

# Entrepreneurship on the Island of Ireland in

*Paula Fitzsimons, Colm O’Gorman, Mark Hart,  
Maureen O’Reilly and Eileen McGloin*

# **Entrepreneurship on the Island of Ireland**

**Based on the research findings of  
The Global Entrepreneurship Monitor (GEM) 2004**

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**Note on the exchange rate used throughout the report:**

In Ireland all financial data is collected in Euros, while in Northern Ireland it is collected as pounds sterling. For the purposes of comparison, we present financial figures in both euro and sterling. The exchange rate used for conversion is the Bank of England quarterly average spot exchange rate (euro to sterling) for quarter ending 30th September 2004. The rate was €1.4877 to £1.

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We would also like to thank InterTradelreland, who first saw the potential of an all island report on entrepreneurship based on the GEM research, and our three sponsors, InterTradelreland, Enterprise Ireland and Invest NI, whose generous sponsorship and co-operation enabled the research team to gain further insights into entrepreneurship on the island of Ireland.



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# Foreword

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The employment, growth and wealth creation that increased entrepreneurial activity brings to Northern Ireland provides a very important contribution to building a sustainable and thriving economy.

We are committed in Northern Ireland to helping those who step forward with courage and imagination to take those first tentative steps towards becoming an owner manager of a new business. We are keen to harness the ideas and enthusiasm of all budding entrepreneurs, men and women, young and not so young.

Individuals, in deciding on whether or not to start a new business, will be influenced in part by their perceptions of how entrepreneurs are valued in Northern Ireland. Let me be very clear that Government values greatly those who take up the challenge and 'Go for it.' My Department will continue to encourage and support those who wish to pursue the opportunities offered by setting up and running their own business.

As part of our commitment to explore various means of encouraging greater entrepreneurial activity, I am very pleased to welcome *Entrepreneurship on the Island of Ireland in 2004*. This report further contributes to our understanding of the entrepreneurial dynamic on the island of Ireland and provides a means of sharing experiences throughout the island and of learning from each other. The valuable insights it provides are most welcome and will provide a stimulus to action to all committed to developing a fully dynamic entrepreneurial environment.

**Angela Smith M.P.**  
**Minister with responsibility for Enterprise, Trade and Investment**

**October 2005**

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# Foreword

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I welcome the publication of *Entrepreneurship on the Island of Ireland in 2004*, which presents the facts about entrepreneurship across the island of Ireland. This report adds to our stock of knowledge and will be of particular interest to policy makers, enterprise development agencies and business organisations. I am delighted that the findings in this report clearly show that choosing to start a business in Ireland is highly regarded.

The environment for small business in Ireland has improved significantly in the past decade. We now have an economic environment which is very conducive to the development and growth of small businesses. There is, however, no room for complacency and that is why I recently established a Small Business Forum to examine the current environment in which small business operates in Ireland. Among the matters I have asked the Forum to consider is whether the strategies being followed to support and develop the spirit of entrepreneurship in Ireland are effective and appropriate. The challenge for policy makers is to ensure that the correct support structures are in place to assist entrepreneurs to develop and grow their new enterprises to their full potential. The research and analysis contained in this report of *Entrepreneurship on the Island of Ireland in 2004* provides a timely stock take of the concerns of entrepreneurs.

Markets have a tendency to become global much more quickly than in the past. From earlier stages in companies' growth cycles, most firms must build the means to do business at an international level. This is just one of the many challenges that are common to entrepreneurs throughout the island of Ireland. Participation in all-island trade and business development networks is one means of facing these common challenges in a way that brings benefit to all.

I very much welcome the further insights which this second report on *Entrepreneurship on the Island of Ireland in 2004* provides and commend the continued collaboration of the Global Entrepreneurship Monitor (GEM) teams from both parts of the island, together with the co-operation of InterTradelreland, Enterprise Ireland and Invest Northern Ireland. It is by pooling our knowledge and experiences that we can achieve the goal of continued prosperity that we all seek.

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

**October 2005**



# Executive Summary

## Introduction

The aim of *Entrepreneurship on the Island of Ireland in 2004* is to develop insights into the entrepreneurial environment on the island of Ireland and to recommend means by which a dynamic entrepreneurial environment can be developed throughout the island. The Global Entrepreneurship Monitor (GEM) Adult Population Surveys for Northern Ireland and Ireland have been merged to allow the island analysis to be undertaken. An important innovation this year is to use the range of variables in the GEM dataset (i.e. individual characteristics and attitudes) to construct a series of models of the determinants of early stage entrepreneurship on the island of Ireland.<sup>1</sup> In addition to survey analysis, views from GEM's key informants and participants in a series of interactive workshops have been utilised, to provide evidence to underpin the recommendations.<sup>2</sup>

## PART 1: AN ANALYSIS OF ENTREPRENEURSHIP ON THE ISLAND OF IRELAND

### Section 1: Levels of Entrepreneurial Activity

On the island of Ireland, one in eleven of the adult population is the owner/manger of an

established business (9.2%). A greater proportion of adults in Ireland are the owner/managers of established businesses (10.1%), than is the case in Northern Ireland (6.9%).

The proportion of owner/managers within the adult population on the island of Ireland (9.2%) is higher than it is in the United Kingdom (UK) as a whole (8.2%). It is also higher than the average across Europe (8.0%), and is not far off the level that prevails in the United States (US) (10.3%).

In 2004, the total early stage entrepreneurial activity rate (TEA – comprises of *nascent*<sup>3</sup> and *new firm* entrepreneurs<sup>4</sup>) for the island of Ireland was 7%. This consisted of 7.7% in Ireland and 5% in Northern Ireland. That means that throughout the island of Ireland about 245,000 individuals between the ages of 18 and 64 were actively involved in either planning a new business or had recently set up a new business in the previous 42 months.

The island of Ireland is to the fore in Europe in terms of early stage entrepreneurial activity: only Poland has a higher rate (8.8%). In Poland, however, more than a third (35%) of entrepreneurial activity is driven by necessity, compared to 14% on the island of Ireland.

<sup>1</sup> The Irish GEM dataset for 2004 contained 1,596 respondents aged between 18 and 64 years. The Northern Ireland GEM dataset for 2004 contained 4,234 respondents giving an overall sample size of 5,830 respondents for the multivariate analysis. The full report may be accessed on the InterTradeIreland website ([www.intertradeireland.com](http://www.intertradeireland.com)).

<sup>2</sup> To gain further insights into entrepreneurship on the island of Ireland, a series of interactive workshops were held during the last year throughout the island. Over 150 individuals were invited to take part in eight workshops – 4 in Ireland, 3 in Northern Ireland and one which combined invitees from throughout the island of Ireland. The attendees included entrepreneurs, educationalists and researchers in entrepreneurship, business angels, development support executives, undergraduate and postgraduate students. The views and opinions that flowed from these workshops augmented the informed views of over 100 entrepreneurs and experts who went to make up GEM's key informants in Ireland and in Northern Ireland as part of the 2004 GEM research cycle.

<sup>3</sup> The active planning phase in which the entrepreneur has done something during the previous twelve months to help start a new business, 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. These entrepreneurs are referred to as *nascent entrepreneurs*. *Nascent entrepreneurs* represent 55% of all entrepreneurs in Ireland and 49% of entrepreneurs in Northern Ireland.

<sup>4</sup> The second phase is the first 42 months after the new venture begins to trade. 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 are referred to as *new firm entrepreneurs*. *New firm entrepreneurs* represent 45% of all entrepreneurs in Ireland and 51% of entrepreneurs in Northern Ireland.

The overall indications are that future entrepreneurial activity levels on the island of Ireland will be similar to those of the UK (9.5%), and will be on a par with the average across Europe (9.5%), but somewhat less than in the US (13.7%). Judging by these indications of future intention given by the adults on the island of Ireland, the rate of entrepreneurial activity on the island of Ireland may be expected to continue to be considerably less than the most entrepreneurial of other OECD countries.

## Section 2: The Characteristics of the New Businesses

Compared to the US there is a marked difference in the spread of early stage entrepreneurial activity by sector. Most noticeable is the relative importance of 'Consumer Sectors'<sup>5</sup> in the US (52%) and in Europe (42%), compared to the island of Ireland (35%). 'Transformative Sectors'<sup>6</sup> are more important on the island of Ireland (31%) than they are in the US (19%) and Europe (27%).

In Ireland (13%) and Northern Ireland (15%) a proportion of all early stage entrepreneurs have significant growth expectations and expect to employ at least twenty people within five years of start up. In both parts of the island of Ireland, one in twenty (5%) *new firm* entrepreneurs already employ twenty or more.

In Ireland 29% of *new firm entrepreneurs* report that they already have 25% or more of their customers in export markets, compared to 17.5% of *new firm entrepreneurs* in Northern Ireland.

Moreover, 14% of all early stage entrepreneurs from Ireland expect that at least half of their sales will come from outside the country, compared to just 7% of entrepreneurs from

Northern Ireland. This makes entrepreneurs from Northern Ireland less focused on growing their company through export sales<sup>7</sup> than is the typical entrepreneur across Europe (9%) or in the US (10%).

## Section 3: Finance for Entrepreneurs

The entrepreneur's need to raise finance for a new venture from sources other than his/her own funds is more pronounced in Ireland than it is in Northern Ireland. The contrast with the UK is even more pronounced. Moreover, the amount needed on average to start a new business in Ireland is higher than it is in either Northern Ireland or the UK.

GEM research estimates the level of informal investment activity among the adult population. Internationally, such investment is critical to the financing of start-ups, amounting, on average, to one-third of all finance used by new ventures. The entrepreneurs themselves typically provide the other two-thirds.

The level of informal investment activity remained broadly at its 2003 levels in Ireland and Northern Ireland in 2004.

## Section 4: Understanding what is Driving Early Stage Entrepreneurial Activity

Descriptive analysis of the GEM data shows that there are significant variations in early stage entrepreneurial activity on the island of Ireland and also across a range of different sub-groups within the adult population. To ascertain the relative importance of aspects of personal attributes (opportunity recognition, perception of skills, personal networks, and fear of failure), as well as different demographic and attribute features (gender, age, income category, education attainment levels, and employment status), a multivariate model of the determinants of early stage entrepreneurial activity was developed.

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<sup>5</sup> **Consumer Sectors** include some Financial Services, Real Estate, Insurance, Health, Education, and Social Services, and Consumer Services.

<sup>6</sup> **Transformative Sectors** include Construction, Mining, Transport and Wholesale.

<sup>7</sup> It should be pointed out, however, that sales within the rest of Great Britain are not considered exports from Northern Ireland, while sales to Ireland would be. Hence, Northern Ireland entrepreneurs have a much larger "home" market than have their Irish counterparts.

A number of important drivers of entrepreneurial activity have been identified. The main points can be summarised as follows:

- The island model indicates that, controlling for other demographic and attribute variables within the GEM dataset, there were other ‘environmental or framework factors’ mitigating against entrepreneurial activity in Northern Ireland.<sup>8</sup> Therefore, the observed difference in early stage entrepreneurial activity between Ireland and Northern Ireland cannot be ‘explained’ in terms of the demographics and personal attributes of the respondents.
- The large size of the public sector in Northern Ireland may be seen as having a ‘dampening’ effect on entrepreneurial aspirations through the provision of ‘safe occupations’ in terms of earnings and job security.
- The ‘framework’ factors in Northern Ireland are to a large extent ‘represented’ by the bundle of attitudinal variables.<sup>9</sup> This clearly sets out one aspect of the policy challenge for Northern Ireland – to raise the thresholds of these proxy variables for entrepreneurial culture.
- Gender operates differently in the Northern Ireland and Ireland models. Although females in Ireland are involved in early stage entrepreneurial activity at half the rate of males, females in Ireland, if all other things were equal, would be more likely than males to be involved in new venture creation. This is not the case in Northern Ireland, however, where the gender gap in favour of males is large, even when other controlling factors such as education, employment status, income and attitudes are included in the model.
- As in the island model there was a strongly positive and significant relationship in Northern Ireland between age and entrepreneurial activity – early stage entrepreneurial activity increases with age but at a decreasing rate, while controlling for other factors. This relationship is not as strong in the Ireland model. In addition, it emerged that young people aged between 18 and 24 years were significantly less likely than individuals aged between 35 and 44 years to be involved in new venture creation in Northern Ireland. This is an important conclusion for policy and provides clear evidence of the need to understand why this age group are even less likely than their counterparts in the rest of Ireland to be engaged in entrepreneurial activity.
- Individuals who report that they are risk averse (as proxied through the ‘fear of failure’ attitudinal variable) are much more likely to avoid early stage entrepreneurial activity in Northern Ireland compared to Ireland. This is an important dimension of the ‘regional entrepreneurial culture’ that requires a renewed focus from a policy perspective.
- Individuals from low and medium income households in Northern Ireland are much more likely than those from high-income households to be involved in setting up a new business venture. The evidence from the Ireland model is less conclusive though not contradictory. This finding has importance for the wider debate on the role of enterprise in providing economic opportunity for disadvantaged and marginalised individuals and groups in Northern Ireland. It does not on its own, however, provide evidence of the ability of policy interventions to raise

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<sup>8</sup> The Northern Ireland dummy variable was negative and significant.

<sup>9</sup> The inclusion of the four attitudinal variables reduced the importance (i.e. marginally insignificant) of the Northern Ireland dummy in the island model although the sign was still negative.

the enterprise potential of these individuals, nor does it provide any assessment of the comparative 'economic worth' of the businesses being established. That research is urgently required. The policy challenge in the interim, however, might be to think about ways to encourage individuals from high-income households to engage in entrepreneurial activity. Evidence from the UK would suggest that individuals from high-income households are more likely to be involved in entrepreneurial activity.<sup>10</sup> That on its own might have the effect of raising the level of start-up activity in both parts of the island.

## **PART 2: BUILDING A FULLY DYNAMIC ENTREPRENEURIAL ENVIRONMENT ON THE ISLAND OF IRELAND — RECOMMENDATIONS**

### **Section 5: Achieving Shared Goals**

It is recognised that the environments in Ireland and in Northern Ireland differ in many respects and that, while the individual goals are common, the starting points are different. The recommendations reflect these differences, while emphasising shared approaches to common challenges, where appropriate.

The recommendations focus on the achievement of the following shared goals:

- **Increase the level of entrepreneurial activity** (Section 6);
- **Harness the resources of the education and training sector** (Section 7); and
- **Maximise the number of innovative and high growth new ventures** (Section 8).

