerick Institute of Technology.

They developed the company into a professional golf marketing company, which could employ low-level aerial photography to showcase the golf courses at their best. The core product is an enhanced photographic yardage guide that uses low-level drive and second shot images of golf courses. Digital Tours and other products complete a marketing mix to meet the objectives of golf courses in delivering satisfaction to their customers and to promote their facilities. The new business was based in the InnovationWorks in the National Technology Park in Limerick and received support from Shannon Development.

Enda Keane had been correct in the possibilities he envisaged for this business idea. In April of 2007, 3D Eagleview supplied imagery for the Quinn Direct British Masters. This prestige golfing event was the latest in a series of such customers and events which included Sky Sports as well as the Monte Rei Golf and Country Club in Portugal, the Albadia Golf Resort in Dubai, St. Andrews in Scotland, Whistling Straits in the US as well as the top name golf courses within Ireland.

As this new business was moving through its start-up phase, Enda saw the possibilities of another business opportunity using aerial photography combined with 3D digital imagery to create a product offering for large scale engineering projects. The idea was to use the technology to enable the promoters of large infrastructural projects to visualize what the finished project would look like in situ. This would be particularly useful for planning and development purposes and for communicating with a wide range of stake holders including planning authorities and local communities.

In developing 3D Eagleview Enda had learnt a great deal. One of the most critical lessons was the difference between *want* and *need*. *The 3D Eagleview product offering was a very nice addition to a golf club's marketing tools but it was not essential. I decided that if I were to develop another business in the future that I would concentrate on an area in which the product or service was a necessity rather than an optional extra.*

While working on 3D Eagleview, Enda was commuting between Cork and Limerick as he had moved to Cork some time previously. He decided to set up a new business in Cork and to pull back from the day to day management of the original company, while still remaining as a shareholder. *The idea for the new business was based on new 3D technology that had become available which I believed had a forestry application. This brought me full circle back to forestry.*

With a strong forestry background he was very aware that timber measurement was a very inexact science. The grower or purchaser does not accurately know the quantity or quality of a timber sale, until after the trees are harvested. This leads to poor decisions. *I was very aware that due to a lack of accurate measurement information systems the management of forest resources is less than ideal.* Enda Keane's idea was to develop a 3-D measurement system to measure standing trees in the forest. He wanted to provide the grower and purchaser of timber with a better method of timber measurement and more accurate information on which to base harvesting decisions. I was aware that up to 20% can be lost through less than optimal decisions in this area.

Once again, Enda Keane sought out a partner with whom to bring the idea from concept to reality. This time the partner was Garret Mullooly a forestry graduate and college friend with 10 years experience in the forest industry.

The two took their business concept to Finland to make sure that it had validity. Those in the industry that they talked to gave them a resoundingly positive reaction. It looked like their informed hunch was right. Enda decided to take time out to flesh out this new idea and was delighted to be accepted as a participant on the Genesis Enterprise Platform Programme. The result was TreeMetrics.

One of the first challenges that the two had to face was that while they had the idea they did not have the technical expertise themselves to make it happen. They turned what could appear to be a disadvantage into a real advantage by developing strategic relationships with some of the best experts in the relevant fields. They turned first to Germany. They were aware that the Technical University of Dresden had great expertise in this area. They approached the university seeking assistance and were very well received. The university agreed that it would help TreeMetrics to develop the product and that the company would subsequently buy the technology from the university.

At the same time, Enda approached UCC, aware that the university's special optimisation laboratory 4C is among the world's leaders in the science of making the best possible decisions based on measurement information. An Enterprise Ireland funded Innovation Partnership project was agreed with 4C.

Finally the entrepreneurs teamed up with Professor Glen Murphy based in the United States at Oregon State University. Professor Murphy is regarded as one of the world leaders in forest harvesting and supply chain analysis and has devoted over twenty years of research and development in the area. For the past year they have teamed up on joint projects in Ireland and the US to validate and refine the system.

With all this talent linked to TreeMetrics, Enda was determined that the company would develop its own suite of forest analysis techniques. *Our aim was to allow better decisions to be made along the supply chain and so reduce waste, save money and increase profitability all round. Our intention was to show that TreeMetrics techniques were not an optional extra but rather a key component for the efficient management of forest resources. There is a real need for a product of this nature in the forestry industry worldwide. Bad decisions based on inexact information lead to losses of about 20% of the value of the forestry crop at harvest time.*

The company was formed in 2005 which proved a red letter year for the new business. TreeMetrics received very valuable validation of its technology when it was awarded in June of that year the prestigious Schweighofer award 2005 for forest innovation in conjunction with the University of Freiburg, Germany. The monetary value of the award (€50,000) while welcome was far out-weighted by the esteem it conferred on the company's measurement system. Finally, in December, TreeMetrics won the All Ireland Seedcorn regional award for best business start-up opportunity. This reward recognised TreeMetrics for the quality of its business idea.

A business no matter how good the idea needs money for its life blood. TreeMetrics received seed funding from Enterprise Equity which was matched by an investment by Enterprise Ireland. This allowed the two entrepreneurs to build a very strong management team and advisors around them. *Our chairman, Cian Kinsella, the founder of several software companies, has been a source of invaluable advice as has Drew O' Sullivan of the Genesis Enterprise Platform Programme. The benefits that entrepreneurs receive from attending this programme are invaluable.*

From his time with 3D Eagleview, Enda been introduced by Shannon Development to Professor Len Middleton, from the Ross School of Business at the University of Michigan. Enda has continued with this relationship in his latest venture. Currently, Professor Middleton has assigned a group of six executive MBA students to the company for three months to review the TreeMetrics' business plan. *This is a terrific opportunity to have an independent review carried out of our business and our products. They get the industry's view and feed it back to us, forcing us to think through every aspect of the business.*

In the development of the business we availed ourselves of all the help and support that was available. From the time we were first assigned a Development Advisor (D.A.) within EI, we got first class advice and support. Our D.A Ray Walsh provided tremendous support to us and helped us to navigate the system. Most of the cost of the development work that was carried out for us by 4C was funded by EI. They not only invested in the new business but put the full resources of their overseas offices at our disposal. That sort of practical support was invaluable.

Reflecting its technical partners, TreeMetrics was born global. Trading has just started recently and already the company has customers in Austria, Norway, Sweden, UK, Poland, Romania and France. Enda Keane describes the journey so far as *significant pressure but a great buzz*. Would he do it all again? *Absolutely!*

5.6 Gillian Clogan

Gillian Clogan comes from a long line of entrepreneurs. Her father John is a property developer, while her mother Ann runs a prestigious boutique in Limerick city.

