

Entrepreneurship in Ireland

2013

Global Entrepreneurship Monitor (GEM)



The Annual Report for Ireland
PAULA FITZSIMONS & COLM O'GORMAN



ENTREPRENEURSHIP IN IRELAND 2013



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The Annual Report for Ireland

Paula Fitzsimons

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Although data used in this report is collected by the GEM consortium, its analysis and interpretation is the sole responsibility of the authors. The authors, for their part, have attempted to ensure accuracy and completeness of the information contained in this publication. No responsibility can be accepted, however, for any errors and inaccuracies that occur.

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Thanks to the sponsorship of Enterprise Ireland, Forfás and the Department of Jobs, Enterprise and Innovation, Ireland is included in the 2013 GEM research cycle. We are very grateful to our sponsors for their support and for the importance they place on entrepreneurship. At a time of unprecedented challenges, when policy makers focus now more than ever on the contribution that entrepreneurs can make, GEM research and analysis is in a position to provide important data to inform and shape policy choices.

The Irish GEM team would like to thank all the members of the public who participated in our survey. We are very grateful to them as without their participation, the adult population survey, on which GEM research is primarily based, could not be completed.

We are also grateful to all the entrepreneurs and expert informants that were consulted as part of this research. They gave generously of their time and their insights as always enriched our understanding of the changing environment for entrepreneurship in Ireland.

We thank our colleagues in the National GEM Teams, who undertake the research in each of the sixty seven countries. We are also grateful to the coordination team in the Global Entrepreneurship Research Association (GERA). The coordination team manages to skillfully combine complex data from all the national teams, while ensuring robustness and academic rigour. We also acknowledge with thanks the assistance of Ian McGlynn, Fitzsimons Consulting, in the production of this report, particularly in relation to the profiles of the entrepreneurs featured.

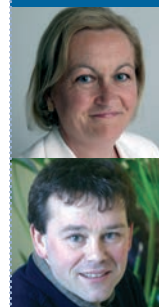
Finally, our sincere thanks go to the many readers of the GEM annual reports. By your comments it appears that many of you find the information of value in a wide variety of circumstances. We are grateful for your feedback and for your continued interest in the research.

Paula Fitzsimons



Colm O'Gorman





AUTHORS' DETAILS

PAULA FITZSIMONS, the founder of Fitzsimons Consulting which specialises in entrepreneurship and growth, has been the national coordinator for the Global Entrepreneurship Monitor (GEM) for Ireland since 2000.

Having been actively involved in its design and development, Paula acted as the coordinator and communications manager for Senior Enterprise, which seeks to increase the engagement of those in the older age group with entrepreneurship and with enterprise more generally. This initiative received support from the EU through INTERREG IVB NWE. The Mid-East Regional Authority acted as Lead Partner and there were partners in the UK and France. The initiative is perceived as highly innovative in meeting a real need. Senior Enterprise was awarded the European Enterprise Promotion Award, Investment in Skills, in November 2013.

Paula is also the director of Going for Growth, which is focused on peer support as a means of assisting women entrepreneurs who wish to grow their businesses. Designed to address a gap in enterprise development, the Going for Growth initiative is being funded under the Equality for Women Measure 2010-2013 and Enterprise Ireland. The Equality for Women Measure is funded by the European Social Fund (ESF) and the Department of Justice and Equality. Going for Growth was included in the 2009 Good Practice initiatives by the European Commission and voted into the Top 10 as most beneficial to implement of those initiatives. It was selected to represent Ireland in the Investing in Skills category of the European Enterprise Awards 2011. Most recently it has been described as an inspiring practice in the OECD/EU report "Missing Entrepreneurs" and has been selected as a Good Practice by the European Institute for Gender Equality (2014). A pilot of Going for Growth is currently being run in Finland and the intention is to implement the initiative across Europe.

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COLM O'GORMAN is Professor of Entrepreneurship at Dublin City University Business School. His research focuses on entrepreneurship, innovation, and growth in new firms and in small and medium sized enterprises (SMEs). Specifically he has studied the growth strategies of SMEs, the nature of managerial work in high growth SMEs, mission statements in SMEs, and internationalisation processes in International New Ventures, and in SMEs. He has explored the emergence of high-tech firms in the context of cluster dynamics, including a study of the factors that led to the rapid emergence of the software industry in Ireland during the 1990s. He has examined innovation processes in large firms.

Colm has published in international peer-reviewed journals such as Entrepreneurship and Regional Development, European Planning Studies, Journal of Small Business Management, International Marketing Review, Organizational Dynamics, R&D Management, Small Business Economics, and Venture Capital. He has completed several European Union funded research projects. He is co-author of 'Enterprise in Action', a text book on entrepreneurship for Irish students. He has co-authored eight teaching cases studies on entrepreneurship published by the European Case Clearing House, including several award winning cases.

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FOREWORD

As I have said before, in Ireland we have great entrepreneurs – we just don't have enough of them.

Start-ups in the first five years of existence create two thirds of all new jobs – if we can increase the number of start-ups this can have a major impact on the creation of the jobs we badly need. That is why as a Government we stated a clear ambition for Ireland to be among the most entrepreneurial nations in the world and acknowledged as a world class environment in which to start and grow a business.