Given that new commercial ventures cannot become a reality without finance, a fourth shared goal has been added to the recommendations:

- **Ensure that adequate and appropriate sources of finance are available to meet the needs of the entrepreneurs and their new ventures** (Section 9).

### **Section 6: Increase the Level of Entrepreneurial Activity**

The importance of the environment in creating conditions in which entrepreneurship can flourish, and in removing all barriers to their greater entrepreneurial activity involvement will depend on access to relevant information, timely support and access to the opportunities created by public sector purchasing. The establishment of entrepreneurial networks and partnerships are essential to enhance information and knowledge sharing among entrepreneurs; to ensure that economies of scale and scope are exploited; new market opportunities are developed; and new technologies are utilised.

A dedicated entrepreneurial forum should be established in which individuals and the various parties interested in entrepreneurship and in starting new businesses may come together to meet, exchange ideas, and obtain relevant advice and information.

### **Section 7: Harness the Resources of the Education and Training Sector**

Nurturing a positive approach to enterprise development among students through those who influence their career choice. The sector has a pivotal role to play in providing well trained teachers who can impart a better grounding in the necessary skills for the next generation of entrepreneurs. The educators must also provide appropriate training for those who are planning new ventures or have become entrepreneurs.

### **Section 8: Maximise the Number of Innovative and High Growth New Ventures**

In addition there must be increased focus on commercialisation of research within the third

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<sup>10</sup> Harding, R (2005) Global Entrepreneurship Monitor 2004 London Business School and the Work Foundation; O'Reilly, M and Hart, M (2005) Global Entrepreneurship Monitor: Northern Ireland 2004, Invest NI and London Business School.

level institutions on the island. Greater market focus alongside the new technology must be fostered. Innovative new ventures capable of growth are not sector or technology specific and can come from a variety of sources.

Given the size of the local market, new enterprises focused on growth will often need to be supported to export at an early stage of their development. Strong management teams of complimentary skills, sufficient finance to fund the growth, strategic partnerships and focused support to achieve scale are all considered necessary.

### **Section 9: Access to Finance**

There is a clear need to ensure that adequate and appropriate sources of finance are available to meet the needs of the entrepreneurs and their new ventures.

This should be continuously monitored, gaps identified and regularly reported to policy makers. As gaps are identified in the availability of finance, these should be addressed.

The procedures, terms and conditions should be simplified and the turnaround time should be shortened for the provision of financial support to entrepreneurs.





**PART 1**

# **An analysis of entrepreneurship on the island of Ireland in 2004**



## SECTION 1

# An analysis of the levels of entrepreneurial activity

### 1.1 Introduction

This section deals with the level of entrepreneurial activity on the island of Ireland. In the first instance, the relative numbers involved as established owner/managers is reported (1.2). Then the current level of early stage entrepreneurial activity is described in terms of both *nascent* and *new firm entrepreneurs* (1.3).

### 1.2 The Level of 'Established' Entrepreneurial Activity

Established entrepreneurs consist of new firm entrepreneurs and owner/managers of businesses in existence for more than 42 months. On the island of Ireland, one in eleven of the adult population is the owner/manager of an established business (9.2%) (Table 1). A greater proportion of adults in Ireland are the owner/managers of established businesses (10.1%), than is the case in Northern Ireland (6.9%).

The proportion of owner/managers within the adult population on the island of Ireland (9.2%) is higher than it is in the UK as a whole (8.2%).

It is also higher than it is for the average across Europe (8%) and is not far off the level that prevails in the US (10.3%).

The percentage of new owner managed firms being established, relative to the stock of existing owner managed firms, is similar, with newly established firms in Northern Ireland (37%) making up a slightly greater proportion of the total of all established owner managed businesses than is the case in Ireland (36%), but the difference is not significant.

### 1.3 The Level of Early Stage Entrepreneurial Activity

In 2004, the TEA rate for the island of Ireland was 7%. This consisted of 7.7% in Ireland and 5% in Northern Ireland (Table 2). On the island of Ireland about 245,000 individuals between the ages of 18 and 64 were actively involved in either planning a new business or had recently set up a new business in the previous 42 months.<sup>11</sup> The figures are broadly similar to

**Table 1: 'Established' Entrepreneurs**

Type of Owner manager	Ireland	Northern Ireland	Island of Ireland	UK	EU	US
Number of 'established' entrepreneurs	253,000	71,000	324,000	3,082,000	21,316,000	18,820,000
New firm plus established firm entrepreneurs	10.10%	6.94%	9.24%	8.20%	7.98%	10.26%
– New Firm Entrepreneurs	3.59%	2.60%	3.35%	3.09%	2.45%	4.82%
– Established Entrepreneurs	6.50%	4.34%	5.89%	5.11%	5.53%	5.45%

<sup>11</sup> This is essentially the percentage of the adults within the population aged between 18 and 64 years that are engaged in early stage entrepreneurial activity. For the purposes of GEM research, all new entrepreneurial activity, including self-employment, is included in this figure.

last year.<sup>12</sup> There was a slight decline being shown in the numbers involved in Ireland – 7.7% compared to 8.1% in 2003. This is explained by a decline in the number of *nascent* entrepreneurs, i.e. those actively planning a new business – down from 5.1% in 2003 to 4.4% in 2004. In Northern Ireland the TEA rate was broadly similar in both years.<sup>13</sup> With a total early stage entrepreneurship activity (TEA) rate of 7%, the island of Ireland is to the fore in Europe: only Poland has a higher rate (8.8%). In Poland, however, more than a third (35%) of entrepreneurial activity is driven by necessity, compared to 14% on the island of Ireland.

The very positive position of the island of Ireland in relation to Europe, in terms of the level of early stage entrepreneurial activity, is

primarily due to the relatively high level of such activity within Ireland (7.7%). The level of entrepreneurial activity within Northern Ireland is lower (5%).

How can we explain this difference in TEA rates between Northern Ireland and Ireland? Can it be explained simply in terms of gender or age, or does it derive from differences in entrepreneurial activity related to income, education and employment status? Perhaps the difference relates to culture and the fact that individuals in Ireland are less risk averse than their counterparts in Northern Ireland. The relative importance of these factors will be explored later in the report (Section 4) as we attempt to model the likelihood of an individual being involved in early stage entrepreneurial activity on the island of Ireland.

**Table 2: Level of Early Stage Entrepreneurial Activity**

	Ireland	Northern Ireland	Island of Ireland	UK	EU	US
Number of entrepreneurs	193,000	52,000	245,000	2,349,000	14,520,000	20,783,000
TEA <sup>14</sup> (% of adult population)	7.70	5.01	7.03	6.25	5.29	11.33
<i>Nascent</i> (% of adult population)	4.39	2.52	3.93	3.37	3.10	7.47
<i>New Firm</i> (% of adult population)	3.59	2.60	3.35	3.09	2.45	4.82

<sup>12</sup> TEA of 7.03% in 2004 compared to 7.40% in 2003.

<sup>13</sup> The TEA in Northern Ireland was 5.01% in 2004 and 5.02% in 2003.

<sup>14</sup> *Nascent entrepreneurs* and *new firm entrepreneurs* sum to greater than TEA as individuals who are both nascent and new firm entrepreneurs are only counted once in calculating TEA.

## SECTION 2

# The characteristics of the new businesses

### 2.1 Introduction

Given the particularly positive impact that high growth new ventures have on the economy, this section examines the characteristics of the new businesses being formed on the island of Ireland in terms of their sector (2.2), growth (2.3), export orientation (2.4), and market expansion index (2.5).

### 2.2 The Preferred Sectors

Nearly one third of all early stage entrepreneurial activity on the island of Ireland is in 'Consumer Sectors'<sup>15</sup> (35%), and 'Transformative Sectors'<sup>16</sup> (31%), with one quarter in 'Business Services'<sup>17</sup> (24%). The remaining activity is in 'Extractive Sectors' (10%)<sup>18</sup> (Table 3).

The divide across these categories differs between Ireland and Northern Ireland. In Ireland 'Extractive sectors' are relatively more important: 11% compared to 6% in Northern Ireland. Northern Ireland has a greater proportion of activity in 'Business Services': 27% compared to 23% in Ireland.<sup>19</sup> 'Transformative Sectors' and 'Consumer Sectors' are of similar importance in Ireland and Northern Ireland.

Compared to the US there is a marked difference in the spread of early stage entrepreneurial activity by sector. Most noticeable is the relative importance of 'Consumer Sectors' in the US (52%) and in Europe (42%), compared to the island of Ireland (35%). 'Transformative Sectors' are more important on the island of Ireland (31%) than in the US (19%) and Europe (27%) (See Table 3).

**Table 3: Sectoral Distribution of Early Stage Entrepreneurial Activity**

	Ireland	Northern Ireland	Island of Ireland	UK	EU <sup>20</sup>	US
Extractive sectors	11%	6%	10%	5%	8%	5%
Transformative sectors	30%	33%	31%	20%	27%	19%
Business services	23%	27%	24%	35%	23%	24%
Consumer sectors	36%	34%	35%	40%	42%	52%

<sup>15</sup> **Consumer Sectors** include some Financial Services, Real Estate, Insurance, Health, Education, and Social Services, and Consumer Services.

<sup>16</sup> **Transformative Sectors** include Construction, Mining, Transport and Wholesale.

<sup>17</sup> **Business Services** include Hotels, Restaurants, some Financial Services.

<sup>18</sup> **Extractive Sectors** include, for example, Agriculture, Forestry, Mining.

<sup>19</sup> A more detailed analysis of entrepreneurial activity by sector in the Irish GEM report shows that the distribution of entrepreneurial activity by sector in Ireland differs from that of other 'high income' countries. In particular, using standard ten sector classifications, there is a much lower level of entrepreneurial activity in Retail, Hotels, Restaurants (10% in Ireland as compared to 22% in high income countries) and in Business Services (22% in Ireland as compared to 30% in high income countries). For further details see Section 1 of the 2004 Ireland GEM report – Fitzsimons, P. and O'Gorman, C.

<sup>20</sup> Italy not included.

## 2.3 Growth Orientation

The greatest economic impact from entrepreneurial activity comes from those entrepreneurs who manage to grow their businesses. Hence, the policy focus is not only on the number of new entrepreneurs on the island of Ireland, but also on the development or growth potential of entrepreneurial activity. While the actual growth trajectory of a new business can only be determined after some years, research has shown<sup>21</sup> that those entrepreneurs who have growth aspirations from the outset for their businesses are more likely to have businesses that will grow. Conversely, those who start out with lower expectations will remain small.

GEM research has shown that business growth aspirations generally remain low regardless of the relative wealth of the country or region. For example, an average recorded for the thirty plus countries who took part in GEM 2004, outlined that two in every three entrepreneurs indicated that they expected their new business to employ no more than two people within five years.

In Ireland, 76% of entrepreneurs expect some employment growth, similar figures in Northern Ireland were recorded at 73%. Early stage entrepreneurs in both Ireland and Northern Ireland seem more confident about creating employment than is the case for US entrepreneurs (71%) or European entrepreneurs (72%) (See Table 4).

In Ireland (13%) and Northern Ireland (15%) a proportion of all early stage entrepreneurs have significant growth expectations and expect to employ at least twenty people within five years of start up. In both parts of the island of Ireland, one in twenty (5%) *new firm* entrepreneurs already employ twenty or more.

## 2.4 Export Orientation<sup>22</sup>

The limited size of the market on the island of Ireland means that many more new businesses might be expected to seek customers in export markets than would be the case if the home market was larger. In Ireland 29% of *new firm entrepreneurs* have 25% or more of their customers in export markets, compared to 17.5% of *new firm entrepreneurs* in Northern Ireland.

Some 13% of entrepreneurs on the island of Ireland expect that at least half of their sales will come from export markets. The export orientation of entrepreneurs from Ireland was 14%, similar figures for Northern Ireland were recorded at 7%. This highlights that entrepreneurs from Northern Ireland are less export orientated than those from Europe (9%) and the US (10%), while entrepreneurs from Ireland are more export orientated than those from either Europe or the US. It should be noted, however, that sales to the rest of Great Britain are not considered exports from Northern Ireland, while sales from Ireland to Great Britain and Northern Ireland are considered exports.

**Table 4: Expected Employment Growth (TEA rates)**

	Ireland	Northern Ireland	Island of Ireland	UK	EU	US
Total Early Stage Entrepreneurial Activity (TEA)	7.70	5.01	7.03	6.25	5.29	11.33
Any Expected Employment Growth (TEA)	5.85	3.68	5.31	4.58	3.83	8.05
Percentage of TEA that expect any employment growth	76	73	76	73	72	71

<sup>21</sup> GEM-Mazars Special Topic Report on High Expectation Entrepreneurship, Erko Autio, expected publication October 2005.

<sup>22</sup> GEM measures the export orientation of early stage entrepreneurs by enquiring of identified *new firm entrepreneurs* what proportion of their customers are currently in export markets, and in the case of those actively planning a new business, i.e. *nascent entrepreneurs*, what proportion of their customers do they expect to be located in export markets.

## 2.5 Market Expansion Index

GEM estimates the innovativeness of entrepreneurs by calculating a 'market expansion' index. The index is based on three factors: (i) the extent of market innovation involved in the entrepreneurial effort; (ii) the newness of the technology or procedures required for the product or service; and (iii) whether there are competing products/services. The index is scored from 1 to 4, 1 is no market expansion, 2 is little market expansion, 3 is some market expansion, and 4 is maximum market expansion.

On the island of Ireland, 46% of all entrepreneurs report that their activities will involve no 'market expansion'. In Ireland fewer

entrepreneurs report no 'market expansion' than is the case for Northern Ireland, 45% as compared to 50%.

More entrepreneurs on the island of Ireland report that they expect 'little', 'some' or 'high' levels of market expansion (54% in total), than is the case for the UK (48%), Europe (43%) and the US (40%).

Focussing on the smaller group of entrepreneurs that report that they expect 'some' or 'high' levels of market expansion, 18% of entrepreneurs in Northern Ireland and 14% of entrepreneurs in Ireland can be considered innovative. This is lower than the rate in the UK (19%), but higher than that in the US (13%). The rate in Europe is 15%.





## SECTION 3

# Finance for entrepreneurs

### 3.1 The Capitalisation of Start-ups

The entrepreneur's need to raise finance for a new venture from sources other than his/her own funds is more pronounced in Ireland than it is in Northern Ireland. The contrast with the UK is even more pronounced. Moreover, the amount needed on average to start a new business in Ireland is higher than it is in either Northern Ireland or the UK.