Gillian's business acumen was obvious at a young age. She regularly set up and ran car boot sales during the school holidays. Much to the dismay of her sister, she was often seen sifting through old toys eager to uncover her next big seller. As a teenager, Gillian worked hard at the weekends restoring Irish creamery butter boxes. These were sold to furniture and antique shops country wide which were used by customers as waste paper baskets and stools.

Like most things in life though it hasn't all been plain sailing. In secondary school an eye specialist diagnosed Gillian with a significant diplopia (double and blurred vision when reading). She was advised not to pin her hopes on an academic based career. However her determination and self belief, coupled with her parents' support, has helped her to overcome this difficulty. It is no surprise then that Gillian cites Richard Branson as a role model. *"His business mind is not only a source of inspiration but also his ability to deal with his dyslexia"*.

Setting up and running a business is a challenge but it is amazing to realize just how resilient and self confident people are when flying in the face of adversity. Like many of their counterparts, my parents survived the strangling economic climate that was the 1980s and still managed to come out on top. Thankfully for my siblings and I, there was always a never say die attitude in our house. We were always taught to be passionate about our chosen careers and, as a consequence, being the best at it should come easily.

Gillian also describes herself as highly motivated, action orientated and goal driven with a belief in the need to get out there and stuck in whatever she is undertaking. Before setting up her own business, Gillian worked for a variety of stores in the retail sector before deciding to broaden her skills and get some business to business sales experience. She initially joined a high potential start up company selling a maintenance service to the manufacturing industry in Ireland. She then worked as a marketing manager for a large manufacturing company who worked on a subcontract basis for large OEM's in the US and UK. During this time Gillian was heavily involved in a mentoring programme assisting entrepreneurs in writing business plans and developing strategies to grow their new businesses.

Gillian holds a Masters in Entrepreneurial Management and has written extensively on succession in family business. *Family businesses survival rate is relatively low with only 24% of businesses surviving through the second generation and only 14% making it beyond the third. There is an alarming amount of family-run businesses that fail to survive the succession process. I wanted to learn more about the reasons behind this and see if my understanding of the practical and psychological issues could make a real difference.* Gillian worked on a live case study and developed a succession plan for a small second generation business which was on the verge of transferring ownership to the next generation. Gillian developed a model that is adaptable to other small businesses that do not have the time or the ability to examine and develop a

suitable model for their succession process. *Planning for succession is critical. The effects of failing to plan for the succession process will impact on the owner, the successor, the business and most importantly the family unit.*

Prior to the two-year Masters, Gillian studied for a Bachelor of Business Studies in Portobello College in Dublin, where she concentrated on the marketing and sales areas of the course. *Both my Degree and Masters were very practical in orientation which allowed students draw on their own experiences and not just the theory behind the subjects but their practical application.*

Gillian asserts that she knew that running her own business was always what she wanted to do and it seemed like a natural move from what she had been doing in the past. *But making the decision was harder than expected, in theory it sounds so easy but this was not the reality. Although once I decided I never looked back.*

Drawing on her experience and having identified a gap in the market, Gillian set up Retail Detail in 2006. Retail Detail delivers “Innovative marketing and sales solutions”. *Retail Detail allows small and medium sized companies the full advantages of having the expertise of a marketing professional available to them who understands their needs and is able to develop a tailored solution that will have a positive impact on their bottom line.*

One of the programmes recently developed by Retail Direct is POISE – Professional Organisation Instructing Social Etiquette. This programme provides instruction on correct social and business etiquette. It is mainly targeted at the international business market. Having insight into the culture of a certain country or region can be invaluable when negotiating business deals. Many companies’ success rates have been dependent on their ability to adapt and understand emerging markets. This is most prevalent in countries like China, where Gillian will be launching a training programme later this year.

Gillian admits that while entrepreneurs are risk takers by nature, the decision to go it alone was not an easy one. *“Each year there are 20,000 new businesses established in Ireland and many of these fail mainly due to a lack of cash flow”*

Gillian has encountered many challenges along the way, describing the experience as *the most fulfilling and exciting rollercoaster of my life*. She is determined to turn challenges into learning experiences and is full of plans for the future. *For new and potential entrepreneurs I would recommend taking the risk and making that decision, albeit hard. It is worth it! Would she do it again? In a heartbeat now that I have started I want to do it over and over again!*

5.7 Michelle Power

It may seem a long road from being a singer song writer to becoming an entrepreneur but for Michelle Power it requires much of the same sense of independence, confidence in what you can achieve through your own creativity and being very mindful of what your customers like.

Michelle did not set out to be an entrepreneur, but finding herself in County Carlow rearing two small children, she wanted to find a way to express her creativity, while staying at home to be with her children. As Michelle explains: *I had never planned on setting up my own business, it was something that kind of evolved naturally.*

With an acre of land around the house, and determined to give the children a good healthy diet from the very beginning, Michelle started to grow her own organic produce. She found that she was particularly interested in growing herbs. Herbs have a tendency to be prolific and very soon Michelle found that she had too many for her family’s requirements. She then began to directly supply a few restaurants of friends

and one thing led to another. *I found myself one summer supplying lots of restaurants three times a week, running gardening courses at the weekends, selling produce at farmers markets and preserving fruits.*

While on a family holiday, Michelle took time out to examine where her herb-based business was going. While she enjoyed the business and could call it a success in its own terms, she realised that the threat on the horizon was that, with relatively low barriers to entry, other suppliers were entering the business and the market was becoming quite crowded. Moreover, it was highly seasonal. Other producers were competing to supply restaurants and run courses which when Michelle started out had been quite unique. *It had suddenly become main stream and not the sort of funky, trendy business that I had first started.*

Having had a taste of entrepreneurship, Michelle decided to continue being an entrepreneur, but to change direction. She realised that there was a market around combining organic fruit with alcohol as she had experimented with jams and preserves in this area and there had been a very good reaction from her customers at the farmers' markets. She decided that there might be potential in reversing the proportions and rather than have alcohol added to fruit in a food based product, to add fruit to alcohol. And so the *Boozeberries Liqueurs* concept was born and Michelle moved her focus from the food to the drinks business.

Michelle made up some samples and test marketed these at various farmers' markets, brought them to off licenses, and to the restaurant owners that she had been supplying with herbs. All gave very positive feedback. This further reinforced Michelle's very strong intuition that she was on to a winner with *Boozeberries*.

Moving from a successful test market to full production has its challenges. Michelle first needed to find a company with the right facilities that would bottle the product to her specification and was prepared to give excellent service, even though the original orders would be for small volumes. Michelle found a local supplier of this service and production began in July 2004. She supplied the organic berries herself.

