Entrepreneurial Activity in Ireland: Evidence from the Global Entrepreneurship Monitor¹

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ABSTRACT

T t is generally accepted that entrepreneurial activity is important for economic growth. Entrepreneurial activity, however, is widely considered not to have been an important driver of the recent period of economic growth in Ireland. This paper explores the level of early-stage entrepreneurial activity currently prevalent in Ireland, and specifically asks if Ireland has enough entrepreneurs. To answer this question, first it is necessary to know both the level and the nature of entrepreneurial activity in Ireland and how this compares with other countries. Data is used from the Global Entrepreneurship Monitor for 2001–2004 to explore this issue. As will be seen, relative to other developed European economies Ireland is guite entrepreneurial. However, relative to some other developed OECD economies such as the United States and Australia, Ireland has less entrepreneurial activity. It is argued that Ireland needs more entrepreneurial activity to sustain future economic growth and prosperity.

Key Words: Entrepreneurship; Entrepreneurs; Entrepreneurial Activity; Ireland; Public Policy; GEM.

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INTRODUCTION

Ireland is an interesting case study of entrepreneurship and economic growth. During long periods of low economic growth, analysts emphasised the relative poor development of Irish industry as a major contributory factor to the relative lack of entrepreneurial activity. The Telesis Report (National Economic Social Council, 1982) highlighted the poor performance of Irish industry in terms of low levels of profitability, over-dependence on the domestic and UK markets, and the production of commodity products that compete on cost. Barry et al. (1999) demonstrated the striking differences between indigenous and overseas industry in Ireland in terms of innovation, exporting, productivity and sector composition, with indigenous industry having low levels of innovation, low levels of exporting and lower levels of productivity, and tending to be concentrated in traditional rather than modern sectors. Despite this historical entrepreneurial deficit Ireland has experienced significant economic growth during the last decade

In describing the factors that account for the 'Celtic Tiger'. indigenous entrepreneurial activity is rarely mentioned. For example, Barry (2003) argued that broadly speaking many factors explain Ireland's economic growth in the 1990s. First, a new fiscal strategy was adopted by the government in 1987. While the expected economic effect of the strategy was a contraction in the economy, factors such as growth in world demand, the inflow of foreign direct investment (FDI) and improvements in competitiveness allowed the economy to grow. The second factor was the development of a model of social partnership. The third broad factor that explains the Celtic Tiger was the structural and cohesion funds that transferred from the European Union to Ireland. These funds accounted for 3 per cent of the economy for the decade 1989-1999, allowing investment in infrastructure and capital projects, which had been put on hold in the 1980s. These funds were spent on three areas: (1) human resource development, (2) physical infrastructure, and (3) production and investment aids to the private sector. In terms of industrial policy, explanations of the Celtic Tiger typically refer to high levels of inward FDI by multinational enterprises (MNEs) into Ireland to produce goods and services for overseas markets. During the 1990s there was a rapid growth in such investment, particularly from US firms. In contrast, there is little mention of indigenous entrepreneurial activity.

Increasingly entrepreneurship is seen as an important component of industrial development in developed economies for a number of reasons. Firstly, entrepreneurial activity is important because increased entrepreneurial activity is associated with economic growth (Austretch, 2004) and because the shortage of entrepreneurial talent is associated with low levels of economic development in developing economies (Kilby, 2004). Secondly, entrepreneurial activity is an important component of knowledgeintensive clusters as entrepreneurial activity is an important mechanism through which new innovation is brought to market (Austretch, 2004). Thirdly, entrepreneurial activity may also be important to attracting inward FDI in knowledge-intensive sectors, as 'asset-seeking' FDI may seek a dynamic environment where entrepreneurs are active in creating new knowledge. For example, while multinational firms played an important role in the development of the indigenous software sector in Ireland, indigenous firms also played an important role in attracting MNEs to Ireland (O'Malley and O'Gorman, 2001). Specifically, indigenous firms acted as sub-suppliers to MNEs involved in software translation, and indigenous software firms have played an important role in developing and upgrading the labour skills in the sector – a factor that MNEs cite as a reason for locating in Ireland. Fourthly, entrepreneurial activity contributes to overall competitiveness and productivity improvements.