The average (median) capitalisation of start-ups planned by *nascent* entrepreneurs is €25,000 (£16,800) in Ireland (Table 5), and £14,000 (€20,800) in Northern Ireland. Half of all entrepreneurs expect to start their new business with less than Stg£10,000 (€14,900).

The average (median) investment planned by *nascent* entrepreneurs is €10,000 (£6,700) in Ireland, and £7,700 (€11,500) in Northern Ireland.

### 3.2 Informal Investment Activity

GEM research estimates the level of informal investment activity among the adult population. Internationally, such investment is critical to the financing of start-ups, amounting,

on average, to one-third of all equity finance used by new ventures. The entrepreneurs themselves typically provide the other two-thirds.

The level of informal investment activity is a measure of the number of adults who have, in the previous three years, personally provided funds for a business start-up other than their own. The level of informal investment activity on the island of Ireland in 2004 was 1.95% of the adult population (Table 6). This means that about 2 in every one hundred adults, or 67,000 adults in total, engaged in informal investment activity in the previous three years.

The level of informal investment activity remained broadly at its 2003 levels in Ireland and Northern Ireland in 2004.<sup>23</sup>

Compared to other countries the rate of informal investment activity on the island of Ireland is low. For example, the US (4.3%), Norway (4.3%), New Zealand (4.8%), France (4.9%) and Iceland (8.8%) all have rates that are at least twice those on the island of

**Table 5: Capitalisation of Start-ups<sup>24</sup>**

	Ireland		Northern Ireland		UK	
	Euro	£	Euro	£	Euro	£
Average planned total money required for start-up	25,000	16,800	20,800	14,000	22,300	15,000
Average planned investment by the entrepreneur	10,000	6,700	11,500	7,700	14,700	9,900

<sup>23</sup> In Ireland informal investment activity was 2.3% in 2004 compared to 2.6% in 2003. While in Northern Ireland, the 2004 rate was 0.95% compared to 1.1% in 2003.

<sup>24</sup> Median figures for Ireland, Northern Ireland and UK.

Ireland. The rate on the island of Ireland is also less than the average for European countries (2.5%). Informal investment activity is notably

low in Northern Ireland. For example, compared to other regions in the UK, Northern Ireland ranks 10<sup>th</sup> lowest of the twelve regions.

**Table 6: Informal Investment Activity**

	<b>Ireland</b>	<b>Northern Ireland</b>	<b>Island of Ireland</b>	<b>UK</b>	<b>EU</b>	<b>US</b>
Informal investment activity (% of population)	2.28	0.95	1.95	1.37	2.46	4.34

## SECTION 4

# Understanding what is driving early stage entrepreneurial activity

## 4.1 Introduction

To further facilitate an analysis of the GEM data and its implications for the island of Ireland, a multivariate model of the determinants of early stage entrepreneurial activity was developed. This model presents an in-depth examination of *nascent* and *new firm* entrepreneurs on the island of Ireland to ascertain the relative importance of aspects of personal attributes (opportunity recognition, perception of skills, personal networks, and fear of failure) as well as different demographic features (gender, age, income category, education attainment levels, and employment status). By isolating the key variables in this way, the relative importance of each becomes apparent as an influence on the level of early stage entrepreneurship on the island of Ireland. To isolate potential variations in the determinants of early stage entrepreneurial activity separate models are developed for Ireland and Northern Ireland.

## 4.2 The Rationale for Further Analysis

There are significant variations in early stage entrepreneurial activity on the island of Ireland.<sup>25</sup> The overall level of early stage entrepreneurial activity, as measured by the Total Entrepreneurial Activity (TEA) score, on the island of Ireland is 7% of the adult population (18-64 years) with Ireland registering 7.7% and Northern Ireland 5% in 2004.

Further differences in the level of early stage entrepreneurial activity and personal attitudes between Ireland and Northern Ireland across a range of sub-groups can be summarised as follows:

- Female entrepreneurial activity differs markedly from 2.3% in Northern Ireland to 5% in Ireland. Females are less than a third as likely to be entrepreneurs as males in Northern Ireland while the gap narrows to almost half in Ireland.<sup>26</sup>
- Individuals with graduate experience in Ireland are twice as likely to be engaged in entrepreneurial activity compared to their counterparts in Northern Ireland.
- Although entrepreneurial activity in both parts of Ireland increases as income increases, it remains the case that individuals from high-income households in Ireland are much more likely to be setting up their own businesses than is the case in Northern Ireland.
- Entrepreneurial activity in Ireland is highest among those aged 25 to 34 years. Around 12% of the population in this age group are involved in the start-up process in Ireland compared to only 6% in Northern Ireland. Amongst the age group (18-24 years) the gap in entrepreneurial activity is more than double between the two parts of

<sup>25</sup> See Appendix I for the detailed comparative data from the GEM 2004 surveys.

<sup>26</sup> Further, the level of female entrepreneurial activity on the island of Ireland, in Ireland, and in Northern Ireland, is low by comparison to highly entrepreneurial countries such as the US. In the US the ratio between male and females entrepreneurs is 100 male entrepreneurs to 89 female entrepreneurs. The island of Ireland is, however, more similar to the average for the European Union, where the ratio is 100 male entrepreneurs for every 48 female entrepreneurs.

Ireland: 4% in Northern Ireland compared to 8.7% in Ireland.

- In Ireland more people personally know someone who has recently become an entrepreneur, than is the case in Northern Ireland: 36% compared to 25%. Fear of failure would inhibit 39% of adults across the island of Ireland from starting up their own businesses. The proportion of adults in the population that perceive opportunities for new businesses vary widely across the island of Ireland – Ireland (45%) and Northern Ireland (34.5%). Fear of failure is higher in Northern Ireland (43%) compared to Ireland (39%). Taking these four attitudes together it is clear that individuals in Ireland, on average, possess a set of attitudes which are more favourably disposed towards entrepreneurial activity than is the case in Northern Ireland.

The simple observation that these differences exist, however, does not lead to any understanding of the processes at work which create them. For example, to what extent is the observed gap in early stage entrepreneurial activity by age on the island of Ireland ‘explained’ by the combined effects of gender, education, income and indeed location within Ireland? To advance our understanding of the processes an analysis of the island GEM data is undertaken that attempts to simultaneously control for these set of potentially inter-related factors.

The task, therefore, in this section is to understand the observed variations in early stage entrepreneurial activity more clearly by undertaking a multivariate analysis of the Ireland and Northern Ireland GEM datasets, which have been specifically merged to facilitate this task. The details of the modelling approach are set out in a separate report.<sup>27</sup>

More specifically, the analysis is designed to isolate more effectively the effects of demography, individual attributes and attitudes on the decision to become involved in entrepreneurial activity. This is done by developing an all-island model of entrepreneurship and then looking at how the Ireland and Northern Ireland models compare.

### 4.3 The Modelling Approach

Multivariate analyses, using Logistic Regression techniques, were undertaken to estimate models which seek to explain the likelihood of an individual engaging in early stage entrepreneurial activity.<sup>28</sup>

The modelling is presented in two sections. First, an overall island model of the merged island GEM dataset is presented which will serve the following purposes:

- (i) Identify those factors at the ‘island’ level which influence the probability of an individual undertaking entrepreneurial activity; and
- (ii) Investigate the importance of location on the island of Ireland in the overall model.<sup>29</sup>

Second, separate models for Ireland and Northern Ireland are developed that will enable a comparison to be made with the overall island model.

The analysis is naturally constrained by the range of variables collected as part of the GEM survey.<sup>30</sup> The key variables used in the models, however, are demographic variables of the respondent (age and gender), some of their personal attributes (income, employment status and education), their attitudes to entrepreneurship (e.g. perception of adequate skills, fear of failure and status of entrepreneurship) and their regional location. These variables reflect current conceptual

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<sup>27</sup> The full report may be accessed on the InterTradeIreland website [www.intertradeireland.com](http://www.intertradeireland.com) under the Business and Economic Research Section.

<sup>28</sup> That is the GEM definition of TEA, which will represent the dependent variable in the models.

<sup>29</sup> By using dummy variables for Ireland and Northern Ireland.

<sup>30</sup> The precise definition of the determining variables for estimating the dichotomous Logistic Regression models can be found on the InterTradeIreland website [www.intertradeireland.com](http://www.intertradeireland.com) under the Business and Economic Research Section.

thinking on the possible range of factors which determine the likelihood of an individual engaging in an entrepreneurial act. For example, higher educational attainment, employment and higher household income are all expected to be positively associated with an individual's propensity to be starting a new business venture.

Recent research on the GEM data for 2003 in the Netherlands has demonstrated the links between entrepreneurial attitudes and entrepreneurial activities.<sup>31</sup> Further, the large differences between levels of male and female entrepreneurship in Ireland and Northern Ireland make it imperative to control for gender in any model estimations. Finally, age is included in the analysis to test the extent to which it continues to be inversely related to entrepreneurial activity or whether there is evidence emerging of an older age group moving into business ownership.

#### 4.4 An Island Model

The island model is presented in two stages:<sup>32</sup>

- (i) A model with the basic demographic and individual attributes.
- (ii) A model with the addition of the four main attitudinal variables (developed within the GEM project to provide some measure of the respondents' predisposition towards entrepreneurship).

The attitudinal variables, which are used in the model to represent a measure of 'entrepreneurial culture', are as follows:

- Knowing a recent entrepreneur;
- Confidence about the possession of start-up skills and knowledge;
- Fear of failure would prevent start-up; and
- Perception that there are good opportunities for start-up.

Concentrating on the significant variables, the model shows the following:

- Males are almost three times as likely (odds ratio of 2.83)<sup>33</sup> to be currently involved in an entrepreneurial activity as females.
- Controlling for other variables, older individuals are more likely to be currently involved in early stage entrepreneurial activity but at a decreasing rate.<sup>34</sup>
- Degree educated (or equivalent) individuals are more likely (odds ratio of 1.40) to be engaged in entrepreneurial activity.
- By controlling certain aspects of the adult population, it is possible to assert that the Northern Ireland environment in some way exerts a limiting influence on the entrepreneurial potential of the population.<sup>35</sup>

Table 7 presents the summary results for the island model with the greatest explanatory power for all respondents.<sup>36</sup>

The income and employment status variables were not significant in the estimated model

<sup>31</sup> Bosma and Wennekers (2004) Entrepreneurial Attitudes versus Entrepreneurial Activities. EIM Small Business Research and Consultancy, The Netherlands.

<sup>32</sup> The reason for doing this is that only half the sample was asked the attitudinal questions and therefore we model the full GEM dataset first before including these variables.

<sup>33</sup> The odds ratios referred to in the text are all reported in the Logistic Regression equations included in a report that can be found at [www.intertradeireland.com](http://www.intertradeireland.com) under the Business and Economic Section. The estimated coefficients are presented as odds ratios because this provides a single figure summary for the partial effect of a given predictor on the odds (in this case of TEA), controlling for other predictors in the equation. When the odds ratio is greater than 1, the predictor increases the probability of TEA, it decreases the probability of TEA when it is less than 1.

<sup>34</sup> Age is represented by two continuous variables in the analysis (Age and Age<sup>2</sup>) and as such an odds ratio cannot be calculated, as there is no reference case against which to predict the odds. The positive sign for Age means that early stage entrepreneurial activity increases with age, but the negative sign for Age<sup>2</sup> indicates that it does so at a decreasing rate.

<sup>35</sup> The odds ratio is 0.64 indicating that individuals in the region are 64 per cent as likely as their counterparts in Ireland to be involved in new venture creation.

<sup>36</sup> The Wald  $\chi^2$  statistic for the joint impact of all the explanatory variables on the dependent variable is significant in all the reported models which leads us to reject the null hypothesis that the models do not have greater explanatory power than 'constant term only' models.

although they were both positive. Those already in employment (full-time or part-time) have higher odds<sup>37</sup> of setting up or running a new business venture than those who are broadly classified as ‘inactive’, but the association with new venture creation is weak in the model. With regard to income those in the middle income category<sup>38</sup> are more likely to be associated with entrepreneurial activity compared to those in the lowest income households, but the association is not strong. The important conclusion to be drawn from

this model on the determinants of early stage entrepreneurial activity on the island of Ireland is that, when controlling for other demographic and individual attributes, Northern Ireland remains negatively associated with the likelihood of an individual engaging in *nascent* or *new firm* entrepreneurship. Therefore, the difference in TEA rates between Northern Ireland and Ireland is **not** related in some way to the age and gender profile of the two samples nor their propensity to have graduate experience, be in work or reside in low or

**Table 7: Summary of Results for Island, Ireland and Northern Ireland Logistic Regression Models**

Independent Variable	Island Model I (n=5,830)	Island Model II (n=2,538)	Ireland Model I (n=1,596)	Ireland Model II (n=698)	NI Model I (n=4,234)	NI Model II (n=1,840)
Gender (1=Male; 0=Female)	+ve***	(+ve)	+ve***	-ve***	+ve***	+ve**
Age	+ve**	+ve*	(+ve)		+ve**	+ve**
Age <sup>2</sup>	-ve**	-ve**	-ve*		-ve**	-ve**
Low Income (Reference Category) (1=Yes; 0=Not)	-	-	-	-	+ve*	+ve*
Middle Income (1=yes;0=Not)	(+ve)				+ve*	+ve**
High-income (1=yes;0=Not)		(-ve)			-	-
Employment Status (1=Working; 0=Not)	(+ve)		(+ve)	(+ve)	(+ve)	
Education (1=Graduate Experience; 0=Not)	+ve**		+ve**		+ve*	
Northern Ireland Dummy (1=NI; 0=Ireland)	-ve***	(-ve)	-	-	-	-
Attitude 1 (Know an Entrepreneur)	Not tested	+ve**	Not tested	+ve**	Not tested	+ve**
Attitude 2 (Good Opportunities for Start-up)	Not tested	+ve***	Not tested	+ve**	Not tested	+ve**
Attitude 3 (Have the Start-up Skills)	Not tested	+ve***	Not tested	+ve***	Not tested	+ve***
Attitude 4 (Fear of Failure)	Not tested	-ve***	Not tested	-ve*	Not tested	-ve***

**Notes:** \* denotes significance at the 0.10 level; \*\* denotes significance at the 0.05 level; \*\*\* denotes significance at the 0.01 level.