We know that it is individuals and not Government that establish new businesses, but what Government can do is remove barriers and support an environment where more businesses can start and grow. Through the Action Plan for Jobs, we have been working hard to do just that. We have been assisted in these efforts by the Entrepreneurship Forum, under the Chairmanship of Sean O'Sullivan, and the wide consultation process that accompanied it. The Global Entrepreneurship Monitor (GEM) also continues to provide valuable information and insights into the entrepreneurial landscape in Ireland and in comparator countries.

In the Action Plan for Jobs 2014 we have set down concrete measures that will be taken by Government this year with the objective of supporting greater levels of entrepreneurship and start-ups. The 31 Local Enterprise Offices, supported by a Centre of Excellence in Enterprise Ireland, are now in place to drive entrepreneurial activity in every part of the country. Other measures to increase youth entrepreneurship, to facilitate more extensive mentoring, peer learning and knowledge sharing among entrepreneurs, and to target those segments of the population with untapped entrepreneurial potential are also being implemented.

I am currently finalising a National Entrepreneurship Policy Statement, which will put in place a clear roadmap with medium term actions for entrepreneurship to bring us further along the road to achieving our ambitious goal.

I know that the economic environment has posed real challenges for those starting a business in recent years. This had been reflected in the results of previous GEM research, which showed some declining trends in Ireland's entrepreneurship potential and entrepreneurial base.

Continued over

“If we can increase the number of start-ups this can have a major impact on the creation of the jobs we badly need.”



FOREWORD (CONTINUED)

“The challenge for Ireland is to sustain and build on this entrepreneurial effort so that businesses can emerge which are innovative, capable of growth and able to match international competition on home and export markets.”

Against this background, I am delighted to see the latest results from GEM, which show that 32,000 people started a new business in Ireland in 2013. This is the highest level of new business creation since the onset of the economic crisis. The outlook for the future is also positive as the number stating their intention to start a new business in the next three years has significantly increased and has turned the decline of recent years right around.

The challenge for Ireland is to sustain and build on this entrepreneurial effort so that businesses can emerge which are innovative, capable of growth and able to match international competition on home and export markets. These are the type of businesses that will be key drivers of employment creation.

I am delighted to see that a higher proportion of early stage entrepreneurs expect to become employers than is the case in comparator countries in Europe and across the OECD. Aspiring to growth is not the same as achieving it, but it is a good place to start. For this reason I am pleased to learn that one in five of these entrepreneurs expect to grow their new business beyond a micro enterprise and employ ten or more. This is indeed good news.

We are committed in the Action Plan for Jobs to track progress towards achieving our targets. The depth of internationally comparable data on entrepreneurial activity which GEM provides assists us in monitoring Ireland's entrepreneurial performance over time and against other comparator countries. I would like to thank the authors of the report, Paula Fitzsimons and Dr Colm O'Gorman, for their continued work in providing this valuable information.

RICHARD BRUTON T.D.

Minister for Jobs, Enterprise and Innovation

June 2014

RECENT ENTREPRENEURS FEATURED ON THE COVER

A profile of each of the following entrepreneurs, who have recently set up a new business, is included in Section 6.

BARBARA ANNE MURPHY

NEW BUSINESS: EQUILUME
ACTIVITY: The Equilume Light Mask provides artificial light to mares affecting the timing of their reproduction cycle
LOCATION: Co. Kildare



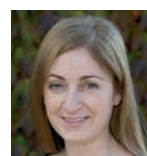
JOHN HUGHES

NEW BUSINESS: INSULCHECK
ACTIVITY: Digital device which detects the time insulin was last injected by a diabetic
LOCATION: Dublin



LEONORA O'BRIEN

NEW BUSINESS: PHARMAPOD
ACTIVITY: Incident reporting & learning system for pharmacists
LOCATION: Dublin



MARJORIE O'MALLEY

NEW BUSINESS: ACHILL ISLAND SEA SALT
ACTIVITY: Salt production from the waters of Keel in Achill
LOCATION: Co. Mayo



PAT O'NEILL

NEW BUSINESS: ZENITH ADHESIVE COMPONENTS
ACTIVITY: Manufacture & supply of medical and industrial adhesive components
LOCATION: Co. Westmeath



PAT PHELAN

NEW BUSINESS: TRUSTEV
ACTIVITY: Real-time online identity verification reducing the risk of fraud
LOCATION: Cork



PATRICK RIGNEY

NEW BUSINESS: PJ RIGNEY DISTILLERY & INTERNATIONAL BRANDS
ACTIVITY: Multi-purpose distillery
LOCATION: Co. Leitrim



THERESA KEADY

NEW BUSINESS: EC CHARGING
ACTIVITY: Manufacture of high speed, network enabled electric vehicle charging stations.
LOCATION: Dublin



GEM METHODOLOGY AND DEFINITIONS

The Global Entrepreneurship Monitor (GEM) provides unique measures of the involvement of individuals in entrepreneurial activity. GEM carries out identical population surveys on an annual basis in 67 countries.¹ The support of Enterprise Ireland, Forfás and the Department of Jobs, Enterprise and Innovation made possible the surveying of 2,000 people in Ireland in 2013.² GEM describes entrepreneurial activity as a process and measures different phases of this process from conception through firm birth to persistence.³

Aspiring entrepreneurs

Aspiring entrepreneurs are those who expect to start a business in the next three years. The rate is for those in the adult population aged 18-64 years inclusive.