The drinks business is a very difficult market to break into, especially for a small artisan producer. Looking back, Michelle reckons that it took two years for anyone to take the new company and its *Boozeberries* offering seriously. *I am very passionate about my product and this I suppose gave me the motivation and the fuel to be positive and focused despite the early rejections.* In fact she thinks that in retrospect this slower initial growth has worked to her advantage: *In a way I think this was in my favour as I have learned more about the drinks business in that time. It was also a good idea to develop our brand organically in the domestic market.*

The drink critics and others in the know about the drinks business began to take note of the fledgling company when it was awarded a Gold Medal at the Great Taste Awards in 2006 for *Boozeberries* with blackcurrant and a Bronze medal for its blueberry variety.

Growth presented the next challenge for Michelle Power and her husband Niall, who also takes time from his musical career to help run the business. Tesco was interested in stocking the product. This would mean substantially larger volumes than they had handled up to this point. Their local bottler would be unable to handle the required volumes. This meant that Michelle had to identify another supplier who could meet their new requirements. This challenge was successfully resolved and a professional bottling company was identified to whom production could be subcontracted. *Boozeberries* is now supplied to two multiples, independent off licenses, hamper companies, hotels, restaurants and style bars, and duty free shops.

In March 2007 *Boozeberries* was a finalist in two SFA awards, the food and drink category and the outstanding small business category. *These nominations were a tremendous confidence boost for us, as these awards usually go to companies that are much longer established. We were thrilled to be highly recommended in the Food and Drinks category as we considered this another step on the road to having*

the company and its innovative product recognized and acclaimed. Michelle was also a finalist in the Image magazine entrepreneur of the year competition 2007.

Getting various awards for Boozeberries is terrific, but the biggest high I get is from people saying that they love the product and asking me where they can buy it.

While Michelle was the first in her family to become an entrepreneur, she has received great encouragement from both her and Niall's families. The support from the family was both psychological and highly practical. Mum bought my first green house and Niall's Dad gave us the money to buy our first tunnel. We already had one ordered, so we bought a second. Practical support also came from the local County Enterprise Board in Carlow. I had already started Boozeberries when I attended a Start Your Own Business Course. I found this very useful and went on to attend other courses which have assisted me in practical ways to manage and develop the business to the next stage with a strong eye on the bottom line. I particularly liked the mentoring sessions as these give me great reassurance.

Now that Boozeberries is beginning to make headway on the Irish market, Michelle Power is turning her sights to export markets, having recently secured their first order from Japan. It is only a small order but it is a beginning. At present the company supplies about 24,000 bottles of Boozeberries a year on the Irish market. Their plan is to increase sales by 50% over the next 6 months and by a further 50% in the next twelve months. Growth is definitely on the agenda and exports will play a key role in this growth. Ours is a niche product. But we believe that we can achieve a presence in a number of export markets. We already have enquiries from a number of European buyers who were impressed by the product when they saw our stand at a recent export trade show which was organised by Bord Bia. Michelle is particularly grateful to Catherine Hargan and her team in the exports division of Bord Bia for their excellent advice and their assistance in supporting Boozeberries to get a foothold in overseas markets.

At present the business employs Michelle and her husband full time and others are employed as required for promotions and shows. Michelle plans to take charge of developing export sales, while Niall will concentrate on the home market.

Michelle's advice to anyone starting out is simple: If you have an innovative idea, do some research. Structure a good business plan. All you need after that is passion, motivation and adrenalin. Be persistent it pays off eventually.

5.8 Mike Hopkins

Growing up in Donegal, Mike Hopkins dream was to become a scientist and an inventor. He was inspired by Alexander Bell and the other great scientists who made a lasting impression on the way we live our lives. When he finished school he was not in a position to go to university and had to leave Donegal in search of work. The dream persisted, however. Through his twenties he saved assiduously so that he could one day get to study science in college. His persistence paid off and he did his primary degree in his late twenties and continued through to take a PhD in Plasma Physics, completing it in 1987.

Mike continued to find science exciting and worked as a research scientist and academic in DCU. He thoroughly enjoyed the mentoring of graduate students and the mutual learning and discovery that involved. He is passionate about academic excellence and sets high standards for himself and for others and believes that world-class is the only standard by which research should be judged.

In the early 1990's, before the days of Science Foundation Ireland and the Government's commitment to greatly increasing the funding for scientific and technological research, the funding of scientific research was virtually non-existent. In order to prove that research had real value and was more than a "hobby" indulged in by academics on the side, Mike set out to prove that research could create wealth. He decided

that the only way to demonstrate this was to take his ideas out of the lab and into the commercial world. This led Mike to get involved in his first start-up. He saw an opportunity to use plasmas to make textiles with unique properties like self cleaning clothes. The company was called Plasma Ireland.

Mike Hopkins retained his academic position, while acting as Chairman to the new company. As the company was under capitalised from the start, it was not able to realise its true potential and the technology was bought out by a US company (Dow Corning) who took the ideas and are developing a business around it. The US company now have 20 or so employed in Cork working on it. This venture proved to be a valuable learning experience.

In 1998, a previous student of his, working in the Far East, contacted Mike. He was full of enthusiasm that there was a market in Japan for Mike's plasma monitoring systems. Mike Hopkins was ten years in DCU at that stage and had reached the position of Senior Lecturer and Director of the Plasma Research Laboratory. This was an opportunity to see his technology inspire a new venture and further prove the point that research could be turned into real commercial value. Then came a real crux: should he leave DCU and the job that he really enjoyed to follow this dream? His wife, ever the pragmatist, thought that he would be mad to want to leave a position he had worked so hard to attain.

He decided in the end to leave the comfort zone of DCU and to take what turned out to be a roller coaster of a ride! Initially the new business was financed with funding from family and friends. Within a year it had VC funding and was shipping product to Japan. *It was hard to believe but here we were a small Irish company selling technology to the Japanese.* The company got caught in the dot com madness and VC funding poured in and with it very high expectations on fast paced growth. From focusing on technology in year one, Mike Hopkins found himself more focused on the management of people, as the company grew. The growth of the company brought it into areas of software technology that were less familiar to him. He felt that he had moved too far away from his real area of expertise and primary love, which was physics and plasma research.