This paper explores entrepreneurial activity in Ireland by asking the question, 'does Ireland have enough entrepreneurs?' To answer this question, the paper first examines both the level and the nature of early-stage entrepreneurial activity in Ireland and how this compares with other countries. If, as is argued here, Ireland needs more entrepreneurs, then it is necessary to identify what aspects of the environment in Ireland facilitate entrepreneurial activity and in what areas there are barriers to entrepreneurial activity; that is, what factors affect the supply of, and demand for, entrepreneurs. The findings of the Global Entrepreneurship

Monitor (GEM) for Ireland for the period 2001–2004 are used to explore these issues.

THE GLOBAL ENTREPRENEURSHIP MONITOR

GEM is a cross-country comparison of early-stage entrepreneurial activity. The project has sought to identify the level of entrepreneurial activity within national economies and then to identify what aspects of the socio-economic institutional environment might be associated with higher levels of entrepreneurial activity. The project is an annual assessment across a range of participating countries. Since 2001, forty-one countries have conducted at least one annual survey, though many have participated for more than one year, and some for all four years.

This paper draws on the GEM databases for 2004, 2003, 2002 and 2001 (Acs et al., 2005; Reynolds et al., 2004) and the analysis presented each year in the Irish GEM report (e.g. see Fitzsimons and O'Gorman, 2005).² Based on a population survey in each participating country, the GEM project seeks to identify levels of entrepreneurial activity, including nascent entrepreneurial activity, by directly asking people are they engaged in such activity – for a more complete description of the GEM model and methodology see the Irish GEM report (Fitzsimons and O'Gorman, 2005) and Reynolds et al. (2005).

In Ireland, the annual population survey is a telephone survey of approximately 2,000 adults. This survey provides measures of entrepreneurial activity and informal investment activity for the adult population. In addition it captures attitudes towards entrepreneurship in the adult population that are used to create a measure of the national cultural context. It also provides data on aspects of the personal context of the population that are important in determining entrepreneurial activity. In addition, the entrepreneurs and informal investors identified in the survey are asked additional questions. In discussing the entrepreneurs and informal investors, data from 2004, 2003 and 2002 are employed as it is assumed that the difference between years is not significant. From the surveys 402 entrepreneurs are considered: 131 female entrepreneurs and 271 male entrepreneurs. These include both nascent entrepreneurs and new firm entrepreneurs. In addition,

156 informal investors were identified. While the absolute number of informal investors is small, this reflects the relative rareness of the phenomenon.

Within GEM, a nascent entrepreneur is someone who responded positively to the following statement, 'you are, alone or with others, currently trying to start a new business, including any self-employment or selling any goods or services to others', provided they have not yet paid themselves a wage for more than three months. A new firm entrepreneur is someone who has started a new business, of which they are part owner and manager, in the previous 42 months. Informal investors are those who have, in the previous three years, provided funds for a new business started by someone else (though excluding the purchase of shares and mutual funds).

A second source of data collected for GEM is the opinions of experts and entrepreneurs. Experts and entrepreneurs are selected to represent critical aspects of the environment that influences entrepreneurial activity. These experts and entrepreneurs are asked each year to complete a questionnaire. All of them have been interviewed, using a semi-structured interviewing format, at least once as part of the GEM annual research cycle.

GEM RESULTS FOR IRELAND

The Level of Early-Stage Entrepreneurial Activity in Ireland

The level of early-stage entrepreneurial activity (total early-stage entrepreneurial activity or TEA rate) in Ireland has averaged at 8.31 per cent for the period 2002–2004 (Table 1). The TEA rate in 2004 was 7.7 per cent. The rate has decreased each year since 2001. The average rate for nascent entrepreneurial activity for 2002–2004 is 5.05 per cent. The average rate for new firm entrepreneurial activity for 2002–2004 is 3.85 per cent.³ Extrapolating from the 2004 GEM survey to the population suggests that there are approximately 193,000 individuals in Ireland active as early-stage entrepreneurs. Of these, 110,000 are active in planning to start a business, though many of these are still in employment. Approximately 83,000 people have started a business in the previous 42 months, which is approximately 24,000 per annum.