Nascent entrepreneurs

Nascent entrepreneurs are those actively planning a new venture. These entrepreneurs have done something during the previous twelve months to help start a new business, that he or she will at least part own. Activities such as organising the start-up team, looking for equipment, saving money for the start-up, or writing a business plan would all be considered as active commitments to starting a business. Wages or salaries will not have been paid for more than three months in respect of the new business. Many of these people are still in fulltime employment. The rate is for those in the adult population aged 18-64 years inclusive.

New business owners

New business owners are entrepreneurs who at least part own and manage a new business that is between 4 and 42 months old and have not paid wages or salaries for longer than this period. These new ventures are in the first 42 months after the new venture has been set up. The rate is for those in the adult population aged 18-64 years inclusive.

Total early stage entrepreneurial activity (TEA rate)

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

Owner managers of established businesses

In addition to those people who are currently involved in the early stages of a business, there are also many people who have set up businesses that they have continued to own and manage. These people are included in the established business owner index which captures the percentage of people in the population that have set up businesses that they have continued to own and manage and which has paid wages or salaries for more than 42 months. The rate is for those in the adult population aged 18-64 years inclusive.

¹ As part of GEM research in 2013, over 190,000 adults (18-64 years of age) and 3,800 national experts were surveyed in 67 economies, spanning diverse geographies and a range of development levels.

² A random telephone survey was carried out in June 2013.

³ Figure 1 in Section 2 illustrates the entrepreneurial process with reference to these definitions.

SECTION 1

SIGNIFICANT ASPECTS OF ENTREPRENEURSHIP IN IRELAND IN 2013

GEM research shows that entrepreneurial activity in Ireland increased significantly in 2013 in contrast to the trends noted in the previous three years. For the first time in four years the more positive trends are more significant than the less positive trends.

MORE POSITIVE TRENDS

New business owners

- Approximately 32,000 individuals started a new business in 2013.⁴
- Men as well as women have substantially increased the rate at which they are starting new businesses. The ratio between men and women who are owners of new businesses is now 1.4:1.
- 13% of new business owners expect to have more than 75% of their customers outside Ireland

Early stage entrepreneurial activity

- One in eleven of the adult population in Ireland are engaged in some aspect of early stage entrepreneurial activity. This is the highest rate of early stage entrepreneurial activity recorded in Ireland since 2005.
- Ireland's ranking against other countries in terms of early stage entrepreneurial activity has greatly improved.
- Relative to other countries, entrepreneurs in Ireland tend to be very well educated.
- Early stage entrepreneurship is higher among immigrant groups than it is among those born in Ireland.

Growth and innovation

- Most early stage entrepreneurs in Ireland expect to become employers and a significant minority expect to have significant jobs growth within five years.
- Early stage entrepreneurs tend to be more innovative and a greater proportion use the very latest technology compared to owner managers of established businesses.

Motivations

- The rate at which individuals are turning to entrepreneurship out of necessity continued a downward trend.

Entrepreneurial aspirations

- The proportion of people in Ireland who indicate that they intend to start a business in the next three years increased significantly in 2013 and is now at the highest level since Ireland became involved in GEM research in 2000.

Attitudes and supports

- A high status, conferred on successful entrepreneurs, is more prevalent in Ireland than it is across the OECD and EU.
- The perception of supportive media attention for entrepreneurship continues to be stronger in Ireland compared to across the OECD and EU.

⁴ The number of new business started in 2013 is less than this number as many new businesses have multiple owners. Approximately 15,200 new businesses were started in 2013.

- The development agencies, in particular Enterprise Ireland and the City and County Enterprise Boards⁵, were singled out for praise as a major support for entrepreneurial activity in Ireland, by the entrepreneurs and experts consulted as part of the research.

LESS POSITIVE TRENDS

Owner-managers

- The rate of owner managers of established businesses is now at its lowest rate since 2004.

Opportunities

- The recession continues to have a very severe impact on the number of people in Ireland perceiving opportunities for new businesses.

Attitudes

- The rate at which entrepreneurship is considered a good career choice by the general public is relatively low.

Financing

- The average amount invested by informal investors in Ireland is relatively low.
- Difficulties surrounding access and availability of finance continued to be cited most frequently as a constraint in 2013, as it was the previous year, by the entrepreneurs and experts consulted as part of the research.

⁵ In April 2014 the City and County Enterprise Boards were replaced by a nationwide system of 31 Local Enterprise Offices (LEOs) as a result of a restructuring of the system for the delivery of State supports to micro and small businesses. The LEOs are intended to be the First Stop Shop for anyone seeking information and support on starting or growing a business in Ireland. An initiative of the Action Plan for Jobs, the LEOs are committed to delivering an enhanced and more integrated support service for micro and small business in Ireland. It is intended that the new LEOs will build on the achievements of the County and City Enterprise Boards. <https://www.localenterprise.ie/>

SECTION 2

ENTREPRENEURSHIP IN IRELAND IN 2013

2.1 INTRODUCTION

In this section we provide an overview of entrepreneurship in Ireland in 2013 and we examine certain aspects of entrepreneurship in some detail. The findings are compared with other developed countries, in particular with those who were included in the GEM 2013 research cycle from across the EU⁶ and OECD.⁷ For ease of reference, cross country comparisons relevant to this section are collected together in Section 6 (Table A through to Table S).