After five years, he decided to hand over the management of the company to others who could scale it. Mike Hopkins took a year out to reconsider his position. He realised that he was still at heart a scientist and decided to return to DCU and research. His head was telling him that his commercial venture had been an interesting experiment and one that he should not repeat. His heart, however, was telling him something else: *I realised that I had learnt so much along the way, that it would be a terrible waste not to put this knowledge to further use.*

And so in December 2004, Mike Hopkins decided to back his own ideas and form a new business, Impedans. *I realised that sophisticated software was not what the customer really wanted. The customer wanted better data and I was good at making world class measurement systems.* This time he brought in a professional manager from the start and took on the role of Chairman. This allowed him to retain his position within DCU, while still being able to base the new venture on his research and to give the new company the benefit of his understanding and experience of the scientific instruments market.

As was the case with Scientific Systems, Mike Hopkins knew from the outset that the first sale would not be within the Irish market. Being forced to find international customers from the outset is a considerable challenge. Learning from his previous experience he progressed more slowly taking two years to get the technical development to customers' satisfaction. *The first time around I went out with a sense of mission to convince the scientific community that they needed our products. Now, I focused much more on understanding their needs and responding to these. I let the customers tell me how the technology could best be applied. They became our lab and were happy to develop products this way.*

Now in the first year of trading, the company is located in the INVENT incubator centre within the DCU campus. Impedans has a good spread of customers and has sold instruments into Asia, the US and Europe. Mike believes that the emerging markets of Korea, India and China will be particularly significant as the company develops further. At present, there are four people employed in the company full time and a further four on contracts.

Learning from his experience in being involved in three start-ups, Mike Hopkins now considers himself an entrepreneurial academic, which is a rare enough breed. He believes that too much emphasis is being put on efforts to turn good academic researchers into entrepreneurs. It is a different skill set. *There is not a natural progression from academic research to commercial exploitation. It is simply not a linear progression. Sometimes you end up with a loss to the research community and not a particularly good entrepreneur. Everyone should play to their strengths.*

Mike Hopkins believes that technology transfer (TT) is too often focused on innovative ideas. *Ideas alone are not enough. There are plenty of ideas. They are like busses: it depends which one you get on and what you do with it. There should be a much greater focus on people, products and markets, after all the best TT has two legs!*

Mike Hopkins has seen the commercialisation of research from all sides. He is still passionate about what he does and has managed to combine his love of science and discovery with a realistic approach to bringing this into the commercial sphere. An entrepreneurial academic indeed!

5.9 Nigel and Carol Harper

Nigel is one of a new breed of farmers who wants to maximise the value of the produce of his farm by combining farming with entrepreneurship, basing a new artisan ice cream business on the milk produced by the farm's dairy herd.

After completing a degree in Agricultural Science, Nigel returned to the family farm. He was very aware that the farming sector was facing severe challenges at the time with costs going up and prices coming down and the farmer's profit becoming ever smaller in the middle. His father had built up a big farm over the years, but quota restrictions and stocking regulations limited any ambitions he might harbour to increase the farm's dairy herd.

If the rules and regulations prevented him growing the farm in one direction, then he was determined to grow it in another. He decided to explore ways of adding value to the milk produced by the farm's dairy herd.

Nigel had studied food science as part of his degree. In college he had concentrated in particular on the production of ice cream and he saw the potential that this could offer. He was very aware of what had been achieved with farm based cheese production in Ireland, but noted that farm produced ice cream had not been developed in any significant way here, although Ireland has the third highest consumption of ice cream per capita in Europe. The UK, however, was an example of what could be achieved as artisan farm produced ice cream had a built a strong foothold in that country. Nigel was convinced that there was a market in Ireland for a high quality, luxury ice-cream of this nature.

While these ideas were flying around in Nigel's head he was talking about them to his wife, Carol, and it became their joint project. The two had been recently married. They decided that if the idea was to go beyond being just an idea, it would need them to concentrate on it more to bring it to fruition. *We decided that there would never be a better time to give it a go, so we said let's do it.* Carol decided to leave her job managing a pharmacy in Kilkenny, and to dedicate herself to the new venture full time. That was in September 2005.

The couple identified the equipment that they would need and went to the Netherlands to investigate further. There they were introduced by the Dutch equipment supplier to another farmer who has producing artisan farm produced ice cream with similar equipment. Buoyed up by this visit, they were more convinced than ever that the idea had real merit. At that stage they approached their local LEADER Company for support.

The deadline for applications was just five days from the day that they first made contact, but the couple were determined to make the deadline. They worked day and night to produce a three year business plan and the necessary financial projections for the application. Their application was successful and they received grant assistance towards the capital costs associated with the project. The next port of call was the bank. There they were well received and could use the fact that they had been grant aided by LEADER to leverage further financing from the bank.

The fledgling enterprise also received complementary assistance from the Kilkenny County Enterprise Board, whose advice and mentoring support was very useful, particularly in getting the brand development right from the outset.

Carol's retail pharmacy management experience and Nigel's experience of farm management augmented the range of business studies topics that Nigel had studied as an integral part of his Agricultural Science Degree course. *Many people don't realise how broad based an Ag. Science Degree is. We had a very good grounding in business principles, including HR and marketing as well as the more technical aspects of farming and animal and plant husbandry. It was the business elements that stuck in my brain, as the technical aspects keep changing all the time.*

By April 2006 the new business was in early production having obtained all the necessary licences from the Department and the two having completed the necessary courses in food hygiene etc. It took the next year to get the process just right. Much time was spent at the beginning ensuring that everything would be produced consistently to the highest standards.

Selling ice cream was new to both Carol and Nigel, but they were certain that their enthusiasm for the product would be sufficient to convince restaurant owners and chefs to try the ice creams and sorbets. They were convinced that an ultra polished sales approach was not what was called for, particularly as this was an artisan product. They believed that once people tried the products that the quality would convince them of its merits.

The approach worked and the reaction to the product has been very good. Many restaurants in the South East are now regularly stocking the ice creams and sorbets. *It's terrific the kick we get if we are having dinner in a restaurant and we see someone order our ice cream and then very much enjoy eating it. With forty ice cream flavours on offer and twenty different sorbets, there is obviously plenty of choice.*

The challenge now is to move more into the consumer market. Cramers Grove Ice Cream is already available in several local supermarkets in the South East. The company's challenge is to get the products more widely distributed, so that consumers can have access to them.