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Measure of Entrepreneurial Activity	2001 (%)	2002 (%)	2003 (%)	2004 (%)
TEA*	12.20	9.14	8.10	7.70
Nascent entrepreneurs	7.34	5.66	5.10	4.39
New firm entrepreneurs	4.88	4.20	3.76	3.59

Table 1: Total Entrepreneurial Activity (TEA) in Ireland 2001–2004

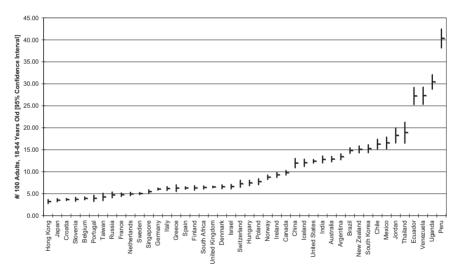


Figure 1: Total Entrepreneurial Activity (TEA Prevalence) 2000–2004

Source: Global Entrepreneurship Monitor: 2004 Executive Report.

Compared to the forty-one countries that have participated in GEM to date, Ireland is ranked nineteenth in terms of TEA rate. A more meaningful comparison is to compare Ireland with countries that have a similar level of economic development or that operate in similar economic contexts. For the twenty-five OECD countries, Ireland ranks eighth, and Ireland ranks first of the fifteen pre-accession EU countries (see Figure 1).⁴

^{*}TEA is less than the combined percentages for nascent and new firm entrepreneurs as individuals who are both nascent and new firm entrepreneurs are only counted once in the TEA calculation.

Irish Entrepreneurs: Gender, Age, Education, Work Status and Motivation

TEA rates are significantly higher for males than they are for females. The average rate of early-stage entrepreneurial activity for males for the period 2002–2004 was 11.77 per cent. In comparison, the average rate for females was 4.73 per cent. Internationally participation rates by men tend to be 50 per cent higher than those for women; though in high-income countries the difference tends to be smaller at only 33 per cent. The difference in the TEA rate between men and women in Ireland is particularly high.

The mean age for early-stage entrepreneurs is 35. The distribution of entrepreneurs across age categories is as follows: 19 per cent of entrepreneurs are in the 18–24 age group, 33 per cent in the 25–34 age group, 28 per cent in the 35–44 age group, 12 per cent in the 45–54 age group, and 7 per cent in the 55–64 age group.

Irish entrepreneurs are relatively well educated. The distribution of entrepreneurs by education category is as follows: 12 per cent of entrepreneurs have not completed secondary school, 32 per cent have completed no more than the Leaving Certificate, 41 per cent have completed third level education and 15 per cent have a post-graduate education.

The vast majority of new-firm entrepreneurs are working full-time in their new business (85 per cent). For nascent entrepreneurs, the majority are still in employment prior to starting-up (full-time 64 per cent, part-time 12 per cent), though 17 per cent report that they are 'not working' ('not working' 14 per cent, 'homemaker' 3 per cent), while 6 per cent are either retired or students.

The vast majority of Irish entrepreneurs are motivated by positive factors such as the desire to exploit an opportunity (85 per cent). A small number of all Irish entrepreneurs (15 per cent) responded that they are entrepreneurially active because they have 'no better alternative'.

New Venture Financing

The majority of entrepreneurs planning new businesses in Ireland typically require relatively small amounts of money to start their new

	Range of Finance Required			
	Less than €112,000	€112,000- €1,112,000	Greater than €1,112,000	
Percentage of entrepreneurs	70	24	6	
Amount needed (average)	€17,100	€291,500	€3,500,000	
Entrepreneurs' funds (average)	€12,200	€107,700	€1,176,000	
External funds (average)	€4,900	€183,800	€2,324,000	
Entrepreneurs' funds (%)	71	37	34	
External funds (%)	29	63	66	

Table 2: Profile of Irish Entrepreneurs' Start-up Funding Requirements (2002–2004)

businesses, though the average amount required to start a business in Ireland is relatively high at €116,000 (Table 2). 70 per cent of nascent entrepreneurs expect to start with less than €112,000. Of these entrepreneurs the average cost of start-up is €17,100. One in four entrepreneurs (24 per cent), however, anticipate that their new business will need €290,000 at the initial stages and a further one in twelve (6 per cent) will need millions to start.

The most important source of finance for entrepreneurs is their own resources (borrowing and savings). The importance of the entrepreneurs' own contribution to their financing needs is particularly evident among those entrepreneurs who anticipate their start-up financing requirements to be less than €112,000. On average these entrepreneurs need as little as €4,900 in external finance.