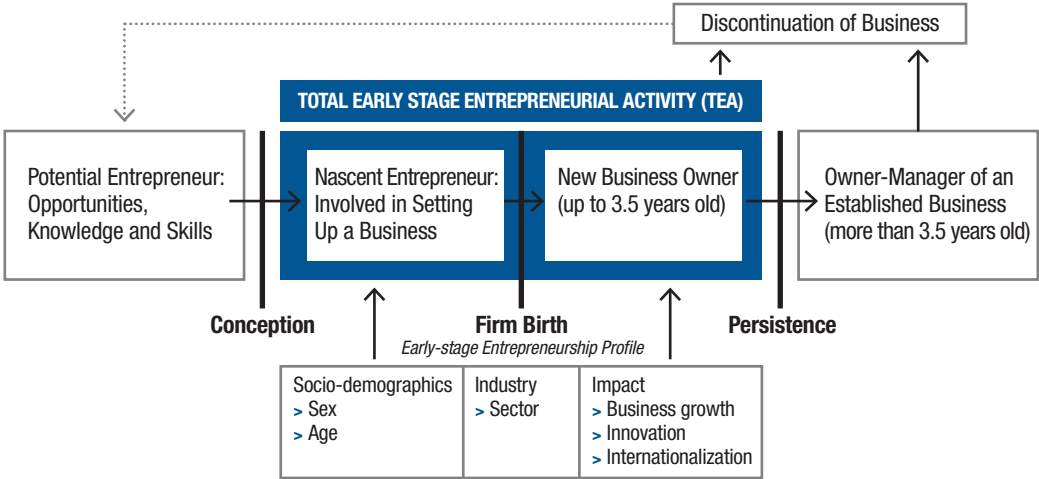
The information provided is based on GEM research, which draws on an analysis of the facts, views and opinions gathered as part of an adult population study of 2,000 people that was undertaken in mid-year. It also draws on the views and opinions of a panel of experts and entrepreneurs who were consulted and whose insights enriched our understanding of the prevailing entrepreneurial ecosystem (Section 2.15).

GEM research is carried out in exactly the same way in each of the sixty seven countries participating in the cycle. Accordingly, the results can be compared across countries and Ireland's relative position ascertained. For the most part, comparisons are made with countries in the OECD, EU-28 and EU-15.⁸ As Ireland has participated in GEM research in all but one year since 2000, comparisons over time can also be made.

2.2 THE ENTREPRENEURIAL PROCESS

GEM describes entrepreneurial activity as a process and measures different phases of this process from conception through firm birth to persistence (Figure 1).

FIGURE 1: THE ENTREPRENEURSHIP PROCESS & GEM OPERATIONAL DEFINITIONS



Source: Adapted from Global Entrepreneurship Monitor 2013 Global Report, José Ernesto Amorós and Niels Bosma, page 19.

⁶ Twenty three of the EU-28 countries are included. They are Belgium, Croatia, Czech Republic, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.
⁷ Of the 67 countries included in the GEM 2013 research, 28 are members of the OCED. They are Belgium, Canada, Chile, Czech Republic, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom and United States.
⁸ Thirteen of the EU-15 countries are included. They are Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and the United Kingdom.

Table 1 gives a snapshot of entrepreneurial activity in Ireland in 2013 with reference to this entrepreneurial cycle. Unless otherwise stated, all rates discussed in this report are for those in the adult population aged 18-64 years inclusive.

TABLE 1: A SNAPSHOT OF ENTREPRENEURSHIP IN IRELAND IN 2013

	Aspiring entrepreneurs	Nascent entrepreneurs	New business owners	Total early stage entrepreneurs (TEA)⁹	Owner managers of established businesses	Entrepreneurs discontinuing businesses¹⁰
Percentage of adult population	14.7%	5.5%	3.8%	9.2%	7.5%	1.9%
Number of people	427,000	161,000	112,000	269,000	218,000	54,000

The proportion of people in Ireland who express an intention to start a business in the next three years has increased significantly in 2013 to 14.7% (from 8.0% in 2012). The rate of early stage entrepreneurs has also increased (9.2% in 2013 from 6.1% in 2012) and Ireland's ranking against other countries has greatly improved. Ireland is now ranked 11th among the OECD countries, 9th of the EU-28 countries and 2nd of the EU-15 countries.

2.3 POTENTIAL ENTREPRENEURS IN THE GENERAL POPULATION

Potential entrepreneurs are found among the general population and are *latent* entrepreneurs. They may never act on their entrepreneurial potential but they have certain aspects in their personal contexts which makes them more likely to be future entrepreneurs than others in the population. They tend to know recent entrepreneurs, are alert to enterprising opportunities in their environment, believe that they have the knowledge and skills to start and successfully run a new business and are less susceptible to being deterred by fear of failure.

In 2013 in Ireland:

- Over one in four people (28%) believe that there are opportunities to start a business in their local area in the coming six months.¹¹
- Over four in ten people (43%) believe they have the skills and knowledge to start a business.
- Three in ten people (31%) have an entrepreneurial role model.¹²
- Over four in ten people (45%) report that fear of failure would prevent them starting a business.