+ve: positive association with entrepreneurial activity – in parentheses if marginally non-significant  
 -ve: negative association with entrepreneurial activity – in parentheses if marginally non-significant

<sup>37</sup> Odds ratio of 1.25.

<sup>38</sup> When income categories are divided into three equal groups.

high-income households. There are obviously other factors at work which explain the observed differences in early stage entrepreneurial activity.

The next step in the construction of an island model of entrepreneurship is to understand the nature of the significant and negative Northern Ireland dummy more clearly. One way of doing this is to use the range of attitudinal variables contained within the GEM dataset, which represent 'proxies' for entrepreneurial culture. The proposition under investigation is the extent to which the regional dummy in the first model is operating as some sort of proxy variable for a 'bundle' of attitudes towards entrepreneurship. Table 7 also presents a summary of the island of Ireland model with the inclusion of four of the GEM attitudinal variables.

The first point to note is that all four attitudinal variables are significant and operate in the direction one would expect. That is, actually knowing an entrepreneur in the previous 12 months, reporting that they have the requisite start-up skills and knowledge and a sense that there are good start-up opportunities all have a positive and significant impact on the likelihood of an individual being involved in new venture creation. By contrast, a fear of failure has a negative and significant effect on the likelihood of new venture creation.

To summarise:

- Knowing an entrepreneur increases the 'odds' of an individual being involved in a new venture creation by almost 2 (i.e. odds ratio of 1.78).
- If an individual reported that they possessed the necessary skills and knowledge for start-up they were 11 times more likely to be actually involved in new venture creation.
- If an individual stated that there were good opportunities for start-up then the likelihood of them actually being involved in setting up a new business

was increased by a factor of just over 2 (odds ratio of 2.26).

- If 'fear of failure' was reported by the respondent as a factor in preventing them setting up their own business then the likelihood of their being involved in a new business venture was reduced by a half (odds ratio of 0.37).

The question to be explored is the manner in which the introduction of these attitudinal variables affected the overall island model reported in Table 7. Although age is still significant, gender is not, indicating that it is not operating independently of other factors, such as attitudes. The implication here is that the observed difference between male and female early stage entrepreneurial activity can be 'explained' by differences between males and females in this bundle of attitudes designed to capture the predisposition of an individual towards business formation. It is clear that the introduction of the attitudinal variables has weakened the positive and significant association between males and early stage entrepreneurial activity.

This is not surprising in the light of the very different attitudinal profiles of males and females. Overall, there are clear differences between gender in Ireland and Northern Ireland as well as differences within gender in the two parts of Ireland. For example, males are more likely than females in both Ireland and Northern Ireland to have known an entrepreneur in the previous 12 months. However, females in Ireland are also significantly more likely to have known an entrepreneur than their counterparts in Northern Ireland (32% compared to 20%). Similarly, males in Ireland are more likely to have known an entrepreneur compared to males in Northern Ireland (47% compared to 30%). In brief, gender on its own is not a significant determinant of entrepreneurial activity in the estimated model.

Clearly, age on its own is a significant determinant of entrepreneurial activity in the estimated model. In order to investigate the



precise influence of age in the model the continuous age variables (Age and Age<sup>2</sup>) were replaced with categorical variables (reference category the age group 55-64 years).<sup>39</sup> All of the four age dummies were positive but only two were significant – 25-34 years and 35-44 years – confirming that this is the optimum age on the island of Ireland to engage in early stage entrepreneurial activity, while controlling for other attributes. Overall, it can be concluded that younger individuals are significantly more likely to be involved in new venture creation than older individuals and this operates independent of gender, education, household income, employment status and attitudes. It is not possible, for example, to argue that younger people are more likely to have a degree or to be less risk averse and this, therefore, explains their predisposition towards entrepreneurship.

Graduate experience is also no longer significant in the model once the attitudinal variables are introduced, although it does still have a positive sign. This suggests that this variable is linked in some way to entrepreneurial culture. One obvious inference is that better educated individuals are more likely to report that they know an entrepreneur, have the necessary skills and knowledge to start a business and to be less risk averse. Finally, employment status loses its strength in the model even though it was not significant in the original basic model, while household income now exerts a different influence in that high-income households are now negatively associated with entrepreneurial activity although it is not significant.

What is of particular interest is the behaviour of the Northern Ireland dummy. It remains negatively associated with the likelihood of an individual engaging in entrepreneurial activity in the expanded model but marginally insignificant. The inference here is that the inclusion of the attitudinal variables has accounted for a significant amount of the

previously ‘unexplained’ difference in entrepreneurial activity between Ireland and Northern Ireland that was being picked up by the dummy variable.

It can be suggested, therefore, that the Northern Ireland dummy was in some way acting as a proxy for entrepreneurial culture. The negative impact on the likelihood of an individual engaging in entrepreneurial activity is reduced by the inclusion of the attitudinal variables. This does not mean that Northern Ireland’s entrepreneurial culture is better than that which prevails in Ireland.<sup>40</sup> In fact, the reverse is the case with Northern Ireland scoring consistently worse on all four variables. What the results show is that these variables account for a large part of the differential in entrepreneurial activity between the two parts of Ireland. Finally, the fact that it remains negative and marginally insignificant<sup>41</sup> indicates that there are still unexplained factors in the model which depress the level of entrepreneurial activity in Northern Ireland.

Nevertheless, the results clearly indicate that, all other things being equal, knowing an entrepreneur, being confident about the necessary start-up skills and knowledge as well as the potential opportunities for start-up in the local area are independent influences on entrepreneurial actions. This has important policy implications which we return to later in the context of the discussion at the end of the chapter and in Part 2 of the report.

The remainder of the section will discuss the results of the multivariate analysis which have been undertaken separately for Ireland and Northern Ireland. The rationale for this is to attempt to establish if there are quite different drivers of entrepreneurship in each of the two components within the island model. The results of the Ireland model are discussed first, followed by those for Northern Ireland.

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<sup>39</sup> The overall significance of the model remains broadly unaltered with the specification of the age variables in this way and the significance of the variables reported in Table 7 remain unchanged.

<sup>40</sup> As proxied by the four attitudinal variables.

<sup>41</sup> Actually significant at the 20% confidence levels.

## 4.5 Ireland Model

Given the importance of the inclusion of the attitudinal variables in the island model, in this section the 'expanded' model for Ireland is discussed.<sup>42</sup>

The model is significantly different from the island model in a number of distinct ways. First, the sign for gender is reversed – it is now negative and significant. This means that females in Ireland, all other things being equal, are more likely than males to be engaged in new venture creation. With an odds ratio of 0.41 this implies that males are 40 per cent as likely as females to be involved in early stage entrepreneurial activity. So, despite the observed gap in the TEA score for males and females (i.e. 10% for males and 5% for females), once other attributes and attitudes of the sample are controlled for in the estimated model, this difference disappears and is, in fact, reversed. The estimated Ireland model, excluding the attitudinal variables, results in gender being positive and significant implying that the introduction of the attitudinal variables reduces dramatically the influence of gender (see Table 7). In other words, females are more likely to be engaged in entrepreneurial activity once the bundle of proxy entrepreneurial attitudinal questions is included – especially in the age range 25-44 years. From this it can be inferred that it is these attitudinal variables that are significant in understanding the reasons that females are less involved in early stage entrepreneurial activity.

Second, other things being equal, age is not significant in the model. This means that the relationship observed in the island model – early stage entrepreneurial activity increases with age but at a decreasing rate with the optimum age range being 25-44 years – does not hold for Ireland. In other words, age does not exert an independent influence on the likelihood of an individual being involved in a

new venture, although it remains negative and significant in the reduced form model (see Table 7). However, if the model is specified using the categorical age variables, with the age group 55-64 as the reference category, the age group 18-24 is positively and significantly associated with new business creation, while those aged between 25 and 34 years exhibit a positive influence (but marginally insignificant).<sup>43</sup>

Third, employment status is a positive influence (though not significant) on the likelihood of an individual engaging in entrepreneurial activity in the Ireland model, whereas in the island model it was neutral, once other factors were controlled for. In other words, being in work, whether full-time or part-time, increases the probability of an individual being involved in early stage entrepreneurial activity as a *nascent* or *new firm* entrepreneur business.

Fourth, education in the form of graduate experience exerts a weakly positive influence on the entrepreneurial activity. If the attitudinal variables were excluded from this model graduate experience remains positive but significant implying, as in the island model, that those individuals with graduate experience are more likely to have attitudes which are positively associated with entrepreneurial activity.

Fifth, as in the island model, all the attitudinal variables are significant with knowing an entrepreneur, confidence in start-up skills and knowledge, perception of good start-up opportunities exerting a positive influence on entrepreneurial activity, while a 'fear of failure' operates as a dampening effect on entrepreneurial activity.<sup>44</sup>

## 4.6 Northern Ireland Model

The estimated model for the determinants of early stage entrepreneurial activity in Northern

<sup>42</sup> The estimated model for the determinants of entrepreneurial activity in Ireland is also summarised in Table 7.

<sup>43</sup> The model specified in this way has large standard errors associated with these variables and, accordingly, the results must be treated with care which is why we prefer to present the model with the continuous age variable included. The problem stems from a small sample size (n=698) for the Ireland model once the attitudinal variables are included which is problematic for further disaggregation by age group.

<sup>44</sup> However, it should be noted that large standard errors associated with these variables (especially start-up skills) means that confidence in the size of the 'odds ratios' is reduced.

Ireland is presented in Table 7. Once again the 'expanded' model is presented which includes the four attitudinal variables. The model is almost identical to the island model except in one very important respect. In Northern Ireland the influence of household income is now a strong influence on the likelihood of an individual being involved in setting up their own business, with low income and middle income households positively and significantly associated with new venture creation (the reference category is high-income households in this model). The island and Ireland models had a negative sign for high-income households but it was weakly associated with entrepreneurial activity.

Gender is positive and significant indicating that males, all other things being equal, are more likely than females to be engaged in entrepreneurial activity. Therefore, it is possible to conclude that gender operates as an independent influence on new venture creation in Northern Ireland. The odds ratio is greater than 2 in this model compared to 1.27 in the island of Ireland model indicating the strength of gender in the Northern Ireland model. Males in Northern Ireland are more than twice as likely as females to be engaged in new venture creation, whereas in Ireland they were less than half as likely (i.e. an odds ratio of 0.41).

The age variables indicate that there is a significant relationship between age and entrepreneurial activity – early stage entrepreneurial activity increases with age but at a decreasing rate. This differs from the Ireland model (see Table 7). However, if the model is estimated using the categorical age variables then the youngest age groups (i.e. 18-24 and 25-34 years) are negatively associated with entrepreneurial activity compared to the age group 35-44 years which exhibits the highest probability of being engaged in entrepreneurship through start-up activity. In effect, it is the higher likelihood of the 35-44

year age group to be involved in new venture creation which drives the overall result we observe in the model, when we use the continuous age variable. Therefore, controlling for other factors, there is a deficit in Northern Ireland of people aged under 35 involved in early stage entrepreneurial activity compared to Ireland.

Unlike the Ireland model the signs for employment status (i.e. working full-time or part-time) and education (i.e. graduate experience) in the Northern Ireland model are negative but they are both weak. The four attitudinal variables are all significant and operate in similar ways to that already identified in the island and Ireland models. Estimating a reduced model by excluding the attitudinal variables reverses the signs of both the employment status and education variable (i.e. they are positive) and the education variable becomes significant.

The odds ratio for knowing an entrepreneur is 1.75 which is lower than in Ireland (2.27) which means that the 'boost' to entrepreneurial activity in Northern Ireland as a result of this factor is lower than in Ireland. Similarly, with the perception that there are good opportunities for start-up – the odds ratio in the Northern Ireland model is 2 compared to 3.19 in the Ireland model. By contrast, the odds of an individual who claims to possess the necessary skills and knowledge for start-up in the Northern Ireland model is two-thirds that in the Ireland model: 9 compared to 14.<sup>45</sup> Fear of failure exerts a negative influence on entrepreneurial activity and with an odds ratio of 0.31. This means that individuals who are risk averse are 30 per cent as likely as those who are not to be involved in new venture creation. The comparable figure for Ireland is around 50% indicating that the strength of this variable is much more important on the level of overall entrepreneurial activity in Northern Ireland.

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<sup>45</sup> Large standard errors, which have been noted in both models, must limit the interpretation of this difference.

PART 2

# Building a fully dynamic entrepreneurial environment on the island of Ireland



## SECTION 5

# Achieving shared goals

## 5.1 Context

The conclusions from the analysis set out in Part 1 establish the context in which shared goals and recommendations are outlined. The report also builds on the recommendations of the first *Entrepreneurship on the Island of Ireland* report, published in June 2004, which set out a number of policy objectives.<sup>46</sup>

Recommendations have been distilled into four central and interlinked objectives:

- **Increase the level of entrepreneurial activity;**
- **Harness the resources of the education and training sector;**
- **Maximise the number of innovative and high growth new ventures; and**
- **Ensure that adequate and appropriate sources of finance are available to meet the needs of the entrepreneurs and their new ventures.**

Opinions from GEM's key informants and those who participated in a series of interactive workshops throughout the island<sup>47</sup> are combined with the analysis and conclusions contained in Part 1 of this report to arrive at a set of pragmatic recommendations to further develop the entrepreneurial environment on the island of Ireland.

It is clear from the analysis that the environments in Ireland and in Northern Ireland differ in many respects and that, while the individual goals are common, the starting points are different. The recommendations set out in the sections that follow reflect these differences, while emphasising shared approaches to common challenges, where appropriate. These recommendations bring with them resource implications and will need Government commitment and financing if they are to be fully implemented.

<sup>46</sup> The shared challenges that were identified at that time were as follows:

- Increase the level of entrepreneurial activity
- Maximise the entrepreneurial potential of all
- Increase the number of women active as entrepreneurs
- Harness the resources of the education and training sector
- Support the development and exploitation of research
- Maximise the number of innovative and high growth new ventures
- Monitor the cost of starting and operating a new business
- Monitor access and availability of finance
- Increase the level of business angel activity.

<sup>47</sup> See footnote 2, page 1.



## SECTION 6

# Increase the level of entrepreneurial activity

### 6.1 Introduction

It is now well accepted that entrepreneurship is an important contributor to economic growth, employment, innovation and competitiveness.<sup>48</sup> It also brings with it other benefits that are valued by society such as consumer choice, personal fulfilment, social cohesion and vibrant local communities.