New Ventures: Sector, Export Orientation and Growth Orientation

Entrepreneurial activity is most frequent in three sectors: (1) business services, (2) retail, hotels and restaurants, and (3) consumer services. Combined, these sectors account for 53 per cent of entrepreneurial activity (Table 3). Manufacturing accounts for only 7 per cent of all entrepreneurial activity. Compared to other high-income

Standard Industry Code (1 digit) Ireland **High-Income Countries** (2002-2004) (%) (2004) (%) Agriculture, forestry, fishing 6 6 Mining, construction 7 11 7 Manufacturing 7 Transportation, communication, 8 5 utilities 5 Wholesale, motor vehicle sales 6 and service Retail, hotels, restaurants 17 22 Financial, insurance and real 3 6 estate **Business services** 21 30 Health, education and social 7 1 services Consumer services 15 12

Table 3: Entrepreneurial Activity by Sector

High-income countries are Australia, Belgium, Canada, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, Japan, the Netherlands, Norway, Sweden, the United Kingdom and the United States.

countries, the distribution of entrepreneurial activity in Ireland is different. In particular, Ireland appears to have a lower level of entrepreneurial activity in business services (which would include such activities as computer and related activities, and research and development).

GEM data suggests that Irish entrepreneurs are active in terms of exporting and in growing their new businesses. In GEM, exports are measured in terms of the percentage of customers in overseas markets. Only one quarter of all Irish entrepreneurs (27 per cent) expect to have no overseas customers. Half of all entrepreneurs (51 per cent) expect to have between 1 per cent and 25 per cent of their customers in export markets. Approximately one in five (22 per cent of all entrepreneurs) expect to have greater than 25 per cent of

customers in export markets. In terms of growth, most entrepreneurs (61 per cent) expect to stay small (employing less than five people). That said, GEM reports that an average of 15 per cent of all Irish early-stage entrepreneurs expect to grow to employ at least twenty people within five years.

The Context for Entrepreneurial Activity in Ireland

Cultural Context

GEM provides a unique cross-country index of whether there is an environment supportive of entrepreneurial activity. This index measures the attitudes of the population in terms of whether entrepreneurship is considered a good career choice, whether successful entrepreneurs are held in high regard, and whether there is much media attention devoted to entrepreneurial activity.

GEM suggests that Ireland has one of the most positive cultural contexts for entrepreneurship. For example, in 2004 Ireland's cultural context for entrepreneurship was the most supportive when compared to other EU countries. In 2004, successful entrepreneurs were perceived to have a very high status by 85 per cent of the Irish adult population (the highest among all GEM countries). Two out of three (66 per cent) of the adult population considered that becoming an entrepreneur was a good career choice. The Irish media was also perceived by Irish adults to be highly supportive of entrepreneurship and to reflect it in a good light (77 per cent).

Personal Context

GEM research has shown a strong positive correlation between the rate of entrepreneurial activity in a country and the personal context of individuals in that country. To illustrate the personal context, GEM measures the proportion of those that perceive good opportunities to start new businesses, those that believe that they have the skills to start and successfully run new businesses, and those who know recent entrepreneurs within their social network – personal role models as it were. Besides these positive predispositions to entrepreneurial activity, GEM also measures the inhibitors, in particular the fear of failure.

The percentage of Irish people who perceive 'good opportunities to start a new business' is 45 per cent; those who know an entrepreneur who recently set up a new business is 41 per cent; and those who believe that they have the necessary skills is 41 per cent. These are all positive influences on entrepreneurial activity. Fear of failure would, however, deter 39 per cent of the population from becoming active as entrepreneurs. The number of individuals who perceive that they have the necessary skills to start a new business (48 per cent) is behind the levels evident in New Zealand (66 per cent), Australia (56 per cent), Canada (55 per cent) and the United States (54 per cent), but it is very much ahead of many countries in mainland Europe such as Germany (36 per cent), France (33 per cent) and Italy (33 per cent).

The Availability of Finance

The most important external source of finance (that is finance not provided by the founder) is access to informal investors. Informal investors are typically family, friends and, occasionally, so-called 'fool-hardy' investors. While the absolute amount of informal investment in Ireland might be high − GEM estimates that over €1 billion was invested over the last three years − the level of informal investment in Ireland is comparatively low. For 2002–2004 the average reported rate of informal investment activity in Ireland was 2.7 per cent of the adult population.