Perception of opportunity

The recession has had a very severe impact on the number of people in Ireland perceiving new business opportunities in their local area. The rate in 2013 is 28%, similar to the previous two years (26%). This rate, however is significantly lower than in 2007 (46%).

This dramatic fall in the perception of opportunities for new businesses is particularly marked when Ireland is compared to other countries. The rate in Ireland (28%) is below the average across the OECD (34%), EU-28 (29%) and EU-15 (31%) (Table A in Section 6).

In the Nordic countries of Sweden (64%) and Norway (64%), the great majority of the general public are able to identify opportunities for new businesses. In Finland, however, there has been a significant drop in the perception of entrepreneurial opportunities among the general public (44% in 2013 compared to 55% in 2012). The perception of opportunities by the general public to start a new business venture in Spain (16%), Italy (17%) and Greece (14%) during 2013 continues at extremely low rates and is considerably lower than the rate of opportunity recognition in Ireland.

⁹ The TEA rate is less than the combined totals for nascent and new business owners. This is because, in circumstances where respondents qualify as both a nascent entrepreneur and a new business owner, they are counted only once.

¹⁰ Closed a business in the previous 12 months and the business was discontinued.

¹¹ The period referred to was July to December 2013

¹² They know someone who started a business in the past two years

Almost a third of the experts and entrepreneurs, who were consulted by GEM in 2013 as part of the national key informant survey, mentioned the continuing recession and economic uncertainty as a constraint on entrepreneurial activity.¹³ Many highlighted that the recession has created a lack of confidence in the economy leading to spending decisions being postponed for longer.

Self confidence in own skills

Over four in ten people in Ireland believe that they have the skills and knowledge to start a business. In this, Ireland (43%) is broadly similar to the average across the OECD (42%), EU-28 (42%), and EU-15 (40%) (Table A).

Many of the experts and entrepreneurs consulted as members of the key informant panel, however, felt that there was a lack of ability and knowledge to successfully start and manage a new business among the general public. This view was not unique to key informant panel members in Ireland and was also held by panel members across the OECD and EU.

Entrepreneurial role models

In Ireland almost a third of people report knowing someone who had recently set up a new business (31%). This figure, however, is much lower than in previous years (37% in 2012). Historically, Ireland had a higher rate relative to other countries. However, this rate is now similar to the average across the OECD (32%), EU-28 (31%) and EU-15 (30%) (Table A).

Fear of Failure

In terms of fear of failure deterring an individual from starting a new business, the rate in Ireland (45%) is similar to that across the OECD (45%), EU-28 (47%), and EU-15 (48%). Interestingly, the prevalence of those reporting fear of failure as an inhibitor is more prevalent in Greece (69%), Italy (56%) and Poland (56%). The figures from Germany (48%), the UK (40%) and the US (35%) are broadly similar to those of Ireland (Table A).

2.4 ASPIRATION TO START A BUSINESS

Focusing on those who have not yet started to set up a new business, but have clearly stated their intention to do so in the next three years, GEM research tells us that 14.7% of the population in Ireland expressed this view in 2013 (Table 1). The number of people that aspire to be an entrepreneur in the next three years is at the highest level since Ireland became involved with GEM in 2000.

This improved rate in Ireland is now well ahead of the EU-15 average (11.5%) more on par with the average across the OECD (15.4%) and EU-28 (15.9%) (Table B).

2.5 CULTURE: PERCEPTIONS OF THE GENERAL POPULATION

In 2013, half the adult population (50%) in Ireland considered entrepreneurship to be a good career choice. This has increased from 45% in 2012. Despite the improvement, the rate considering entrepreneurship as a good career choice is still lower than it was in 2006, when it was 70%. The 2013 rate in Ireland is also lower than the average across the OECD (54%), EU-28 (57%) and EU-15 (55%) (Table C).

Successful entrepreneurs continue to be well considered in Irish society, with 81% of individuals considering that success at entrepreneurship has high status. This rate is considerably higher than it is across the OECD (67%), EU-28 (65%) or EU-15 (70%) (Table C).

The perception of supportive media attention for entrepreneurship has fallen slightly over the course of the last year. In 2013 it is perceived as supportive by 60% of people in Ireland. This rate, however, is higher than the average across the OECD (51%), EU-28 (49%) and EU-15 (49%) (Table C).

¹³ Of the 36 strong panel just over half are entrepreneurs (53%). The others are experts drawn from across academia and from the public and private sectors. All are well informed in this area and have considerable experience in dealing with entrepreneurs and their new ventures and /or with the ecosystem that impacts on them.

2.6 EARLY STAGE ENTREPRENEURIAL ACTIVITY

In Ireland 3.8% of the adult population are new business owners and a further 5.5% are nascent entrepreneurs. This means that almost one in eleven of the adult population in Ireland (9.2%)¹⁴ is engaged in some aspect of early stage entrepreneurial activity (TEA) (Table 1).

Nascent entrepreneurs are further along the entrepreneurial development cycle than aspiring entrepreneurs in that they are actively planning a new venture, although many of them may still be in employment. Nascent entrepreneurs have done something during the previous twelve months to help start a new business, that he or she will at least part own. Activities such as organising the start-up team, looking for equipment, saving money for the start-up, or writing a business plan would all be considered as active commitments to starting a business. Wages or salaries will not have been paid for more than three months in respect of the new business. These people will not all start a new business. The rate is for those in the adult population aged 18-64 years inclusive. The rate of nascent entrepreneurs in 2013 was 5.5% of the adult population. This equates to approximately 161,000 individuals.