This year Nigel and Carol expect to turn about 30,000 litres of milk into ice cream, that is about 10-15% of the farm's milk production. The couple are growth oriented and have significant ambitions for the new business: *Who knows how much it will have grown in five years time. The potential is limitless.*

The one aspect of the business that is more difficult than they had anticipated is the time it takes to get everything done. This is particularly true when the new business owners are trying to do everything from administration to product development to production to distribution themselves. The hours are long. A

twelve hour day seven days a week at present is typical. *But we are doing it together and so have each other's support* Their parents and siblings have also been most supportive and have helped in very practical ways. *An extra pair of hands can always be relied on, if necessary.*

Despite the long hours and the steep learning curve, Nigel and Carol Harper are delighted that they followed through on their idea and set up the new business as Nigel says: *Doing it for yourself and building a new business is very motivating.*

5.10 Patsy Carney

Growing up in a family where permanent and pensionable jobs were the parents' aspiration for their children, Patsy Carney was encouraged to apply himself to his studies, get well qualified and then seek secure employment. That he did. He got a degree in industrial chemistry from the University of Limerick and went to work for a large US multinational company. Entrepreneurship and setting up his own business was far from his mind at that stage.

He spent the following 20 years working in different multinationals in the pharmaceutical industry. For the last 14 years of this, he was working for a one such company in Waterford. In 1996, he interviewed Tom Brennan and, impressed by Tom's technical knowledge, offered him a position as technical support to manufacturing. Little did either of them realise at the time that nine years later they would be planning to set up a new business together.

Tom moved subsequently into R&D and eventually become head of development. At this stage Tom's job was to develop the products and Patsy's to make them in a cost effective manner and organise the product launch in a timely manner. The company that they were working for, a genetic manufacturer of pharmaceuticals, was engaged in developing substitute medicines for branded products to coincide with the termination of patent protection. The time lines on this were extremely tight. Product had to be developed, manufactured, shipped and ready to be delivered on the stroke of midnight as the patent expired. First mover advantage was essential. The close working relationship that this entailed between development, manufacture, and product launch meant that Patsy and Tom were often working together against tight deadlines in a spirit of mutual respect for each other's area of expertise.

Patsy had made very good progress in the company and his next promotion in all likelihood would have necessitated him leaving Ireland or if he changed companies, leaving Tramore where his family was well settled. Up-rooting four children was not something he or his wife would lightly undertake and so he was beginning to think of alternatives. At this stage, he, and by coincidence Tom, began to study for an MBA from the University of Limerick.

This was in 2005. As part of their MBA studies, the 12 participants had a business planning module with Professor Pat Fleming. It is the nature of MBA courses that the participants study in small groups. Patsy and Tom had purposely avoided being in each other's study group up to this point, as being work colleagues they thought it preferable to work with other participants from different companies.

Listening to Pat introduce the course and explain what it entailed, was like a moment of Eureka for both Tom and myself, as we both had the same thought at the same time. She had provided the spark that would turn Patsy Carney and Tom Brennan from experienced managers in the pharmaceutical industry into entrepreneurs. They decided to take seriously the business plan exercise that was an integral part of the course and to use the opportunity to develop a robust plan as the basis for a new business. They asked if it would be possible for them to work together so that they could work on an idea that they had for a new

business. Despite some raised eyebrows, as this meant a reorganisation of study groups, their request was accommodated and the start of planning for what was to become EirGen Pharma began in earnest.

Patsy and Tom worked flat out on the plan for the next few months and as it began to take shape, Patsy decided to go for it wholeheartedly and negotiated a deal which would allow him to leave his current employer. This meant that he could work on the plan full time. Tom, still employed, worked on it in the evenings and weekends.

In the meantime, Professor Pat Fleming announced to the class that this exercise was being turned into a competition and the winning business plan would win through to represent the University of Limerick at a business plan competition in the University of San Diego.

The two worked night and day over the Christmas period and finally had a plan to submit. It was selected as the winning entry and the two were on their way to San Diego. As part of the preparation for going, they continuously refined the plan, keeping the whole tightly focused and internally consistent and practised an elevator pitch to make to venture capital companies. In all of this Pat guided them, coached them and acted as editor in chief.

Neither Patsy nor Tom will ever forget where they were on St Patrick's Day 2006. They were in San Diego and had made the final six out of about 80 entrants. They also won the *Golden Phone Award* for making the best pitch to a VC over the phone. *More than anything else, the experience validated what we had put together. We were doubly determined to make a go of it.*

When Patsy and Tom were undertaking the research for the new business they had contacted Enterprise Ireland and were immediately assigned a Development Advisor (D.A.). EI indicated their intention to back the fledgling business and the company was given HPSU status. The challenge now was to find sufficient finance to bring the concept to reality. EI would provide part of the financing requirements but would only do so when the entrepreneurs themselves had secured sufficient funding to match the EI contribution.

Both entrepreneurs re-mortgaged their houses, with their wives' full support, and each invested six figure sums in the business. This was a very big personal commitment as both had small children and many responsibilities. It would not be sufficient, however, to meet the initial needs of the business. Endless discussions with VC companies led nowhere, as the terms on which the VCs were prepared to lend were too onerous. *They were more than willing to invest: but wanted more than a pound of flesh in return! The price was simply too high.*

They then had some luck. A business associate that they knew in Canada was looking to invest in a business such as theirs. He visited for the weekend and agreed before he left not only to invest his money in the new business, but also to use his considerable contacts in the industry to assist EirGen Pharma to find suppliers and customers. This was indeed more than a business angel investment, because of the practical advice and support that accompanied the investment, and was just what was required. A more traditional Irish business angel also invested. All in all, this was sufficient to match EI's investment and that was secured.

The entrepreneurs also worked with their accountant to make use of the Business Expansion Scheme (BES) and to attract two rounds of investors under the scheme. By Christmas 2006, they had sufficient funds to begin to move on equipping a facility that they had identified on Westside Business Park in Waterford.

Up to this stage, the business had been developed out of Patsy's home. It was becoming quickly apparent that they would need more professional offices, while their permanent premises were being kitted out. At

this time the South East BIC gave the project substantial and very practical support. *Thanks to Patrick Munden and his team in SEBIC we had a professional address, front office support, fully equipped offices and a meeting room. It increased the professional look of the new business immediately. This was very important for meeting potential suppliers, customers and investors.*

By the end of August the new premises were ready and had received the necessary licences from the Irish Medicines Board. The company has been issued with an Investigational Medicinal Products (IMP) licence for the manufacture of clinical trial materials and a Manufacturing Licence for manufacture and packaging of commercial supplies. Eirgen Pharma could now begin to focus on its core mission – the development, registration and commercial manufacture of high potency, high barrier to entry solid dose (tablet and capsule) products for the global pharmaceutical market. EirGen Pharma was now fully licensed to manufacture oncology, cytotoxic, steroidal, immunosuppressant and hormonal molecules in a purpose built high containment facility utilising innovative isolation technology. The state of the art facilities could also handle the development of moisture sensitive molecules in a low humidity environment.