Section 1 reported that the level of early stage entrepreneurial activity on the island of Ireland (7%) is to the fore in Europe but it is well behind the more entrepreneurial of the developed countries.<sup>49</sup> Despite many positive indicators, however, the rate of early stage entrepreneurial activity in Ireland has been in decline for several years now. In Northern Ireland, after an initial increase since 2002, the current level of entrepreneurial activity appears to have stabilised at around 5%.

Accordingly, if the common objective of developing a fully dynamic entrepreneurial environment on the island of Ireland is to be achieved, an increase in the level of entrepreneurial activity will have to be brought about.

### 6.2 Macroeconomic policies in Northern Ireland should be developed, which manage to reduce the high dependence on public sector spending

GEM research at the global level demonstrates that favourable macroeconomic conditions and policies, resulting in higher levels of growth

within an economy, are important in creating an environment conducive to entrepreneurship. The economic context of both Ireland and Northern Ireland was examined in the first *Entrepreneurship on the Island of Ireland Report*<sup>50</sup> and the more benign conditions and higher rate of growth, experienced in Ireland compared to Northern Ireland in recent years, was noted as underpinning the higher rate of entrepreneurial activity rate in Ireland, as more entrepreneurial opportunities were created within the economy.

The island model of the determinants of early stage entrepreneurial activity showed that Northern Ireland, while controlling for other demographic and attribute variables, was negatively associated with the likelihood of an individual engaging in *nascent* or *new firm* entrepreneurship. This suggests that there were other 'environmental or framework factors' mitigating against entrepreneurial activity in the region. Hence, there is an argument that suggests that if macroeconomic conditions could be further improved in Northern Ireland the increased consumer and investment confidence that would result would provide a backdrop that would be conducive to increased entrepreneurial activity.

The Northern Ireland economy has certain distinct features: one of which is a high dependence on public spending as a source of economic activity and employment. Many of those consulted pointed to the attractiveness of public sector employment as running counter to a positive perception

<sup>48</sup> For example, a variety of positive correlations between entrepreneurship and economic performance are set out in 'Action Plan: The European Agenda for Entrepreneurship', published by the EU Commission in March 2004.

<sup>49</sup> New Zealand (14.7%), Iceland (13.6%), Australia (13.4%), US (11.3%) and Canada (8.8%).

<sup>50</sup> Section 7.3, page 31- 33 inclusive.



of entrepreneurship. The pervasiveness of the public sector with its legitimacy, high salaries and security of employment is having a double dampening effect as it soaks up much of the available talent and provides many of the services that might have been provided by the private sector in other circumstances.<sup>51</sup>

The key informant interviews and workshops conducted for this research highlighted a lack of positive cultural supports toward entrepreneurship in Northern Ireland. Several felt that this was the number one issue preventing a greater level of entrepreneurial activity in Northern Ireland:

*“This non-supportive culture is the most detrimental aspect facing entrepreneurs in Northern Ireland today and serves to dampen the level of entrepreneurial activity and the entrepreneurial spirit of a resourceful, young and well educated population.”*

Hence, an improvement in the prevailing culture may be one means by which an increase in the level of entrepreneurial activity in Northern Ireland can be brought about. Culture, however, is notoriously difficult to change in a short time frame and is often not amenable to direct Government intervention. The Northern Ireland model of early stage entrepreneurship (see Section 4) demonstrates that even with lower levels of entrepreneurial activity in the region the bundle of ‘culture’ variables are an important set of factors influencing the individual decision to start a business venture.

These are aspects of the Northern Ireland culture, however, that can be harnessed to provide the cultural support for entrepreneurship that is largely missing at present. Several of the key informants drew attention to the existing networks and strong community support as positive features in the environment:

*“There are good business networks and strong personal friendships which help entrepreneurial development in Northern Ireland. This is aided by a strong community spirit. There is a realisation that people who get on the ladder can pass on their good fortune. In spite of the difficulties and negativity, these networks are helping to restore the economy and build on it.”*

Many of the key informants noted the fact that entrepreneurship had been given much more visibility as a result of the ‘Go for it’ campaign:

*“Invest Northern Ireland have produced a good campaign in raising awareness of entrepreneurship. This has created a real buzz.”*

### **6.3 A range of role models should be profiled that appeal to a broad range of potential entrepreneurs, including role models from non-typical entrepreneurial profiles i.e. female and younger/older age groups**

All of those consulted throughout the island of Ireland stressed the importance that role models can play in demonstrating to others what is possible and in encouraging future entrepreneurial behaviour. This is reinforced in the GEM findings which indicate that those who have other entrepreneurs in their personal networks are more likely to act entrepreneurially themselves. Knowing an entrepreneur almost doubles the ‘odds’ of an individual being involved in new venture creation.

Role models can have a positive influence on shaping the culture in local communities towards entrepreneurship. As one group of Irish undergraduate and postgraduate students explained:

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<sup>51</sup> The public sector plays a very significant role as an employer in Northern Ireland with about one in three (32%) of the labour force employed in the public sector compared with less than 20% in Ireland. Source: PriceWaterhouseCoopers’ Review and Prospects for the Northern Ireland Economy, January 2005.

*“The existence of role models is extremely important in encouraging entrepreneurial behaviour. In local areas this is even more prevalent and serves to enthuse the local community to celebrate local entrepreneurs and treat them as ‘local heroes’.”*

This is most important for those groups within society who are less active as entrepreneurs. Therefore, this might mean trying to enhance the profile of role models for females and younger/older age groups.

This profiling of role models by the media needs to move beyond an exclusive focus on the business pages, but more generally to the features pages and to the more general interest local and national radio and TV programmes. Role models can also be used in person as an important part of training and awareness raising programmes.

#### **6.4 The particular barriers to the greater participation of females as entrepreneurs should be systematically identified and means found to overcome these identified barriers**

The female entrepreneurs and support executives that took part in the interactive workshops in Ireland and in Northern Ireland were in broad agreement in their views as to why there were less female entrepreneurs than there were males. It was felt that females tended to assume the main caring role within families. As a result, it was suggested that they often needed a degree of flexibility in their working arrangements and that a smaller window of opportunity was often available to them in terms of the time commitment that they could devote to a new enterprise. Moreover, given the cycle of their main caring duties, there was also a timing window in which it was possible for them to set up their own business. It was suggested that this was often at a later age than was common for males.

The GEM adult population surveys on the island of Ireland provide evidence that female

entrepreneurs tend to be slightly older than their male counterparts and in Ireland are often coming from full time home duties or having worked part time. Males tend to have been full time employed before they set up their own businesses.

The model of early stage entrepreneurial activity suggests that personal context (i.e. the bundle of four attitudinal variables in the GEM survey) is an important predictor of likely entrepreneurial activity and that it operates independently of gender. The analysis described in Section 4 highlights the fact that the personal context of females is less favourable in this regard than it is for males. Compared to males on the island of Ireland, females are:

- less likely to perceive opportunities;
- less likely to perceive that they have the necessary skills;
- less likely to personally know someone who has recently become an entrepreneur; and
- they have a higher fear of failure.

Given this less favourable personal context, it is not surprising that there is a low level of entrepreneurial activity reported by females on the island of Ireland.

The model presented for Ireland in Section 4 suggests that the less favourable personal context of females in Ireland goes a long way in explaining the different entrepreneurial activity levels between males and females in Ireland. In Northern Ireland, however, gender remains a significant variable in the model (males more than twice as likely to be *nascent* or *new firm* entrepreneurs) even after the inclusion of the ‘personal context’ bundle of variables.

Evidence from the workshops concurred with these findings, that is, females in general had lower self confidence than males in terms of their ability to be successful entrepreneurs. This is the case even though females, who were considering becoming entrepreneurs, tended

to have higher educational achievement levels than their male counterparts. There was a view that females also tended to be more risk averse and had a greater fear of reputation loss among their community should their new venture not prove successful.

In Ireland, GEM research also shows that females on average are in a position to put in less of their own money into a new business than are males and are more reliant on the banks and other financial institutions to bridge their finance gap than is the case for men.

The female entrepreneurs in Ireland also drew attention to the fact that current Government policy is primarily aimed at supporting and encouraging development in ICT and the life sciences sectors and in internationally traded services. They pointed out that these sectors are ones in which the participation of females has been historically low. Accordingly, the types of businesses that are typically being started by females fall outside these particular sectors. In Northern Ireland, the development agencies have a more inclusive focus on supporting female entrepreneurs and this point was not raised in the discussions in Northern Ireland.

### **6.5 The financial and personal consequences of failure on the individual entrepreneur should be minimised**

Fear of failure, as an inhibitor to entrepreneurial activity, is relatively high on the island of Ireland. This would deter almost twice the proportion of adults participating in entrepreneurial activity throughout the island than is the case in the US. The island model of early stage entrepreneurial activity demonstrates very clearly that this attitude, while controlling for other factors such as age, gender and education of the respondent, has a significant negative impact on the propensity

of an individual being involved in setting up a new business venture.

This characteristic is more pronounced in Northern Ireland than it is in Ireland: but even here it is relatively high. A group of Irish agency support executives, discussing this issue, highlighted fear of failure in their view as one of the biggest barriers to entrepreneurial activity on the island of Ireland. They pointed out that the basis of the fear of failure as an inhibitor to entrepreneurial behaviour went beyond a psychological and cultural phenomenon. In their view, it concerned both fear for one's reputation and standing and real financial concerns.

One serial entrepreneur/business angel spoke at length of the consequences of failure:

*“A further complication in the Irish context is the stigma of failure. While we can wax lyrical about an entrepreneurial culture, the pressure and the responsibility that the funding arena forces on an entrepreneur means that failure, rather than simply being a concern, is a very real, very stressful, usually financially crippling experience. The Irish banking system does not take risks on high risk start ups, the seed funding available to any start-up is too small, even for the recognised best in their field, and most entrepreneurs will gamble their own financial security on their new company and this is a disaster if the firm cannot become viable quickly enough. It is also a serious risk for any employee joining a new venture.”*

Better preparation and ongoing education and training may be one way of reducing the likelihood of failure, but there will always be some failures. When the failure of the entrepreneurial business is due to factors other than careless or reckless management, the financial and personal consequences of failure on the individual entrepreneur should be minimised.

## 6.6 The basic information required when setting up a new business should be made available in a simple and easily accessible format. This resource should contain information on all the sources of support, advice and training available to the entrepreneur.

Government policy and programmes were mentioned most often by the GEM key informants in Northern Ireland when they were asked to nominate important strengths in the environment that are supportive of entrepreneurship. The following is typical of the kind of comment that was made by the entrepreneurs and experts consulted by the Northern Ireland GEM team as part of the 2004 cycle of research:

*“The Government’s commitment to promoting entrepreneurship has been very positive. It has recognised that this is an issue and has taken steps to promote it through the ‘Go for it’ campaign. There is a clear message to the public that entrepreneurship should at least be considered. In addition, behind that there is an infrastructure of support to follow up.”*

While Ireland does not have a high profile marketing campaign similar to that of ‘Go for it’, the Irish GEM key informants, as well as those who took part in the interactive workshops, all drew attention to the many positive features of the Government’s policy which is supportive of entrepreneurship. In particular, the pro-business attitude of the Government, a fiscal regime that does not penalize success, and Government programmes that support entrepreneurs were all perceived to be strong contributors to a positive environment.

Set against these positive features in the environment, however, are other areas in

which it was suggested that improvements could be made. Among the key informants and in the interactive workshops in Ireland and in Northern Ireland, there was mention of difficulties in accessing all the relevant information on the support, advice and training available for entrepreneurs. Those working within the development agencies, however, were of the view that the information on available supports was out there and was easily accessible, but others were less sure. It seemed that in some instances entrepreneurs were not clear on what or how to access support:

*“There is a definite information gap and a lack of awareness among the majority of people as to what is available.”*

It was suggested by several of those consulted that the information gap could be addressed simply by having one-stop<sup>52</sup> information provision regarding the initiatives and their focus and requirements. This would simplify the situation for the entrepreneur considerably and also improve the initiatives by giving them more coverage and allowing them to attract more and better candidates.<sup>53</sup>

In addition the assistance provided by the development agencies on the island of Ireland should be made available in a timely and efficient manner that reduces unnecessary bureaucracy and the time and cost required on the part of the entrepreneur.

Several key informants in Ireland and in Northern Ireland commented on the time and effort involved in obtaining funding from the development agencies.

*“Well meaning and well thought out initiatives often cannot deliver the required results because they are stifled by complex administrative structures and extensive bureaucracy. In practice, many Northern Irish initiatives aimed at entrepreneurs are notoriously slow and require copious*

<sup>52</sup> This is an initiative which is currently being undertaken by InterTradeIreland, where a full list of supports and information is available online for entrepreneurs. It can be found at [www.intertradeireland.com/get2business](http://www.intertradeireland.com/get2business) available November 2005.

<sup>53</sup> The branding of Invest Northern Ireland’s ‘Go for It’ campaign and the related Start a Business Programme (SABP) through the Enterprise Northern Ireland (ENI) network is an attempt to create a single point of presence in the start-up market, but the proliferation of other programmes and initiative still exists.

*quantities of paper work. This leads to an onerous situation where some entrepreneurs complain of chasing grants more than chasing business – a potentially serious downfall for any start up ignoring its market in favour of grant claims.”*

In Ireland and Northern Ireland there was a realisation that the high level of the bureaucracy on the part of the development agencies is as a result of Central Government requirements for accountability and prudence in the spending of public monies. While this is understandable, it was considered that a better balance was needed to address the concerns of the entrepreneurs, the clients of these agencies, for a speedy and simplified system of support.

### **6.7 The procurement procedures of public sector purchasing should be examined to ensure that entrepreneurial new businesses are not being excluded from being considered as suppliers**

The public sector tendering system was cited by several key informants in Ireland and in Northern Ireland as a means by which the Government could create opportunities for new and growing businesses.

Several experts in Ireland perceived the scheme as being open and fair. Several entrepreneurs, however, queried whether there was in fact transparency in the awarding of contracts and considered that it was difficult for a new business to break into the system. As a result the argument was made that *“there are barriers to entry in accessing work as a young business.”* It was pointed out that in the US, by contrast, a given percentage of public sector contracts must go to young businesses.

Throughout the island many of those consulted suggested that there should be a positive orientation, through public procurement policies, towards the purchasing of goods and services from SMEs, as is the case in the US. It was considered that this orientation should

apply not only at national level, but also at EU Commission level.