New business owners are entrepreneurs that have actually set up a new business, which they at least part own and manage. The business is between 4 and 42 months old and they have not paid wages or salaries for longer than this period. The rate of new business owners is 3.8% of the adult population. This equates to approximately 32,000 people in 2013 involved in starting a new firm. This is a considerable increase on the position in 2012, when 19,000 individuals were involved in starting a new business. As many new businesses have multiple owners, the number of new firms started is lower¹⁵.

Total early stage entrepreneurship (TEA) is a combination of new business owners and nascent entrepreneurs. The TEA rate in Ireland is 9.2%. The rate in 2013 (9.2%) is higher than it was in 2012 (6.1%) and is due both to an increase in the rate of new business owners (to 3.8% from 2.3%) and nascent entrepreneurs (to 5.5% from 3.9%) (Table 2). The prevalence of early stage entrepreneurs is at its highest level since 2005 (9.8%).

Relative to other countries, Ireland's rate of early stage entrepreneurial activity is high (Table B). For example, relative to OECD and EU-28 countries, Ireland has a higher than average rate of new business ownership, nascent entrepreneurship and TEA. Relative to the EU-28 member countries, Ireland is now ranked 9th (of twenty three countries included) in terms of early stage entrepreneurial activity. Relative to EU-15 countries Ireland ranks 2nd out of 13 countries included. Only the Netherlands reported a higher rate of total early stage entrepreneurial activity.

Emerging economies such as Brazil and China report rates of entrepreneurial activity that are significantly higher than OECD averages (Table B).

TABLE 2: ENTREPRENEURSHIP IN IRELAND 2008 - 2013

Year	Aspiring entrepreneurs	Nascent entrepreneurs	New business owners	Early stage entrepreneurs (TEA) ¹⁶	Owner managers of established businesses	Entrepreneurs discontinuing businesses ¹⁷
2013	14.7%	5.5%	3.8%	9.2%	7.5%	1.9%
2012	8.0%	3.9%	2.3%	6.1%	8.3%	1.2%
2011	8.5%	4.3%	3.1%	7.3%	8.0%	2.8%
2010	8.4%	4.4%	2.6%	6.8%	8.6%	1.2%
2009 ¹⁸	-	-	-	-	-	-
2008	10.0%	3.3%	4.3%	7.6%	9.0%	1.8%

¹⁴ The TEA rate is less than the combined totals for nascent and new business owners. This is because, in circumstances where respondents qualify as both a nascent entrepreneur and a new business owner, they are counted only once.

¹⁵ The number of new firms started in 2013 was approximately 15,200. See Section 2.11 for further details.

¹⁶ In some instances, this rate is less than the combined totals for nascent and new business owners. This is because, in circumstances where respondents qualify as both a nascent entrepreneur and a new business owner, they are counted only once.

¹⁷ Closed a business in the previous 12 months and the business was discontinued.

¹⁸ Due to budgetary constraints on the part of its sponsors, Ireland did not participate in the GEM 2009 research cycle.

2.7 OWNER MANAGERS OF ESTABLISHED BUSINESSES

Owner managers of established businesses are those that have set up businesses that they have continued to own and manage and which have paid wages or salaries for more than 42 months. The rate of established owner managers in Ireland is 7.5%, corresponding to over 218,000 people (Table 1). The rate of established owner managers in Ireland is now at its lowest rate since 2004 when it was 6.5%. The rate (7.5%), however, remains higher than the average across the OECD (6.6%), the EU-28 (6.4%), and EU-15 (6.6%) (Table B).

2.8 DISCONTINUED BUSINESSES AND EXITS

During the twelve month period July 2012 to June 2013, 1.9% of the population exited a business that was discontinued, while 0.6% exited a business that was continued (Table D).

The rate of exit in 2013 where the business is discontinued or closed is slightly higher than the rate reported in 2012 (1.2%) (Table 2). The rate of exit where the business was continued (0.6%) was on a par with 2012 (0.5%).

When individuals exit from entrepreneurial activity, this may or may not result in the discontinuation of the business.¹⁹ Focussing on exits where the business is discontinued, the principal reason for exit is a lack of profitability (59%). In 2012, lack of profitability was also the principal reason, though the rate was much lower (42%).

The other reasons cited for exiting (where the business is discontinued) is as follows: 'personal' reasons (13%); found another job or business opportunity (13%); difficulties in getting finance (10%) and retirement (5%) (Table D).

Relative to other countries, Ireland has a rate of exit where the business is discontinued (1.9%) on par with the average across the OECD (2.1%), EU-28 average (2%), and EU-15 (1.7%). In Ireland the rate of exit where the business is continued (0.6%) is lower than the average across the OECD (0.9%), EU-28 (0.9%) and EU-15 (0.7%).

Exits where the business is discontinued represent a higher percentage of all exits in Ireland (76%) than the average across the OECD (66%), EU-28 (69%), and EU-15 (71%).

2.9 PROFILE OF IRISH ENTREPRENEURS

GEM provides data on the backgrounds of individuals engaging in entrepreneurial activity. These measures separately refer to early stage entrepreneurs (that is, both nascent entrepreneurs and new business owners) and to established owner managers.