One year later, eleven people are already employed in Waterford serving the needs of customers in the UK, Canada, the US and Japan. *We have been global from Day 1. Having an active investor in place in Canada has opened up tremendous opportunities for us. We also owe a huge debt to EI. Their overseas office staff also helped us to identify customers and came with us to those crucial first meetings. Having a representative of the Government of Ireland in your corner carries significant weight!*

Patsy's advice to anyone else who is thinking of starting out is very simple: *Put a business plan together. Fill out all the sections. Talk to Pat Fleming, if you can. By doing all this, it may be that you convince yourself that it is not worth proceeding. If so walk away from that one and try again with another idea, until you get it right. The discipline of putting time and effort into a business plan cannot be overstated.*

Patsy and Tom now have very substantial growth plans for the business. *If it continues to grow at the rate it has in this last year, the possibilities that this business offers are very exciting to say the least.* While the hours are very long and any holidays that can be snatched are spent with the lap top in tow, the two entrepreneurs are getting tremendous satisfaction out of seeing what they have already accomplished. Patsy explains that often on a Friday one of them turns to the other with what has become something of a catch phrase, *Beats working!*

5.11 Thomas Marry

As was the case with many electronic engineering university graduates in the early nineties, Thomas Marry went abroad to look for work. He chose Siemens in Germany and was engaged in the area of industrial automation. He returned seven years later to work for Siemens in a sales management role within their technical services division in Ireland. In 2000, Thomas left Siemens to take on the role of Managing Director of a new IDA backed German company, which was setting up operations in Kilkenny. InFoScore Software Service was a subsidiary of the InFoScore Group, a financial services company.

In 2004, Thomas had the idea of providing a *pay as you go* internet access for people on the move. He asked Declan Lennon who was working as Systems Manager for him at InFoScore, and who was a fellow UCD classmate, to join in turning the idea into a viable business. Declan had the technical skills required to develop the product and manage the operations of the system.

In 2005, the InFoScore Group in Germany were taken over by Bertelsmann, who already had a large operation in Dublin. As part of the takeover and restructuring that followed, the Kilkenny operation was to be downsized, as the services that had previously been supplied to Germany were to be sourced elsewhere within the Bertelsmann Group. This was the perfect opportunity to negotiate a good redundancy

package for Thomas and Declan, and to pursue their entrepreneurial plans. Together they took the plunge, set up SurfBox, a coin and credit card operated internet access solution for hotels, pubs and cafes.

Thomas had been thinking of setting up his own business since leaving Siemens but felt he needed greater experience in the area of business administration. Experience in this area he gained from his role as MD of InFoScore. The training and experience gained with both multinational companies from sales to finance, HR and product development was to stand Thomas Marry in good stead when he went to set up his own company.

Not only did the two negotiate a redundancy package from their previous employer but also a contract for their new company to provide services to the downsized InFoScore operation in Kilkenny. This provided Thomas and Declan with much needed income for the initial years.

Having the concept was one thing, coming up with a defined technical solution was another! The challenge was to design a prototype that could be implemented at a low cost while being stable enough to ensure a high level of availability with low maintenance requirements. After months of research and development they came up with a working prototype, which is still the core of their SurfBox solution today.

Asked where the name came from, Thomas explained that *when we were looking for a name for the product, we started from the concept that we wanted people to view the product as a ' Phone box' for the internet. Instead of talking, users were surfing, so we decided on SurfBox.*

As the business developed, Thomas and Declan needed funding to finance the rollout of SurfBox terminals. *We decided that we did not want to bring in external investors at this stage, as we would have to give up a percentage of the business for funding. By going down the route of company bank loans and personal loans to the business, we would retain 100% of the business.* Thomas and Declan approached a few banks and found Ulster Bank very supportive of a start up business that had a solid business plan and the right people behind the business. Ulster Bank has backed the business since day one.

From his experience with IDA and Enterprise Ireland from his InFoScore days, Thomas was fully aware of all the supports available from state agencies for start up businesses. *Once you know the rules of the schemes and follow them, there is excellent supports and tax incentives to start up businesses.* In 2006, Thomas and Declan utilised the Seed Capital Scheme as a tax efficient way of investing in the business. *Seed Capital takes time but is an excellent way of investing in your own business. I would recommend it to any one who has paid a lot of income tax over their working years, prior to entrepreneurship.*

Thomas found the local Kilkenny County Enterprise Board to be very helpful, providing feasibility and employment grants, as well as the certification required for the Seed Capital Scheme.

In September 2006 Thomas Marry entered the South East Enterprise Platform Programme (SEEPP) in Waterford Institute of Technology (WIT) for budding entrepreneurs. Thomas had been introduced to the programme by Kilkenny County Enterprise Board. Thomas found this formal training programme very beneficial: *The programme is open to one director per company, workshops are one day per week, and they also offer office space, which we did not take as we have our own offices in Kilkenny. The programme provided valuable workshops on sales, marketing and business development. The CORD funding which I received from EI during the programme was most welcome and is an excellent support for new entrepreneurs. The Programme is particularly beneficial as it allows you take time out to view your business from different angles.*

SurfBox is now fully operational, and there are over 200 SurfBox terminals in locations throughout Ireland and the UK. This new company now employs 5 people directly and has many contractors throughout

Ireland. The two directors plan to expand the business in the coming years, and in five years time, they expect to have a company that will be a major player in the provision of innovative services to the hospitality industry.

Reflecting on his decision to become an entrepreneur, Thomas is convinced it was the right one: *After gaining years of valuable sales and business management experience working for a multinational, I was not getting the level of personal satisfaction I desired from my career. I felt that I could be doing more. Setting up and managing SurfBox, with Declan, has given me a level of enjoyment, business drive and career fulfilment which was lacking before.*

Entrepreneurship has become a way of life for me. I could not imagine going back into the corporate world as a paid employee. The sense of freedom, innovation, achievement, drive, excitement and satisfaction associated with running your own business is a tonic for healthy living. I don't go to work anymore, I enjoy life.