In Ireland in 2004, just over two out of every hundred adults (2.28 per cent) had, in the past three years, personally provided funds for a new business started by someone else (excluding any purchase of stocks or mutual funds). This rate of involvement as informal investors, while higher than in the United Kingdom (1.37 per cent), is relatively low. The rate of informal investment among the adult population in New Zealand and the United States, for example, is almost twice what it is in Ireland and in Iceland it is twice that again (Figure 2).

The low level of informal investment activity means that the overall amount of funds available to new businesses in Ireland is comparatively low. Comparing the amount of external finance nascent entrepreneurs expect to require with the amount of finance available from informal investors suggests that in most countries nascent entrepreneurs require more finance than is available (Figure 3)

Prevalence rate, percent of adults

Brazil
Croatia
Japan
Portugal
Netherlands
Singapore
Singapore
Singapore
Singapore
Somand
Australia
Denmark
Agentina
Canada
Cana

Figure 2: Informal Investor Prevalence Rate 2001–2004

Source: GEM 2004 Financing Report.

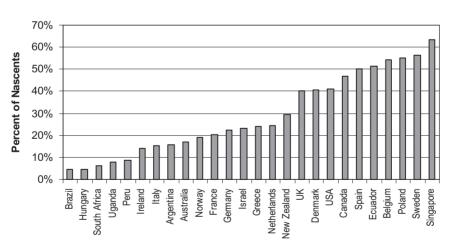


Figure 3: Percentage of Nascent Businesses that Could Be Funded with Available Informal Investment

Source: GEM 2004 Financing Report.

(Bygrave, 2005). However, this may be expected as not all nascent entrepreneurs start new business. In Ireland the amount of informal investment invested would fund only 14 per cent of nascent entrepreneurs. This figure is low when compared to other countries.

The Views of Irish Entrepreneurs and Experts

According to the experts and entrepreneurs interviewed and surveyed as part of the GEM Ireland study, Ireland has many positive features. These include a positive cultural context in which entrepreneurs and entrepreneurial activity are held in high regard; very positive media coverage within the country; many aspects of government policy that are supportive of entrepreneurs and entrepreneurial activity, for example, a pro-business attitude, continuing low-interest rates, and a fiscal regime that does not penalize success; government programmes that support entrepreneurs; a range of benefits flowing from the strong high-tech FDI presence in the country; a buoyant economy; a highly skilled workforce; a vibrant capital city; and a growing range of networks and advisors.

Set against these very positive features in the environment, however, are other less positive features. In particular, the negatives noted included difficulties in accessing finance; the lack of a champion for entrepreneurship within the government; shortcomings in the development agencies related to their coordination, the appropriateness of the background and experience of many of their executives, and the time and effort required to access their support, which are considered to impose unnecessary difficulties on entrepreneurs; the increasing regulatory burden that is flowing from the European Union and government which is adding to the cost and difficulties for new firms; a skills deficit in entrepreneurs with regard to sales, internationalisation and growth; difficulties in accessing information on entrepreneurship; the high-cost economy; an educational sector which is not particularly supportive of entrepreneurship or effective in equipping entrepreneurs with the skills that they need; the limited size of the home market; physical infrastructure deficits that impact on international trade; and skills gaps in the labour force.

DISCUSSION

Does Ireland Need More Entrepreneurs?

Ireland has experienced high levels of economic growth, high levels of employment creation and has, compared to European economies, a relatively high rate of early-stage entrepreneurial activity. As such it could be argued that Ireland does not need more entrepreneurs. However, the GEM reports for Ireland have consistently argued that Ireland needs more entrepreneurs. In arguing that Ireland needs more entrepreneurs it is important to recognise that not all entrepreneurial activity has the same economic impact. As such, the argument advanced here is that Ireland needs more entrepreneurs that will positively impact on economic development. The reasons for advocating that Ireland needs more entrepreneurs are discussed below.