In these paragraphs Irish early stage entrepreneurs are profiled in terms of motivations for starting and in terms of gender, age, education, income, and employment status. A profile of established owner managers, in terms of gender, age, education, and income, follows. In Section 4 men and women early stage entrepreneurs and established owner managers are profiled in more detail.

Why start a new business?

Motivations for starting a business can be broadly classified as opportunity driven or necessity driven (no other options for employment). In Ireland, most entrepreneurs are driven by opportunity (81%) (Table E). The high rate of necessity entrepreneurship first noted in the 2010 report (31%) has declined considerably in 2013 (19%), but is higher than in earlier years (6% in 2007).

Relative to other countries, the rate of necessity entrepreneurship in Ireland (19%) is lower than the average across the OECD (21%) and EU-28 (24%) and is broadly similar to that across the EU-15 (18%).

¹⁹ Sometimes the business is closed with the departure of the owner manager. In other cases it is passed to others within families or sold to others as a going concern.

The prevalence of entrepreneurs being motivated by necessity is also lower in Ireland in 2013 than it is in Spain (30%) or the United States (23%), but higher than in the United Kingdom (17%) and France (16%).

Who starts new businesses?

Gender: The likelihood that an individual engages in early stage entrepreneurial activity is influenced by their gender.²⁰ Irish men are 1.9 times more likely than Irish women to be an early stage entrepreneur. Rates of early stage entrepreneurs for males are 12.1% and for women are 6.4%.

Age: The likelihood that an individual engages in early stage entrepreneurial activity is influenced by their age (Table F). Rates of entrepreneurial activity within age cohorts are highest for those aged between 35-44 years (12.6%); 25-34 (10.0%) and 45-54 (9.0%). Those aged 18-24 (7.6%) and those aged 55-64 (4.6%) are less likely to start new firms.

The age profile of Irish entrepreneurs is as follows: 10% are aged 18-24; 29% are 25-34; 33% are 35-44; 20% are 45-54; and 8% are 55-64.

Education: The likelihood that an individual engages in early stage entrepreneurial activity is influenced by their level of education attainment (Table G). Rates of early stage entrepreneurial activity are highest among those with post-secondary (9.2%) or graduate education (12.1%), representing 70% of all early stage entrepreneurs.

Relative to other countries, Irish entrepreneurs are very well educated. The rate of all early stage entrepreneurs with post-secondary education (70%) is significantly higher than the OECD average (49%), the EU-28 average (47%) and the EU-15 average (49%). In 2013, Ireland ranked third out of twenty-eight OECD countries behind Canada (75%) and Korea (71%).

Work status: The likelihood that an individual engages in early stage entrepreneurial activity is influenced by their employment status. Those in employment are almost four times as likely (3.7 times) as those that are unemployed to be early stage entrepreneurs (Table H).

Income: The likelihood that an individual engages in early stage entrepreneurial activity is influenced by level of household income. Individuals from higher income households (the highest 1/3rd and middle 1/3rd) are 1.5 times more likely to be early stage entrepreneurs than individuals from lower income households (the lowest 1/3rd of households) (Table H). This difference is on a par with the average across the OECD (1.7 times) and EU-15 (1.6 times) averages, but is lower than the EU-28 average (2.1 times).²¹

Owner Managers of established businesses

Gender: The likelihood that an individual is an established owner manager is influenced by their gender. Irish men are more than three times as likely as Irish women to be an owner manager of an established firm (3.1:1).²² This is higher than the average across the OECD (2.2:1), EU-28 (2.3:1) and EU-15 (2.3:1)

Age: The likelihood that an individual is an established owner manager is influenced by their age (Table I). Rates of owner manager are highest for those aged between 45-54 years (13.7%); 55-64 (12.2%) and 35-44 years (8.5%).

²⁰ Please see Section 4 for more information on the gender issue and Table T in Section 6 for relevant comparisons across countries.

²¹ Highest 1/3rd of households.

²² Section 4 contains more information on the gender issue. Table T in Section 6 contains relevant comparisons across countries.

Almost two out of three (63%) owner managers are aged 45-64. This is slightly higher than the OECD average (59%), the EU-28 average (57%) and the EU-15 average (58%).

Education: The likelihood that an individual is an established owner manager is partly influenced by their educational attainment. Rates are highest for those whose highest level of educational attainment is graduate education (9.1%). The rate of owner managers with some-secondary school as highest qualification is lower at 3.9%. Those with secondary school as highest qualification is 7.9% and those with post-secondary education as highest qualification is 6.3% (Table J).

Income: Over half (53%) of established owner managers are in high income households (the highest 1/3rd of households) (Table J). An owner manager is 3.25 times more likely to be in a high income household (the highest 1/3rd of households) than in a low income household (the lowest 1/3rd of households). This difference is higher than the norm across the OECD (2.5 times higher), EU-28 (3 times), and EU-15 (2.9 times).

2.10 ENTREPRENEURSHIP BY IMMIGRANTS

Early stage entrepreneurship is higher among immigrant groups (11%) than it is among the non-immigrant population (8.8%) (Table K). This is the case in the other EU-15 countries, with the exception of Finland and Italy. More specifically, a higher percentage of immigrants (5.4%) have recently started a business in Ireland, compared to the non-immigrant population (3.4%). More immigrant early stage entrepreneurs are motivated by necessity (32%), than is the case for non-immigrant entrepreneurs (17%).