Thomas is realistic as well as enthusiastic and recognises that the entrepreneurial route is not always an easy one: *Its not always plane sailing, there are also challenges and difficulties along the way – recruiting staff, increased competition, providing unfailing service and support, long hours and a lot of travel. But the satisfaction of knowing you are building a business for the future makes it all worth while.*

Thomas would recommend entrepreneurship to anyone who wants excitement and fulfilment in their working life. He believes that in the current environment in Ireland it is not the risky option it once was: *If it doesn't workout you can always go back to paid employment.* Thomas is adamant in his advice to others who are toying with the idea of becoming an entrepreneur: *Don't go through life dissatisfied at work and always talking about running your own business, as the saying goes, 'Just Do It'.*

5.12 Vivienne Williams

Entrepreneurship was never something that Vivienne Williams thought about while in school or in college. A former scholar of Trinity College Dublin (1997), she received a B.A. Mod in Experimental Physics from Trinity in 1999 and decided to do a postgraduate degree in the laboratory of Professor Igor Shvets. She had offers from other groups but joined Prof. Shvets's group because she knew of his excellent reputation as being incredibly inventive and very active in his primary field of research. She joined a sub-group working with Dmitry Kashanin focusing on microfluidics, the study of small volumes of fluids.

She was immediately thrust into a hugely exciting area. At the time, 1999-2002, microfluidics was a buzzword and as an area of research was still relatively new. Many groups around the world were publishing work about how, in theory, chemistry and biology laboratories would be shrunk to the size of a chip (less than 1cm²). Before long, the media hopped on the bandwagon and hype built very quickly. Unfortunately, the nature of research is slow and commercialised products did not keep up with the microfluidic dreams.

From early on, they decided to develop a microfluidic device for one simple application and stuck to it rather than becoming distracted by all the various possibilities that this new field of research offered. The device mimicked human capillaries in plastic for use as a drug screening device by the pharma and biotech industry. *After 1-2 years, Igor quickly identified the commercial potential of what we were working on and asked Dmitry and I whether we would consider developing the device commercially. It was Igor who planted the idea in the heads of Dmitry and I and that's how it all started.*

Vivienne is the first in her family to opt to start a business. She is very careful not to call it her own business as she could not have done it alone. Her role models are her father with his unwavering discipline, encouragement and advice; her mother who never stops working; and her mentor and trusted advisor from college, Prof. Igor Shvets.

Vivienne received great encouragement from her father when she told him of the possibility of her becoming an entrepreneur. *After Igor had first approached Dmitry and I with the idea, I phoned my Dad and asked him to meet me for a pint. The following day, we met in the Gingerman near Trinity College and I told him about the idea. My Dad commented that I was in a melting pot of multi-disciplinary, multi-cultural, highly skilled and intelligent people and that if an idea such as this was ever going to work, these were the people that would make it work. He believed that it was a great opportunity to have the chance to be involved in and I should grasp it with both hands.*

In 2001, she received a MSc. from Trinity for work on Microfluidic Biochips for Medical Diagnostics. This work then continued and led to the formation of the campus company, Cellix Ltd. in October 2004. During this period, she also completed a number of business courses: *These courses were vital in helping me form the basis of the business idea for the company.*

The greatest challenge that Vivienne Williams encountered in getting the fledgling business off the ground was raising the seed round of funding while still trying to keep everything afloat. Looking back now at this experience, Vivienne is quite philosophical: *In hindsight, the process is a necessary evil as once you finally do raise the much-needed cash to get things off the ground, you make each cent count as you spend it.*

Vivienne believes that the difficulties she encountered in raising early finance for the new business related in particular to the fact that there are only a handful of Venture Capital companies (VCs) in Ireland that invest in the field of life sciences. Most of these VCs have fund sizes of less than €20 million, but not all of their funds are dedicated to the life sciences area. *This resulted in only a small number of people whom I could approach with our business plan. I recognised early on that we would most likely have to venture outside Ireland for part of the funds required for our first round of funding and that we would also need an experienced, local investor.*

Vivienne met John Monahan, former CEO of Avigen Inc. (NASDAQ: AVGN), through one of Enterprise Ireland's networking events and invited him to join the board of Cellix as he had many years experience raising funds and he was also able to put Vivienne in contact with a number of investors who might be interested in Cellix. One of these investors was Paul-Henry Schmelck from OTC Asset Management, a Paris-based VC. OTC co-invested with NCB Ventures, based in Dublin and Enterprise Ireland's (EI) private equity arm.

Vivienne Williams is very fulsome in her praise of Enterprise Ireland, who have supported her and the fledgling business every step of the way. Asked how she first came into contact with Enterprise Ireland, Vivienne explains that during her postgraduate studies, she co-wrote a proposal with Igor and submitted it to EI for one of their commercialisation grants. Successful in their application, this funded the development of their technology from proof-of-concept to prototype. *The amount of this award was €380,000 and we managed to make it last from 2001 to 2004. We were then awarded the CORD (Commercialisation of Research and Development) grant which is used as a stepping stone to test the market with your product. This was 50% funding of €38,000 and carried us through to 2005.*

Following market testing through the CORD grant, it became evident that there were a number of modifications which needed to be made. As a result, Vivienne and her team went back to EI to request more funding and were successful in receiving further funding under the Commercialisation Plus programme and this lasted until 2006. At that stage a number of the co-founders and promoters of the company then invested some of their own funds in order to get the company off the ground and Vivienne Williams became the company's first employee in March 2006. Cellix had its first sales in late 2006 and raised a seed round of funding, totaling €800,000, in December 2006.

Vivienne Williams believes that Cellix is a real product of EI's pipeline. *I can undoubtedly say that Cellix would not exist today without the support of Enterprise Ireland (EI). On a personal note, I am lucky enough to have worked and still work with some of the amazing individuals at EI, including Karen Conroy and Dick Lenehan of the HPSU unit; Ruth McMahon, Fiona Shalloe and many more in overseas offices who continually offer support when asked. The only criticism I would have of EI is the approval processes which are in place for grants, whereby some of the smaller grants (e.g. less than €30,000) require the same rigorous processes as some of the larger ones (e.g. €200,000 plus). The result is a drain on human resources for both EI and the fledgling company which in the end costs more taxpayers money than it would to implement a simpler approval process.*

Cellix began trading in August 2006 with sales to the National Institute of Health in the US. Since then, the company has rapidly developed and already includes among its customers top pharma and biotech companies such as AstraZeneca in Sweden and Amgen in California, USA. The company currently employs 4 people.

Vivienne does not pretend that the entrepreneurial route that she has chosen is easy, she has encountered many challenges and set backs along the way. The highs, however, have more than outweighed the difficult times – the first sale to the NIH in the US, the completion of the first round of funding but above all, seeing customers get excited about Cellix's products.