One reason for the need for more entrepreneurs in Ireland is that there is increasing evidence that entrepreneurial activity is associated with economic growth, and in particular that the relationship between the level of entrepreneurial activity and economic growth depends on a country's stage of development. GEM research suggests that the extent and nature of entrepreneurial activity varies depending on the stage of economic development (Figure 4). In developing countries high rates of entrepreneurial activity, motivated to a large degree by necessity, reflect the relatively few alternatives available for paid employment in those countries. As a country develops the rate of necessity entrepreneurial activity declines, as greater economies of scale become possible. The growth of larger firms is facilitated by better transportation and communications systems and by the emergence of more sophisticated credit markets. The emergence of larger firms means that fewer entrepreneurs can provide more employment to others, thereby lessening the need for a high proportion of the population to make a livelihood through self-employment, as had previously been the case. For countries within this income group, it can therefore be expected that fewer people will need or will want to start new businesses. However, with the emergence of the 'new economy', as a country becomes wealthier and its economy further develops, there is a shift away from larger firms and the importance of entrepreneurial activity increases. Ireland appears to be at a stage of economic development for which the theory suggests that increased levels of entrepreneurial activity will be associated with increased economic growth. So while the rate of entrepreneurial activity in Ireland is favourable when compared to European economies, it is much less favourable when compared to other high-income countries

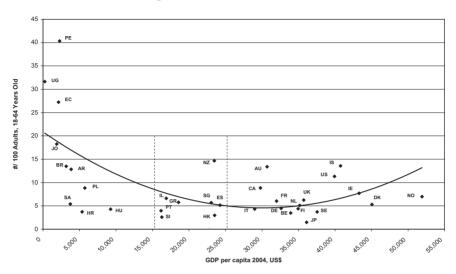


Figure 4: Total Entrepreneurial Activity 2004 and Economic Development: Fitted Parabolic Trend

Countries above the curve: Low income: Peru, Uganda, Ecuador and India; Middle income: New Zealand; High income: Canada, Australia, Iceland and the United States

Countries on the curve: Low income: Jordon, Brazil and Argentina; Middle income: Israel, Greece, Singapore and Spain; High income: France, Germany, the Netherlands, Belgium, the United Kingdom, Finland, Ireland and Italy.

Countries below the curve: Low income: Poland, South Africa, Croatia, Hungary and China; Middle income: Slovenia, Portugal and Hong Kong; High income: Japan, Sweden, Denmark and Norway.

Source: Global Entrepreneurship Monitor: 2004 Executive Report.

such as the United States. Furthermore, the rate of entrepreneurial activity in Ireland has decreased in recent years.

A second reason for advocating that Ireland needs more entrepreneurs is that entrepreneurs are critical to knowledge economies. Irish government policy is directed towards developing Ireland as a knowledge-intensive economy, with clusters of economic activity in sectors such as software, bio-technology and financial services. Entrepreneurship is a central component of knowledge-intensive regions and clusters. As part of its strategy to build a knowledge economy, the Irish government has committed to funding research in the third-level education sector. To maximize the economic benefits of

such research, entrepreneurs will need to commercialize the outputs of such research and bring these to the market. GEM data suggests that entrepreneurial activity in the business services sector is underrepresented in Ireland and that Ireland needs entrepreneurs to commercialise research and development (R&D).

One component of the policy to develop Ireland as a knowledge economy is to attract inward FDI by MNEs in higher value-added activities such as R&D and marketing, and to encourage MNEs already located in Ireland to upgrade their activities. Extant theory and emerging research suggests that in many ways large MNEs increasingly depend on the strength of the supporting cast as much as their own strengths (Gomes-Casseres, 1996). As such, the ability to attract higher value-added inward FDI will depend on the success of indigenous entrepreneurial activity.

A third reason for increasing the number of entrepreneurs in Ireland is that entrepreneurial activity contributes to the overall competitiveness of the Irish economy through increased competition in both local and internationally traded products and through increases in productivity. Reports by the OECD and the Competition Authority have demonstrated that some government regulations reduce competition, and in doing so have reduced the competitiveness of the Irish economy (e.g. see the Competition Authority's website, http://www.tca.ie, for reports on various sectors of the economy and OECD, 2001). While GEM research does not systematically capture the 'demand' for entrepreneurial activity, beyond a measure of the population's perception of opportunity for entrepreneurship, the 2000 Irish GEM report argued that there are systematic barriers to entrepreneurship across a range of sectors due to barriers to entry that typically result from government regulation.