### **6.8 A dedicated entrepreneurial forum should be established in which entrepreneurs and new businesses may come together to meet, exchange ideas and obtain relevant advice and information**

For small businesses, in particular, networks present a number of options to overcome a range of increasing disadvantages they are experiencing in trying to compete in an increasingly complex, global market place. Because of their size, small businesses are unlikely to be in a position to retain in-house all the specialised functions required to compete in international or even national markets. Networks offer small businesses, in particular, access to resources that they could not obtain acting alone. They also offer the potential to improve the use of existing resources e.g. skills and process development. Through collaborative ventures they can open new market opportunities. Through such benefits collaboration in a network can be a source of competitive advantage for a business.

Personal networks, particularly those that contain entrepreneurial role models, are very important in determining the likelihood of an individual being involved in *nascent* or *new firm* entrepreneurship. Many of those consulted highlighted the capacity to network and build relationships as a strength of the people on the island of Ireland.

Several suggested that a dedicated entrepreneurial forum, if created, could provide a mechanism to further increase the level of entrepreneurial activity on the island of Ireland and the quality of the new businesses created.

One Irish key informant described how this *“brainstorming environment”* could be a way in which *“opportunities could ignite themselves”*:

*“The various parties involved in the venture creation process should be brought together – potential entrepreneurs*

*with the skills, but no business ideas, could be exposed to those with ideas. Such an initiative allows combinations of people with different skills, visions and technical knowledge to meet and put a viable business together."*

The idea for a forum or network of this nature was also mooted by several of those who participated in the interactive workshops.

Several of the key informants, who separately suggested an initiative of this nature, suggested

that the forum should not be led by the development agencies. In the words of one:

*"Entrepreneurship necessitates speed, rapid reactions and fast paced proactive behaviour. The agencies and Government policy aimed at promoting entrepreneurship need to acknowledge this dynamic. Most agency services follow a few paces behind the entrepreneur."*

Another spoke of the need for the entrepreneurs to set the agenda and for the forum, and the networks that it would bring together, to be independent.



## SECTION 7

# Harness the resources of the education and training sector

## 7.1 Introduction

There is a general acceptance that the overall standard of education on the island of Ireland is high and that throughout the island there is a large resource of young and well-educated people.<sup>54</sup> Given the seminal importance of the education sector in shaping attitudes and opinions, as well as in the formation of knowledge and skills, it was considered by those consulted that the sector could make a considerable contribution to further strengthening the entrepreneurial environment on the island of Ireland.

This view is given support by the modelling work on the determinants of early stage entrepreneurial activity described in Section 4. In the island model those individuals who had graduate experience were almost one and half times more likely to be involved in *nascent* or *new firm* entrepreneurship than those with lower levels of educational attainment. However, when the bundle of personal context variables are included (i.e. the attitudinal variables) the educational variable is no longer an independent influence on the likelihood of an individual to be engaged in early stage entrepreneurship. This provides evidence that education interacts with the attitudes and opinions of individuals and the inference drawn is that it is the experience of this level of education rather than the actual qualification which increases the 'odds' of an individual deciding to engage in entrepreneurial activity through a new business venture.

It was considered by many of those consulted, that the contribution of the education and training sector to entrepreneurial development could be enhanced. This contribution could be in terms of the formation of a supportive culture, opening students to the concept of entrepreneurship as an eventual career choice, or imparting to them the skills to successfully run their own businesses. This is particularly true in Northern Ireland as the model demonstrated that 18-34 year olds in Northern Ireland, when controlling for other factors, were significantly less likely to be involved in *nascent* or *new firm* entrepreneurship. This was not the case in the Ireland model.

The recommendations contained in this section focus on the education and training sector and seek to harness its resources to support the prevailing culture through nurturing a positive approach to enterprise development among students and among those who influence their career choice. The sector also has a pivotal role to play in providing well trained teachers who can impart a better grounding in the necessary skills for the next generation of entrepreneurs and can provide appropriate training for those who are planning new ventures and those who have recently become entrepreneurs.

## 7.2 A strategic and co-ordinated approach should be taken to nurture a spirit of enterprise among students

The views of a group of Irish undergraduate and postgraduate students, who opted to take

<sup>54</sup> There were some concerns from Northern Ireland, however, that too high a proportion of the well educated and highly trained workforce were often to be found employed within the wider public sector and that public sector employment in the main did not provide a good formation platform for future entrepreneurial activity. There were also some concerns expressed about a "brain drain" with a concern that many students and graduates with significant potential continued to leave Northern Ireland.



entrepreneurship as an integral part of their degree course, illustrate the potential within the education system to awakening an early interest in entrepreneurial matters. It was the view of the group that education at second and third levels was *the* most important factor in encouraging future entrepreneurs and building an entrepreneurial culture. This view echoes the results of the island model in this regard.

Many of those consulted could trace their interest back to having been made aware of the potential of entrepreneurship through their involvement in mini companies in secondary school. Forty per cent of the students consulted were involved in setting up a mini company as part of the entrepreneurship module in their transition year studies in secondary school. The group felt that this initiative opens students' minds to the possibilities of entrepreneurship and equips them with the confidence and some of the skills needed to start and run their own business.

Several felt that their course of study was a definite positive influence on their determination to become entrepreneurs at some point in the future. This was also a strong contributor to their belief that they had the skills to run a successful business. There was no doubt in the students' mind that the lecturers who teach them have had a very significant impact on their appreciation and enthusiasm for entrepreneurship. They felt that their teachers had opened their minds to the possibilities associated with entrepreneurial behaviour.

The key informants raised concerns on the lack of formal entrepreneurial education at primary and secondary level and for most students at third level. Many considered this to be a weakness in the system and believed it to be a lost opportunity. While there are examples of worthwhile initiatives being made in this area,

the general view is that these are not being coordinated and are rather the initiatives of individual teachers.

A network of teachers and researchers in entrepreneurship<sup>55</sup> on the island, consulted for this research, highlighted the lack of a strategy in this area which appears to have led to a piecemeal and fragmented approach to the provision of training for entrepreneurs and an under exposure of students at all levels to the possibilities offered by entrepreneurship as a possible career option.

This was also emphasised by a number of entrepreneurs consulted who outlined a lack of "stitched up thinking" between the Government Departments responsible for enterprise policy and those responsible for education.

There was a general view that exposing students of all ages to the concept of entrepreneurship would be a very beneficial method of raising awareness of its role and of raising the profile of entrepreneurs in society. In the words of one Irish key informant:

*"Entrepreneurship awareness and training must be adopted as an integral part of the education system at all levels: it is too late to introduce this concept at graduation or among postgraduates."*

Key informants in Ireland and in Northern Ireland noted that, while some initiatives were being taken in this regard, that these were not sufficiently integrated into the education system, and as a result their effect was diluted. This would seem to be a particular problem in Northern Ireland with the 18-24 and 25-34 age groups negatively associated with early stage entrepreneurial activity.

By contrast, Finland provides a concrete example of a country in which the educational

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<sup>55</sup> The Island's Network of Teachers and Researchers in Entrepreneurship (INTRE).

system takes a holistic approach to the encouragement and promotion of entrepreneurship.<sup>56</sup> In Finland educational initiatives cover the spectrum of educational levels concentrating on inculcating an entrepreneurial culture and on conferring the necessary skills and business know how to students at all stages within the educational system. The approach is as follows: primary schools emphasise entrepreneurial attitudes and values; secondary schools concentrate on the knowledge and basic skills associated with entrepreneurship; and third level institutes focus on developing managerial and higher level entrepreneurial skills. It is this type of coordinated approach that many of the key informants and members of the discussion panel had in mind when they made their comments.

Besides a more formal entrepreneurship curriculum which would mainstream entrepreneurial education, it was suggested that changes should also be introduced in the second level education system to encourage the development of personal characteristics, such as risk taking and responsibility, which tend to mark out entrepreneurs. It was suggested that these traits could be developed through project and fieldwork across a range of subject areas and in the running of student councils, tuck shops and other student to student events and services.

### **7.3 Teachers of entrepreneurship must be properly trained and resourced**

Teachers, through their training and experience, tend to have little experience of entrepreneurship and the world of business. If there is to be greater integration between the objectives of the stated enterprise policy and the education system in relation to entrepreneurship, and if initiatives to promote

entrepreneurship among students at all levels throughout the educational system are to be adopted, then this will require the preparation of suitable teaching materials and aids. In many cases the educators will require appropriate training in the relevant areas to bring the subject to life.

As one Northern Ireland GEM key informant summed up this recommendation:

*“Teachers need to be given some form of business experience. This may not necessarily involve getting teachers to work in a business but perhaps through more exposure to past pupils who have gone various career routes.”*

In addition, it was considered that the teaching of this subject would greatly benefit from the contribution that could be made by role models (see section 6.3) across different sectors on the island of Ireland. The role models should be profiled and these profiles used as teaching materials.<sup>57</sup> In addition, local entrepreneurs should be encouraged to come into the classrooms to talk about their experiences.

### **7.4 The entrepreneurial capacity of students should be strengthened in all faculties across the third level sector**

The evidence from the models of entrepreneurial activity suggests that those who self-report that they have the knowledge and skills to start their own business are much more likely to be actually engaged in *nascent* or *new firm* entrepreneurship.

It was suggested that business courses at third level should include more entrepreneurship training and that exposure to business and management training be broadened to include those within the technical and science areas.

<sup>56</sup> This point is highlighted in Section 6 of the Ireland 2004 GEM report – Finland and Ireland: A GEM Insight. This co-ordinated initiative in Finland has been taken to address specific shortcomings in the cultural support for entrepreneurship and to address the current low level of entrepreneurial activity in that country, despite its recognised lead in innovation.

<sup>57</sup> InterTradeIreland plans to produce a portfolio of island entrepreneurial role models based on the Ernst & Young ‘Entrepreneur of the Year’ finalists. These portfolios will be illustrated as practical interactive learning tools targeted at those teaching and studying entrepreneurship. This project will be completed in September 2006.

This poses a challenge to Presidents and Directors in third level colleges to move the focus on entrepreneurship beyond the Business Departments and to encourage an entrepreneurial culture in all faculties among both staff and students alike and to expose more technical and science students to an understanding of market and commercial requirements.

As one expert in this area explained:

*“There is a need to move away from a silo approach to knowledge within Departments to a much greater cross fertilisation across Departments with marketing/business interacting much more closely with the technical, medical and science Departments.”*

The various models of the factors influencing entrepreneurial activity on the island of Ireland have shown that those who believe that they have the skills to successfully run a new business are more likely to become entrepreneurs. This operates independently of age, gender, education, employment status and household income of the respondent. Accordingly, the building of entrepreneurial capacity and personal belief among the wider student body will have a significant impact on the number of graduates who subsequently in their career choose the entrepreneurial route. This is particularly pertinent to those with higher technical, engineering and scientific qualifications.

This may prove more challenging, however, than at first sight it might appear. An experienced lecturer commented:

*“Entrepreneurship programmes are not valued by science and technology students, and consequently, there is a lack of enthusiasm by students in these areas for such programmes.”*

## **7.5 Appropriate entrepreneurship training should be made available in a coordinated manner to different types of entrepreneurs at the various stages of the creation and development of their new businesses**

Those consulted emphasised that entrepreneurs are not a homogeneous group; they differ in terms of their background and experience, their level of educational attainment, socio economic background, the sectoral focus of their new business and their growth aspirations for that new business. Accordingly, their training needs differ considerably.

Many of those consulted saw a need for appropriate entrepreneurship training to be made available to meet the needs of these different types of entrepreneurs. It was also suggested that the training be tailored to the stage of development of their business – those actively planning a new business, those in the early stage of starting a new business and those running successful businesses who wish to grow them significantly.

It was considered that on the island of Ireland there was not a systematic approach to the training of all entrepreneurs who needed it. Those consulted suggested that broader based training initiatives are available in Northern Ireland than in Ireland, where the training available was often considered to be confined to those operating in certain sectors and those initiating more sophisticated ventures. But from all parts of the island it was suggested that training was not always available appropriate to entrepreneurs’ needs at all stages of their new businesses’ development and that further initiatives should be taken in this area.

Experts consulted in Northern Ireland, who have experience in this area,<sup>58</sup> made the following observation:

*“Often in the case of female entrepreneurship (more so than is seen with males in entrepreneurship) imparting and building the confidence and self-assurance of potential female entrepreneurs is critical in the pre-start up phase. This personal support is important for females in Northern Ireland who often*

*feel a societal pressure to retain traditional roles in the economy. Such support then needs to be followed with specific skills training.”*

The challenge to policy is to develop initiatives in Ireland which focus on the practical ways of closing the ‘gap’ between the pool of characteristics exhibited by females and males and which have been shown to have an influence on the ‘odds’ of being engaged in early stage entrepreneurial activity.<sup>59</sup>

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<sup>58</sup> The experts gave an example of a particular model that they felt assisted female entrepreneurs to make the leap from paid secure employment or work in the family home to starting up on their own. This involves facilitating a kind of ‘emergent entrepreneurship’. Under this model, female entrepreneurs can avail of services which provide outreach pre-start assistance, mentoring and encouraging along with signposting to business support programmes (e.g. those run by the Enterprise Agencies). These they felt helped females “to test the water” before fully committing themselves. In tandem with a salaried job they can start incrementally by offering services after hours and by building up a client base and a reputation slowly and without the risks inherent in leaving paid employment to start up a business. This model, it was pointed out, is only relevant to certain industry sectors and does not apply to those in sales intensive sectors where an entrepreneur must devote significant time and energy to researching and positioning a new market.

<sup>59</sup> In Northern Ireland the implication is somewhat different with gender emerging as an important factor in its own right which prevents women getting involved in setting up their own business.



## SECTION 8

# Maximise the number of innovative and high growth new ventures

### 8.1 Introduction

Innovative and high growth new ventures represent only a small proportion of all entrepreneurial activity.<sup>60</sup> As Section 2 highlighted, this is true on the island of Ireland as it is true throughout the world. Though they are fewer in number, businesses of this type have by far the greatest economic impact and because of this are high on the agenda of policy makers in most developed countries.

The focus of Irish enterprise policy is on providing an environment in which it is relatively easy and rewarding to set up a new business, concentrating particularly on supporting those enterprises which it is considered will provide the best return for the Government's investment, (namely knowledge based, growth orientated and internationally trading businesses). In Ireland, new enterprises with growth potential are referred to as "high potential start-ups" (HPSUs) and are the primary focus of Enterprise Ireland's attention in the new business arena.