When asked what advice she would give to others starting out, Vivienne Williams had some very clear advice based on her own experience:

- *If you' re spinning a company out from a university, stay within the confines of the university for as long as possible. When they ask you to leave politely, stay another year. When they ask you again to leave (threatening eviction), stay one more year. I cannot overestimate the increase in costs when you are fully supporting the company. It is a complete drain on resources.*
- *Again, if you are starting a company from a university, ask Enterprise Ireland for help. They have lots of experience in the field and will be able to help you and potentially save you time. This may be in the form of access to reports through their databases, grants for different stages of research, contacts and investor networks.*
- *If you are already working with EI, don' t be disheartened by some of the comments they make about your plans. They made many comments about the plans I had made. In hindsight, they were right about many of them! There is a reason why the statistics for successful high potential start-ups are higher in Ireland compared to many other EU countries and EI have a lot to do with it.*

Asked if she would do it again, Vivienne replies without hesitation: *Absolutely!*

Appendix 1

Global Results at a Glance

The GEM study includes a wider group of countries than those referenced in this report.

- Table 1 provides an overview of entrepreneurship measured by GEM. The early-stage prevalence rate (or TEA index) is nascent entrepreneurs and new firm entrepreneurs combined, while the overall rate of entrepreneurship is early stage entrepreneurs combined with established entrepreneurs.
- Figure 1 shows the rate of early stage entrepreneurship across the 42 countries that participated in the GEM research cycle in 2006. The vertical bars in the chart display the 95% confidence intervals.²³
- Figure 2 shows the rate of established entrepreneurs across countries in 2006. Established entrepreneurs are individuals that are the owner and manager of a company that they set up, and that has paid wages or salaries, for more than 42 months. As before, the vertical bars represent the 95% confidence interval.

²³ While the prevalence rate for each country is based on weighted observations, the confidence interval displayed by the vertical bars is approximated using unweighted individual-level survey data. This asymmetry occurs because there is, to the best of knowledge, no formula for computing confidence levels using weighted data. A confidence interval is provided because the GEM survey does not include the entire adult population of a country. If the survey would cover the entire adult population in each country, the actual rate of entrepreneurial activity would have a 95% probability of falling along the vertical bar around the estimated points. The length of the bar is a reflection of the sample size in each country: small samples lead to wider vertical bars, and vice versa. Countries that exhibit overlapping vertical bars are not significantly different in their participation rates.

Appendix Table 1: Rates of Entrepreneurship Across Countries, 2006

	Nascent Entrepreneurs	New Firm Entrepreneurs	Early stage Entrepreneurs (Nascent + New)*	Established Entrepreneurs	Overall Entrepreneurs (Nascent + New + Established)	Number of Observations
Argentina	6.44%	4.10%	10.24%	6.96%	16.41%	1,755
Australia	7.33%	5.72%	11.96%	9.12%	20.56%	1,971
Belgium	1.82%	1.11%	2.73%	2.12%	4.76%	2,001
Brazil	3.50%	8.62%	11.65%	12.09%	23.42%	2,000
Canada	4.07%	3.17%	7.12%	5.11%	12.01%	1,697
Chile	5.74%	3.89%	9.19%	6.79%	15.40%	2,007
China	4.86%	12.00%	15.71%	12.14%	27.17%	2,399
Colombia	10.92%	12.55%	22.48%	10.41%	31.87%	2,000
Croatia	6.38%	2.49%	8.58%	4.12%	12.48%	1,549
Czech Republic	6.41%	1.98%	7.85%	5.41%	12.21%	1,628
Denmark	2.88%	2.75%	5.32%	5.28%	10.25%	10,000
Finland	2.94%	2.41%	4.99%	8.23%	12.96%	2,005
France	3.76%	0.70%	4.39%	1.33%	5.73%	1,519
Germany	2.90%	1.70%	4.21%	3.03%	6.84%	4,049
Greece	5.67%	2.26%	7.90%	8.24%	16.09%	2,000
Hungary	3.18%	3.00%	6.04%	6.72%	12.60%	2,500
Iceland	8.13%	3.78%	11.26%	7.43%	18.19%	2,001
India	5.42%	5.31%	10.42%	5.60%	15.55%	1,916
Indonesia	9.63%	11.51%	19.28%	17.62%	35.20%	1,998
Ireland	4.46%	2.93%	7.35%	7.82%	14.52%	1,961
Italy	2.23%	1.37%	3.47%	3.03%	6.21%	1,626
Jamaica	11.64%	9.21%	20.32%	10.30%	30.10%	3,554
Japan	1.59%	1.37%	2.90%	4.76%	7.45%	1,923
Latvia	4.03%	2.65%	6.57%	5.69%	12.05%	1,958
Malaysia	4.88%	6.21%	11.09%	7.31%	18.40%	2,005
Mexico	4.12%	1.19%	5.26%	2.27%	7.42%	1,839
Netherlands	3.56%	1.86%	5.42%	6.59%	11.85%	2,685
Norway	5.25%	4.34%	9.14%	5.98%	14.37%	1,503
Peru	30.01%	15.14%	40.15%	12.37%	49.55%	1,845

Appendix Table 1: Rates of Entrepreneurship Across Countries, 2006 Continued

	Nascent Entrepreneurs	New Firm Entrepreneurs	Early stage Entrepreneurs (Nascent + New)*	Established Entrepreneurs	Overall Entrepreneurs (Nascent + New + Established)	Number of Observations
Philippines	4.98%	15.62%	20.44%	19.72%	39.20%	2,000
Russia	3.46%	1.71%	4.86%	1.19%	5.64%	1,894
Singapore	2.74%	2.52%	4.85%	3.37%	7.89%	3,883
Slovenia	2.91%	1.79%	4.63%	4.44%	9.04%	3,008
South Africa	3.55%	1.74%	5.29%	1.72%	6.94%	2,684
Spain	3.01%	4.41%	7.27%	5.45%	12.46%	28,306
Sweden	2.23%	1.39%	3.45%	4.99%	8.39%	1,747
Thailand	4.05%	11.49%	15.20%	17.42%	31.70%	2,000
Turkey	2.20%	4.01%	6.07%	11.45%	17.04%	2,417
U. Arab Emirates	1.71%	2.20%	3.74%	1.39%	4.96%	1,903
United Kingdom	3.19%	2.78%	5.77%	5.41%	10.85%	34,896
United States	7.47%	3.26%	10.03%	5.42%	14.70%	2,325
Uruguay	8.37%	4.58%	12.56%	6.91%	19.09%	1,618
Average	5.32%	4.59%	9.46%	6.97%	15.94%	156,575

* This measure corresponds to the Early Stage Total Entrepreneurial Activity (TEA) Index.

Source: GEM 2006 Executive Report

Appendix Figure 1: Early Stage Entrepreneurship by Country, 2006



Source: GEM 2006 Executive Report

Appendix Figure 2: Established Entrepreneurship by Country, 2006



Source: GEM 2006 Executive Report