A fourth reason for advocating that Ireland needs more entrepreneurs is that entrepreneurial activity among women entrepreneurs is especially low in Ireland (when compared to other high-income economies). In particular there appears to be a much lower number of women who have recently set up a business, yet there is a pool of well-educated women who are considering starting new businesses. Why are rates of entrepreneurial activity low for Irish women? GEM suggests that the reasons for this may be due to the

personal context of women in the Irish population. Compared to Irish men, women are much less likely to perceive opportunities, have much lower perceptions of having the required knowledge, skills and experience necessary to start a business, and are much less likely to have an entrepreneurial role model (in that they are less likely to personally know an entrepreneur who has recently started a new business). Added to this, women entrepreneurs are less likely to have recently been engaged in full-time employment. Presumably full-time employment provides access to market opportunities and to networks of contacts.

Increasing the Level of Entrepreneurial Activity in Ireland: Policy Challenges

There are two main thrusts to industrial and economic policy for entrepreneurs in Ireland. Firstly, there are measures that improve the environment for entrepreneurs and, secondly, there are specific supports for entrepreneurs. Supports for entrepreneurs in Ireland have generally been focused narrowly on firms that export, typically manufacturing firms and internationally traded services such as software. These firms are generally referred to as *high potential start-ups*. The following is a brief review of the policy challenges for increasing the level of entrepreneurial activity under these two policy domains.

The Environment for Entrepreneurs

GEM research suggests that there are many aspects of the environment in Ireland that are supportive of entrepreneurial activity. In particular, it suggests that there is a very positive cultural context for entrepreneurial activity — one of the best in the world. GEM research also suggests that Irish adults in general have a personal context that is positively associated with entrepreneurial activity. The current and projected growth in the Irish population and the age structure of the Irish population suggest that Ireland should be able to increase its rate of entrepreneurial activity. However, there are a number of aspects of the environment that are not supportive of entrepreneurial activity.

Firstly, Ireland has a low level of informal investment activity. While entrepreneurs typically find it difficult to access finance in all

countries, GEM research suggests that the availability of funds for entrepreneurs in Ireland is low. Specifically GEM research suggests that there is a relatively low level of informal investment activity among Irish adults. It also suggests that the availability of informal investment is particularly low as a percentage of the funding requirements of all nascent entrepreneurs. For most entrepreneurs such investment is the most important external source of finance after their own personal investment (both savings and borrowings). International evidence suggests that many high-growth firms rely on such funding during their early stages of development.

GEM research suggests that there are a large number of entrepreneurs (over 30 per cent of nascent entrepreneurs) expecting to need in excess of €112,000. Such entrepreneurs may need to access funds from business angels and, for a small number of entrepreneurs, from venture capitalists. The formal venture capital market in Ireland is relatively small. The amounts invested in firms are also relatively small, particularly when compared to US firms. The US market is an important market for many high-tech firms that receive venture capital in Ireland, and they may expect to compete with many firms, including new firms that are much better resourced. However, the view of many venture capitalists is that there is a shortage of attractive investment prospects rather than a shortage of venture capital.

Secondly, according to the entrepreneurs and experts surveyed as part of the GEM research, there is an increasing regulatory burden on entrepreneurs, stemming both from Irish government policy and EU policies. The burden of regulation impacts entrepreneurial activity in two ways: firstly, regulations can increase the time and cost of doing business, thus making it more expensive to start a new business; and secondly, regulations can restrict entry into markets, reducing opportunities for entrepreneurs.

Thirdly, comparably speaking, many Irish adults perceive that they lack the knowledge, skills and experience required to start a new business. This is an important aspect of personal context that is associated with entrepreneurial activity. Many experts and entrepreneurs suggested that the educational sector does not recognise the importance of entrepreneurship or does not prepare individuals for an entrepreneurial career. In particular women have a poor personal context.

Supports for Entrepreneurs

To the extent that policy directly supports entrepreneurs, the focus of support has been targeted support for high potential start-ups (HPSUs). These firms are considered to be innovative and to have the potential to grow rapidly in international markets. Typically HPSUs are in newer sectors of the economy, such as ICT (information and communications technology) and biotechnology. Such firms have been the focus of policy because of the contribution they can make to economic growth and because it is assumed that there are a number of market failures that impact on the emergence of such firms. Such a targeted approach is probably appropriate to Ireland's stage of economic development. Indeed, it is one that many developed economies are seeking to emulate.