In Northern Ireland, the strategy behind the 'Go for it' campaign was to increase the number of new business of all types being created in Northern Ireland and to positively impact on the culture supporting entrepreneurial activity there. Within the Accelerating Entrepreneurship Strategy there is a focus on different target groups of new enterprises – "globally trading, knowledge-based projects," are one such group. Because this group of new ventures must face significant challenges relative to other groups, there is a comprehensive package of measures

to support their creation and development, as in Northern Ireland their potential is clearly recognised.

It is not surprising, therefore, that the analysis has highlighted the need to maximise the number of innovative and high growth new ventures. This is not an easy task – if it were every country would be in the happy position of having a large proportion of their new venture activity highly innovative and rapidly achieving high growth.

The *quality* of the enterprises is the important point here. Accordingly, the recommendations set out below are designed to maximise the number of innovative and high growth new ventures that are being started. The recommendations cover a number of areas designed to achieve this objective including the need to harness the commercial potential of the research being carried out within the third level colleges throughout the island and to introduce a greater market focus alongside the new technology. The recommendations also recognise that innovative new ventures capable of growth are not sector or technology specific and can come from a variety of sources. Given the size of the local market the recommendations reflect the fact that new enterprises focused on growth will often need to be supported to export at an early stage of their development. Strong management teams of complimentary skills, sufficient finance to fund the growth, strategic partnerships and focused support to achieve scale are all considered necessary if the objective of maximising the number of innovative and high

<sup>60</sup> GEM-Mazars Special Topic Report on High Expectation Entrepreneurship, Erko Autoio, expected publication October 2005.

growth, sustainable enterprises is to be achieved.

## 8.2 Strong technology transfer offices should be developed in all third level institutions

Many of those consulted equated *innovative* and *high growth* exclusively with technology based ventures<sup>61</sup> and were clearly of the belief that the research currently being carried out within the third level sector had the potential to provide the technology base on which innovative, high growth new ventures could be developed.

In Ireland there is a commitment by Government to fund research within the third level sector through Science Foundation Ireland (SFI). There was a clear expectation that innovative new businesses, particularly in the ICT and bio medical/life sciences technology sectors in which SFI funding is being concentrated, would flow from the universities and other third level colleges on the back of this significant funding.

In Northern Ireland there exists a strong science and technology research base within the third level sector. In the words of one key informant:

*“There is significant scientific innovation and Intellectual Property (IP) development in Northern Irish third level institutions. This provides a critical supply of new technology for the Northern Irish economy to build upon.”*

To maximise the economic benefits of such research, those consulted all agree that the outputs of this research must be commercialised and brought to market. Strong technology transfer offices should be developed in all third level institutions that marry knowledge of market and commercial realities to the potential offered by the innovative research being undertaken. This is evident from the role that strong technology

transfer offices have played in the successful commercialisation of research out of Stanford, the Massachusetts Institute of Technology (MIT) and Cambridge for example.

## 8.3 Development of Entrepreneurial Skills for Business Growth

The spinout of new ventures from the research, currently being carried out in the third level sector, was perceived by the key informants as having considerable potential for commercialisation. Key informants in Ireland and in Northern Ireland highlighted the slow pace of the entrepreneurial exploitation of this research. Many of the comments made centred around a concern that the research is often divorced from the market.

### Commercialisation/Sales & Marketing

One Northern Ireland expert in this area believes that there are two consequences of the current system:

- (i) commercial opportunities that exist are simply not being recognised; and
- (ii) in those rare cases when commercialisation is attempted, there is frequently a failure to put the customer and the customers' needs ahead of the technical aspects driving the new venture. He suggests that there was a need for much greater collaboration within and across third level academic Departments, with a move away from a *silos* approach to knowledge within Departments, to a much greater cross fertilisation across Departments with marketing/business interacting much more closely with the technical, medical and science Departments.

One academic went even further and suggested that Science Foundation Ireland and other research funding should include a condition that commercialisation issues be addressed in collaboration with the business schools within the relevant colleges.

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<sup>61</sup> Research in the area of high growth suggests that not all high growth companies are technology based. For example Storey, D.J. “A Portrait of Success: the facts behind high growth companies in the UK”, Deloitte and Touche, London, 2001.

The need to strengthen the entrepreneurial team is explored and within this it is recognised that sales and marketing capacity in particular needs to be improved. The key informants continued to emphasise the challenge to get a much closer connection between the research being carried out within the third level sector and the market.

One academic spoke of a “*disconnection between the business community and education system.*” Another key informant emphasised the nature of the links that need to be established: “*a much greater level of trust needs to be built between the business community and the universities to undertake collaborative research projects*”. Another academic researcher suggested that “*scientists and business people should be matched up to promote collaboration between R&D and sales and marketing.*”

An entrepreneur, who is in the process of establishing a campus company, considered that the focus on the technology as the number one priority needs to be redirected and the emphasis shifted towards the market:

*“There is a very strong focus on the development of IP, to the extent that it is the number one focus, yet IP must be supported with finance and a market, if it is to be developed. Commercialisation becomes an afterthought. The IP is not developed with a market in mind. It is developed first and then has to seek a market: this is putting the cart before the horse.”*

An Irish entrepreneur, who in fact is creating a new ICT based company, made this point:

*“New business initiatives that may be viable, but which fall outside Enterprise Ireland’s terms of reference (knowledge based and export oriented), have little support from the Government in their establishment.”*

### International Marketing

New ventures should be assisted to sell their products and services off the island of Ireland. There was clear agreement from all those consulted that the challenges posed by the limited size of the local market on the island of Ireland are considerable for companies wishing to grow and develop. New businesses simply do not have the advantages of a large local market on which to base their growth. This is a challenge common to all new businesses with growth aspirations on the island of Ireland.

Part of the solution lies in strengthening the international marketing and sales capacities within the young companies themselves.<sup>62</sup>

It is also suggested by those consulted that the Government development agencies have a practical role to play in lending support to new companies to sell their products and services off the island. In Ireland, this is one of the major challenges identified for Enterprise Ireland by the report of the Enterprise Strategy Group. Several key informants in Northern Ireland considered that the support given to Northern Ireland companies in this regard could also be improved.

Informants throughout the island suggested that the overseas office network of the main development agencies are a significant resource that should be made more available to a wider range of companies that wish to develop sales in export markets. There was a suggestion from a few key informants that the overseas offices of Invest Northern Ireland are particularly focused on the attraction of Foreign Direct Investment (FDI) and that more support would be welcome in assisting Northern Ireland companies to better understand markets and to win customers overseas.

It was considered that supportive networks, being developed throughout the island, should facilitate increased competitiveness of export firms in the global market place.

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<sup>62</sup> This challenge was referred to in the report of the Enterprise Strategy Group, *Ahead of the Curve: Ireland’s Place in the Global Economy*, July 2004, and further detailed in *Innovate Market Sell*, a review of the sales, marketing and innovation capabilities of Irish exporting SMEs, November 2004.



Given the location of the island of Ireland issues surrounding the ease and cost of access off the island for individuals, goods and services was frequently raised and considered a key issue.

#### Pooling of Knowledge and Resources to Facilitate Market Entry

Another key informant suggested that the model supplied by the BIRD Foundation could usefully be explored for high technology companies on the island of Ireland. BIRD is an acronym for Israel-U.S. Bi-national Industrial Research and Development.<sup>63</sup> The BIRD Foundation's mission is to stimulate, promote and support industrial R&D of mutual benefit to the US and Israel. The activities of the Foundation are focused on matchmaking services between Israeli and American companies in the field of Research and Development.

BIRD provides both matchmaking services between US and Israeli companies, as well as funding covering up to 50% of project development and product commercialization costs. BIRD takes no equity in the joint projects and all of the services of the Foundation are free of charge.

Typically the role of the larger US company is product definition and specification, sales, and service, while the role of the Israeli smaller company is in product development and some manufacturing. In this way both partners play to their strengths. It is suggested that this type of strategic partnership has much to offer Irish technology companies if they could be appropriately matched with US companies who have market intelligence and access.

#### Management Capability

Many of those consulted emphasised the importance of having strong management teams with balanced skills, if the growth aspirations of those companies focused on growth are to be achieved.

Several suggested that support for entrepreneurs should focus on building management capability. The recommendations here are not confined to training initiatives to enhance the capability of the individual entrepreneur, but also include mechanisms which facilitate the recruitment of those with appropriate experience into the management team. It is generally recognised that start-up companies often have more difficulty attracting experienced executives than do larger more established companies and it was considered that ways to redress this balance are needed.

In this context, one key informant from Northern Ireland focused on the *academic as entrepreneur* dilemma in terms of the management of new ventures arising out of the commercialisation of third level research:

*“There is a need to recognise the limitations on the academic as an entrepreneur. They should not necessarily be pushed into becoming an entrepreneur or even becoming a “key player”. There is a need to look more towards entrepreneurial teams.”*

An Irish key informant summed up this challenge:

*“There is a need to find ways of making connections between experienced*

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<sup>63</sup> The BIRD Foundation was established by the US and Israeli governments in 1977 to generate mutually beneficial cooperation between the private sectors of the US and Israeli high tech industries, including start-ups and established organisations. BIRD supports 25-35 projects annually with a total investment of around \$14 million per year. To date, BIRD has invested over \$180 million in 600 projects, which have produced sales of over \$7 billion.

The BIRD Foundation helps companies to find their strategic partner, whether technological or marketing. BIRD's investment, ranging from \$500,000 to \$1,000,000 over 2-3 years for full scale projects (where total project cost to the two companies is at least twice the BIRD grant) and \$100,000 over a year or less, for mini-projects (where total cost is at least \$200,000), buys it neither equity nor intellectual property rights: simply the commitment to receive repayments from successful projects, up to a modest maximum.

Any pair of companies, one Israeli and one US based, may apply jointly so long as they can demonstrate the combined capabilities and infrastructure to define, develop, manufacture, sell and support an innovative product based on industrial R&D. The companies may be simply cooperating on an ad hoc basis, linked through a corporate joint venture, or commonly owned (in whole or in part). The key criterion is that each corporate entity shall have the ability to carry out its part of the joint development and commercialisation. Their willingness to share in the financial risk of product development as well as in the financial gain of commercialisation, are also key factors in BIRD's evaluation. Further information can be obtained from the dedicated web site of the Foundation [www.birdf.com](http://www.birdf.com).

*managers and entrepreneurs in order to build balanced start-up teams from solo entrepreneurs.”*

Taking this idea further another key informant suggested that this was a role in which the development agencies could play a part. He cited for example the extensive networks and contacts that Enterprise Ireland and other agencies have which could be brought into play in this regard. He felt that Invest Northern Ireland would have similar contacts that could be made available for the benefit of entrepreneurs in Northern Ireland. Another key informant from Northern Ireland suggested that the search for balanced entrepreneurial teams should not be confined to individuals from Northern Ireland (or by extension the island of Ireland), but should range internationally.

Others suggested the potential role that appropriate mentors could play, particularly those with international experience. It was considered that the support of a “guardian angel” or mentoring figure would go some way in providing the realism and experience gap that is often lacking from a young company as it begins to tackle the marketing, financial, organisational and operational challenges posed by growth and development. As the business becomes more sophisticated, it was considered that a well connected advisory panel, made up of experienced persons with strengths in particular functional and strategic areas, could go some way in identifying and helping to fill the emerging skill gaps. It was recognised that individuals of the calibre needed are often difficult to find, particularly as there is often a need for them to spend significant time with the start up and growing venture.

Business angels and networks of angels can also contribute through mentoring (‘smart money’). It is desirable that such networks are strengthened on the island of Ireland.

#### **8.4 A comprehensive package of support should be put in place to assist companies achieve scale**

Given the recognised impact that those entrepreneurial companies have (that achieve significant scale), several key informants, particularly from Ireland, considered that companies with this potential should be the particular focus of Government support:

*“The recommended approach is not to seek a greater number of new enterprises being started within the country, but to increase the “quality” of the new ventures started through management and team development, with a higher proportion of the new start-ups developing over time into companies of considerable scale.”*

International research and the experience throughout the island have demonstrated that the challenge to nurture companies of significant scale is considerable. Accordingly, those consulted as part of the GEM research emphasised the need to provide comprehensive and substantial support to meet the particular needs of companies with desire and potential to achieve growth of this magnitude:

*“Development agencies need to focus on building scale. From nine months after start up or thereabouts, the businesses need substantial finance and need to be partnered with overseas businesses, if they are to really grow.”*

It was suggested that imaginative initiatives may need to be taken that harnesses the resources available through the large scale FDI presence on the island:

*“Policy makers need to leverage the FDI base in Ireland for early stage indigenous companies. This will not necessarily be in terms of direct sales to FDIs, but rather the FDIs should be mined for opportunities for co-development in sales and marketing, providing access to contacts etc. This type of leverage should help Irish companies to achieve scale.”*



## SECTION 9

# Access to finance

### 9.1 Introduction

The challenge to encourage a higher level of entrepreneurial activity on the island of Ireland and to maximize the number of those new ventures that are of an innovative and high growth nature will be set at naught if adequate and appropriate sources of finance are not available to meet the needs of the entrepreneurs and their new ventures.

This section sets out a number of recommendations on the provision of adequate and appropriate sources of finance to meet the needs of the entrepreneurs and their new ventures. These recommendations are based on two strands of evidence from the GEM survey in 2004:

- The gap that entrepreneurs typically face between their own resources and the financing needs of their new venture.
- The inadequacy of informal sources of investment on the island of Ireland.

### 9.2 Sufficient sources of appropriate finance should be available to companies that wish to grow

There is a clear recognition by all consulted that adequate and appropriate sources of finance are a necessity for a thriving entrepreneurial environment. When this is not the case, and either availability or access becomes difficult, the clear policy objectives of increasing the level of entrepreneurial activity (Section 6) and maximising the number of innovative and high growth new ventures (Section 8) becomes problematic.

While those interviewed as GEM key informants in Northern Ireland raised the issue

of access and availability as a negative factor in the environment less often than the issue was raised in Ireland, it is clear from the detailed questionnaires completed by key informants, that throughout the island the objective of ensuring that adequate and appropriate sources of finance are available to meet the needs of entrepreneurs and their new ventures is not always met.

For example, in terms of equity financing of new and growing ventures, a very low level of informal investment was available. The venture capital (VC) sector does not provide sufficient funds for the needs of new and growing firms; and initial public offerings (IPOs) have virtually no role to play in providing funding.