However, GEM evidence suggests that the remit of the government development agencies may be too targeted and that there are many other entrepreneurs who can deliver high growth and export activity. GEM suggests that there is a much larger cohort of Irish firms that are growth-orientated and export-orientated than are typically supported by Irish development agencies. That is, supports, while appropriately targeted at high-growth firms, are perhaps targeted too narrowly at a subset of all growth-orientated entrepreneurs.

GEM also suggests there are many entrepreneurs who achieve some growth in that they employ more than twenty people. Few, however, attain significant competitive scale when compared to international competitors. In the opinions of the experts and the entrepreneurs this inability to attain scale reflects a skills deficit. Entrepreneurs and their new firms often lack the skills to build sales in international markets and to grow the business.

GEM suggests that there are a number of deficiencies in the delivery of government programmes targeted at entrepreneurs. These are a lack of coordination of the efforts of separate State agencies, a lack of market or sector experience among agency executives, and too much agency bureaucracy.

CONCLUSIONS

This paper has reported the results of the GEM study for Ireland. GEM suggests that the level of early-stage entrepreneurial activity

in Ireland is relatively high when compared to other developed EU economies, though it is relatively low when compared to some high-income economies such as the United States and Australia. The typical early-stage entrepreneur in Ireland is a well-educated male in his mid-30s. Most entrepreneurs require relatively small amounts of money to start their new business. Typically the entrepreneur provides most of this finance (through savings and borrowings). In seeking external finance, most entrepreneurs seek funds from informal investors such as family members. The level of informal investment in Ireland is relatively low. Most entrepreneurs expect their new business to remain small, though as many as 15 per cent expect to grow to employ twenty people within five years. Over two-thirds of all entrepreneurs (73 per cent) expect that their new business will have some customers in overseas markets.

This paper argues that there is a clear need for an entrepreneurship policy in Ireland. Developing such a policy requires a systematic review of existing supports for entrepreneurs and for encouraging entrepreneurship (fiscal, educational, financial and advisory among others). If, as argued here, Ireland needs more entrepreneurs, what should policy-makers do? The following are some suggestions:

- The availability of pre- and start-up seed capital for different types of business needs should be reviewed and any gaps in the availability of financing should be addressed. The relative attractiveness for investors of investing in early stage enterprises should also be examined and the risk/reward of such investment made more attractive as necessary.
- More women must be actively encouraged and supported to become entrepreneurs.
- Means of transferring the significant research, technological development and innovation (RTDI) investment, currently being implemented, into new entrepreneurial initiatives should be actively encouraged and any barriers to its transfer should be identified and removed.
- Regulations that impede low-cost market entry should be removed.
 The government should seek to facilitate easy, low-cost market

entry across all sectors of the economy. As such, the recommendations of the Competition Authority should be implemented.

• Skills deficits in entrepreneurship need to be addressed.

Does Ireland need more entrepreneurs? This paper suggests that the answer is 'yes'. However, not all entrepreneurs have the same economic impact and, as such, this paper has argued that Ireland needs more entrepreneurs who might be expected to impact on economic growth. More entrepreneurs are needed to develop new knowledge intensive activities and realise Ireland's objective of becoming a knowledge-based economy, entrepreneurs are needed to realise the objective of attracting higher value-added inward investment projects, and entrepreneurs are needed to increase Ireland's overall competitiveness.

- 1 This article was first submitted to the *Irish Journal of Management* Special Edition in June 2005.
- 2 The Irish GEM reports, the Executive Global GEM reports, a study of female entrepreneurship and an annual GEM finance report are available to the public free of charge at http://www.gemconsortium.org.
- 3 The level of nascent entrepreneurial activity and new firm entrepreneurial activity sums to greater than the TEA rate because some individuals are both nascent and new firm entrepreneurs. In calculating TEA such individuals are only counted once.
- 4 The OECD 25 group consists of (in rank order) Mexico, South Korea, New Zealand, Australia, the United States, Iceland, Canada, Ireland, Norway, Poland, Hungary, Switzerland, Denmark, the United Kingdom, Finland, Spain, Greece, Italy, Germany, Portugal, Sweden, the Netherlands, France, Belgium and Japan. The EU pre-accession member states that participated in GEM in 2001–2004 were Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Portugal, Spain, Sweden and the United Kingdom.

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