With regard to debt financing, the continuing low interest rate regime was welcomed as facilitating the creation and development of new businesses, but access to that finance still posed difficulties for some entrepreneurs, not least because of “*the onerous conditions*” attached.

Difficulties concerning access and the availability of finance were frequently mentioned by entrepreneurs throughout the island as a key issue. The financing needs of companies with significant growth aspirations are considerable and are therefore included in the section of recommendations which is focused on suggesting ways to ensure that the island economy can maximise the number of innovative and high growth new ventures that are established.

As one Irish serial entrepreneur explains:

*“To build a company of the relevant size you need substantial funds. Currently in Ireland, there is simply not enough seed capital available to build a truly international, commercially viable firm.”*

The necessary R&D and export related expenditure are very expensive and, if funding is insufficient, the potential of the new enterprise may be fatally flawed.

Key informants complained that it is particularly difficult to raise very early, pre-production stage finance. They considered that while funding at later stages is somewhat easier to raise, the level of bureaucracy, the amount of paperwork and the lag time required for the funding processes means that it is as easy to raise relatively small amounts as it is to raise very substantial amounts.

Gaps must be identified in the access and availability of various types finance. These must be directly related to the varying needs of different types of entrepreneurs and their new ventures. The research identified the need to encourage a greater involvement in informal investment, to address the risk reward balance of early stage investment, and to minimise the time and costs involved in accessing finance from all providers of finance.

Given the increasing cost of starting and running a business on the island of Ireland, the recommendations reflect a need to monitor these costs and benchmark these against those that pertain in other developed countries.

The individual recommendations, which are framed around a common desire to ensure that adequate and appropriate sources of finance are available to meet the needs of the entrepreneurs and their new ventures.

# Conclusion and recommendations

Ireland and Northern Ireland have a similar desire to nurture entrepreneurial activity among their respective populations and to harness the economic benefits of entrepreneurial activity. Entrepreneurs throughout the island face many similar challenges – not least of which is the limited size of their local market. It is also clear, however, that the environments in Ireland and in Northern Ireland differ in many respects and that their efforts to achieve the common goal of a fully dynamic entrepreneurial environment have different starting points.

## Analysis of Entrepreneurship on the Island of Ireland

Overall, the multivariate analysis of the Ireland and Northern Ireland GEM surveys for 2004 has revealed a number of important drivers of entrepreneurial activity. It is difficult from the nature of the analysis undertaken to talk in terms of causality but nevertheless, the analysis has for the first time managed to identify the strength and direction of association of individual factors, while simultaneously controlling for other respondent attributes.

The drivers of early stage entrepreneurial activity in Northern Ireland and Ireland can be summarised as follows:

- In the island model, the Northern Ireland dummy variable was negative and significant indicating that, controlling for other demographic and attribute variables, there were other ‘environmental or framework factors’ mitigating against entrepreneurial activity in the region. Such factors, for example, may be the large size of the public sector which may be seen as having a ‘dampening’ effect on entrepreneurial aspirations through the provision of ‘safe occupations’ in terms of earnings and job security.
- The inclusion of the four attitudinal variables reduced the importance (i.e. marginally insignificant) of the Northern Ireland dummy in the Ireland model, although the sign was still negative. The implication here is that the ‘framework’ factors in Northern Ireland are to a large extent, though clearly not totally, ‘represented’ by this bundle of attitudinal variables. This clearly sets out one aspect of the policy challenge for the region as it seeks to raise the thresholds of these proxy variables for entrepreneurial culture.
- Gender operates differently in Northern Ireland and Ireland. Although females in Ireland are currently involved in early stage entrepreneurial activity at half the rate of men (5% compared to 10%), females in Ireland in theory, if all other things were equal, would be more likely than males to be involved in setting up *nascent* or baby businesses. This is not the case in Northern Ireland, however, where the gender gap in favour of males is large, even when other controlling factors such as education, employment status, income and attitudes are included in the model.
- As in the island model there was a strongly positive and significant relationship in Northern Ireland between age and entrepreneurial activity – early stage entrepreneurial activity increases with age but at a decreasing rate. This relationship is not

present in the Ireland model. Further investigation of the Northern Ireland dataset revealed that it was individuals in their late thirties and early forties (i.e. 35-44 years) who were more likely to be involved in new venture creation. In addition, it emerged that young people aged between 18 and 24 years were significantly less likely<sup>64</sup> than individuals aged between 35 and 44 years to be involved in new venture creation. This is an important conclusion for policy and provides clear evidence of the need to understand why this age group (i.e. 18-24 year olds) in Northern Ireland are even less likely than their counterparts in the rest of Ireland (and indeed the UK when the models are run at the regional level) to be engaged in entrepreneurial activity.

- Individuals who report that they are risk averse<sup>65</sup> are much more likely to avoid early stage entrepreneurial activity in Northern Ireland compared to Ireland. This is an important dimension of the 'entrepreneurial culture' that requires a renewed focus from a policy perspective.
- Individuals from low and medium income households in Northern Ireland are much more likely than those from high-income households to be involved in setting up a new business venture. The evidence from the Ireland model is less conclusive though not contradictory. This finding has importance for the wider debate on the role of enterprise in providing economic opportunity for disadvantaged and marginalised individuals and groups in Northern Ireland. It does not on its own, however, provide evidence of the ability of policy interventions to raise the enterprise potential of these individuals, nor does it provide any

assessment of the comparative 'economic worth' of the businesses being established. That research is urgently required. The policy challenge in the interim, however, might be to think about ways to encourage individuals from high-income households to engage in entrepreneurial activity. Evidence from the UK would suggest that individuals from high-income households are more likely to be involved in entrepreneurial activity.<sup>66</sup> That on its own might have the effect of raising the level of start-up activity on the island.

- The influence of education, as proxied here by degree qualification (or equivalent) or higher, is positive and significant before the introduction of the attitudinal variables in the Ireland and Northern Ireland models. Once these four variables are introduced into the models the education variable becomes very weakly negative and insignificant. The most likely inference here is that those individuals, controlling for gender and age, with at least a degree qualification are more likely to report that they have the necessary skills and knowledge to start-up their own business.

While Ireland faces some challenges, it is clear that it has many positive features in the prevailing culture, the macro economic environment, the level of entrepreneurial activity, and the growth and export aspirations of its entrepreneurs.

The situation in Northern Ireland, however, despite the success of the high profile 'Go for it,' campaign is much more difficult. This is evident from a number of the findings – a fifth of Northern Ireland entrepreneurs are motivated by necessity, relatively few graduates are involved in setting up new businesses, only a small number of the

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<sup>64</sup> Odds ratio of 0.45.

<sup>65</sup> As proxied through the 'fear of failure' attitudinal variable.

<sup>66</sup> Harding, R. (2005) Global Entrepreneurship Monitor 2004 London Business School and the Work Foundation; O'Reilly, M. and Hart, M. (2005) Global Entrepreneurship Monitor: Northern Ireland 2004.

entrepreneurs show any significant export aspirations, the level of informal investment is almost non-existent, the involvement of females as entrepreneurs is very low and declining, and there are very low levels of future entrepreneurial intention evident among the adult population. Moreover, the multivariate analysis, which controls for a range of demographic and attribute variables including gender, age, income category, and employment status as well as certain personal attitudes, clearly indicates that there are deep underlying reasons, which go beyond these particular variables, that are coming into play to inhibit the full development of a vibrant entrepreneurial environment in Northern Ireland.

There are many similarities and some important differences in the level and nature of entrepreneurial activity in Ireland and Northern Ireland. Policy makers on the island of Ireland will need to develop interventions across a broad range of activities if they are to effectively address weaknesses to fostering and sustaining a fully dynamic entrepreneurial environment on the island.

This research has identified four central but interlinked areas to assist policy makers in this challenge.

### **1. Increase the level of entrepreneurial activity**

- Macroeconomic policies in Northern Ireland must be developed, which manage to reduce the high dependence on public sector spending, in a manner that does not dampen growth;
- Build on the positive features of strong community networks and supports in Northern Ireland as a platform for nurturing a culture supportive of entrepreneurs and their new ventures;
- Encourage the media to play a more supportive role in nurturing a positive view of entrepreneurs and their contribution, particularly in Northern Ireland;

- A range of role models should be profiled that appeal to a broad range of potential entrepreneurs, including those sections of the population and those living in areas of the island that are less entrepreneurial at present;
- The practical barriers that prevent women from fully participating as entrepreneurs should be identified and means found to remove them where possible;
- When failure of the entrepreneurial business is due to factors other than careless or reckless management, the financial and personal consequences of failure on the individual entrepreneur should be minimised;
- The assistance provided by the development agencies on the island of Ireland should be made available in a timely and efficient manner that reduces unnecessary bureaucracy and the time and cost required on the part of the entrepreneur;
- The procurement procedures of Government purchasing should be examined to ensure that entrepreneurial new businesses are not unnecessarily being excluded from being considered as suppliers;
- Initiatives should be considered that would encourage larger businesses to spin out new businesses; and
- A dedicated entrepreneurial forum should be established in which individuals and the various parties interested in entrepreneurship and in starting new businesses may come together to meet, exchange ideas, and obtain relevant advice and information.

### **2. Harness the resources of the education and training sector**

- A strategic and co-ordinated approach should be taken to imaginatively nurturing a spirit of enterprise among students, appropriate to their stage of



development, throughout the education system;

- Entrepreneurship education should be mainstreamed at primary and secondary level;
- Teachers of entrepreneurship must be properly trained and resourced;
- Initiatives should be taken to communicate to those influencing students' career choices that entrepreneurship is a legitimate career option;
- The entrepreneurial capacity of students should be strengthened in all faculties across the third level sector; and
- Appropriate entrepreneurship training should be made available in a coordinated manner to different types of entrepreneurs at the various stages of the creation and development of their new businesses.

### **3. Maximise the number of innovative and high growth new ventures**

- Develop strong technology transfer offices in all third level colleges that marry knowledge of market and commercial realities to the potential offered by innovative research being undertaken;
- Innovative new ventures must primarily focus on the market rather on the technology if they are to be successful;
- New ventures must be assisted to sell their products and services off the island of Ireland;
- Assistance must be given to building entrepreneurial networks capable of competing in the global marketplace;
- Strategic partnerships and/or networks should be developed that entrepreneurs can tap into for advice on operations in

both home markets and internationally; and

- A comprehensive package of support must be put in place to assist companies achieve scale.

### **4. Ensure that adequate and appropriate sources of finance are available to meet the needs of the entrepreneurs and their new ventures**

- Access and availability of finance should be monitored on an ongoing basis and any gaps identified in the availability of finance should be addressed;
- Appropriate coaching/training should be available, if requested, for entrepreneurs seeking finance;
- An investigation should be undertaken to ascertain whether female entrepreneurs face particular difficulties in raising finance and appropriate measures should be taken to address the situation, if this is the case;
- Further fiscal and other incentives should be introduced to improve the risk/reward profile of informal investment, particularly at the early stages;
- Business angel networks should be further extended and strengthened;
- The procedures, terms and conditions should be simplified, and the turnaround time should be shortened, for development agency provision of financial support to entrepreneurs; and
- The costs of starting and operating a new business, including the costs involved in raising finance, should be monitored.

The insights and recommendations set out in this report are intended to facilitate the further development of a thriving entrepreneurial environment which will be of lasting economic benefit to all the people on the island of Ireland.

APPENDIX

**Early stage entrepreneurial activity and attitudes by subgroup**



**Table A1: Cultural Context for Entrepreneurship**

	Ireland	Northern Ireland	Island of Ireland	UK	EU	US
Entrepreneurship is considered a good career choice (% yes)	66	57	63	54	62	58
Successful entrepreneurs are held in high regard (% yes)	85	77	83	71	69	63
There is a lot of media attention to entrepreneurs (% yes)	77	59	71	55	50	59

**Table A2: Personal Context of the Population**

	Ireland	Northern Ireland	Island of Ireland	UK	EU	US
Personally know an entrepreneur (% yes)	41	25	36	28	38	36
Personally have the skills to start a new business (% yes)	48	44	47	52	41	54
Personally believe that there are good opportunities to start a business (% yes)	45	34	41	36	33	34
Fear of failure would prevent me starting a business (% yes)	39	43	39	33	39	21

**Table A3: The Motivations of Early-Stage Entrepreneurs (TEA rates)**

	Ireland	Northern Ireland	Island of Ireland	UK	EU	US
TEA %	7.70	5.01	7.03	6.25	5.29	11.33
Opportunity TEA %	6.64	3.88	5.96	5.49	4.12	9.53
Necessity TEA %	0.99	1.00	0.99	0.63	0.95	1.51

**Table A4: The Motivations of Early Stage Entrepreneurs (as Percentage of All Entrepreneurs)**

	Ireland	Northern Ireland	Island of Ireland	UK	EU	US
Opportunity motivation	86	77	85	88	78	84
Necessity motivation	13	20	14	10	18	13
Other motivation	1	3	1	2	4	3

**Table A5: Male and Female Early Stage Entrepreneurial Activity (TEA) Rates**

	Ireland	Northern Ireland	Island of Ireland	UK	EU	US
TEA: Males	10.40%	7.76%	9.75%	8.54%	7.25%	11.98%
TEA: Females	5.00%	2.27%	4.32%	3.91%	3.32%	10.69%

**Table A6: Early Stage Entrepreneurial Activity (TEA) Rates by Age Group**

	Ireland	Northern Ireland	Island of Ireland
18-24 years	8.74%	3.92%	7.74%
25-34 years	11.76%	6.09%	10.47%
35-44 years	8.62%	7.06%	8.21%
45-54 years	4.37%	3.87%	4.24%
55-64 years	2.81%	3.19%	2.92%

**Table A7: Early Stage Entrepreneurial Activity (TEA) Rates by Educational Attainment**

	Ireland	Northern Ireland	Island of Ireland
Some Second Level (GCSE)	5.49%	3.41%	4.96%
Completed Secondary Level	5.00%	4.63%	4.88%
Third Level (incl. Vocational)	9.93%	4.62%	9.47%
Postgraduate Education Level	8.42%	6.48%	7.93%

**Table A8: Entrepreneurial Activity by Income Group**

	Ireland	Northern Ireland	Island of Ireland
Lowest Third	4.11%	4.95%	4.46%
Middle Third	7.31%	6.16%	6.88%
Highest Third	13.50%	6.47%	11.22%

# Entrepreneurship on the Island of Ireland



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