2.11 ENTREPRENEURIAL TEAMS

Most entrepreneurs start new businesses as part of a team (Table L). Start-up teams of entrepreneurs in Ireland (2.1) are similar in size to those across the OECD, EU-28 and EU-15 (1.8). Among nascent entrepreneurs in Ireland, the average start-up team of entrepreneurs is smaller (1.7) and is lower than the average prevailing across the OECD, EU-28 and EU-15 (1.9). The average number of owners is lower for owner managers of established businesses (1.6) and is significantly lower than the averages across the OECD (2.5), EU-28 (2.7) and EU-15 (3.5).

2.12 INFORMAL INVESTORS

Informal investors play a vital role in the development of new businesses. In Ireland in 2013, 3.4% of adults reported having provided funds in the past three years (June 2010 to June 2013) to a new business started by someone else. This rate was broadly similar to that reported in 2012 (3.7%).

Informal investment is more pervasive in the US (4.6%), across the OECD (4.6%) and the EU-28 (4.3%). The rate in Ireland is more on a par with the EU-15 average (3.3%) (Table M).

The great majority (90%) of the 33,000 individuals, who provided funds as informal investors in Ireland in 2013, provided them to family, friends or work colleagues. Instances of providing investment to entrepreneurs unknown to the investor were much less common (10%).

Almost three in every ten (28%) informal investors are involved in entrepreneurial activity, in that they are active as an early stage entrepreneur, are an owner manager of an established business or have closed down a business in the past year.

The average amount invested by individuals in Ireland (€18,700) during this period was significantly lower than in the US (€38,600) and lower than the average amount invested across the OECD (€23,000), EU-28 (€21,600) and EU-15 (€24,100) (Table M).

2.13 THE IMPACT OF ENTREPRENEURSHIP

Although they are not in the majority, a number of entrepreneurs will have a disproportionate economic impact due to their ability to exploit newer technologies, their degree of innovation, their greater export orientation, their aspirations for growth and their expectation of being significant employers.

The paragraphs that follow examine the new businesses of early stage entrepreneurs in relation to each of these aspects.

Sector of Activity

GEM classifies entrepreneurs into (i) high-tech, medium-tech, and low-tech sectors and (ii) into four sectors of activities as follows:

- *Consumer service* sectors (including retail, motor, lodgings, restaurants, personal services, health, education, recreation)
- *Business service* sectors (including finance, insurance, real estate, services to businesses)
- *Transformative* sectors (including construction, manufacturing, transport, wholesale, and utilities)
- *Extractive* sectors (including forestry and fishing, mining and quarrying).

9% of early stage entrepreneurs in Ireland are in high or medium technology sectors. This is slightly higher than the average across the OECD, EU-28, and EU-15 (7%) (Table N).

A focus on consumer service sectors accounts for the highest percentage of early stage entrepreneurs (55%). This is greater than the proportion focused on business service (21%), transformative (22%), and extractive sectors (2%). The proportion focused on the consumer service sectors is higher than 2012 (41%), while the proportion of entrepreneurs engaged in business service sectors has declined (35% in 2012).

Innovativeness

GEM measures innovation in terms of three factors:

- Relative familiarity/degree of novelty of the product or service to the customer,
- The extent of competition, with 'many competitors' suggesting a mature or crowded market,
- The newness of the technology used by the business.

The perception of early stage entrepreneurs in Ireland of the three factors used by GEM to measure innovation, relative to a range of other countries across the EU and OECD, are presented in Table O.

Looking at each of these measures in turn:

- **Novelty of product or service:** 27% of early stage entrepreneurs in Ireland believe that they produce or will produce a product or service that is new to all customers. Relative to other countries, Ireland's early stage entrepreneurs are more innovative in this respect. Averages for the OECD (17%), EU-28 (16%) and EU-15 (18%) are all significantly lower.
- **Extent of Competition:** 18% of early stage entrepreneurs in Ireland believe that they have, or will have, no competitors, while 41% have, or expect to have, very few competitors. This compares to OECD averages of 10% and 37%; EU-28 averages of 10% and 38%; and EU-15 averages of 11% and 39% respectively.
- **Newness of the technology:** 10% of early stage entrepreneurs consider that they use the very latest technology, while 19% use new technology (available in the last 1-5 years). This is on par with other countries across the OECD (averages of 11% and 19%), EU-28 (averages of 13% and 20%) and EU-15 (averages of 14% and 19%).

Early stage entrepreneurs tend to be more innovative than established owner managers. In Ireland 27% of early stage entrepreneurs consider that they offer a product or a service that is new to all customers while only 10% of established owner managers have this perception. This rate (10%) is on a par with average across the OECD (10%), EU-28 (9%) and the EU-15 (8%) (Table P).

Two in every three established owner managers in Ireland believe that many other businesses offer the same product or service as they do (63%). This rate of perception of having many competitors is slightly lower in Ireland compared with averages across the OECD (66%), EU-28 (68%) and the EU-15 (66%). Fewer early stage entrepreneurs in Ireland have this perception (41%). As a result, a much lower percentage (37%) of established owner managers perceive that they have few or no competitors compared to the perception of early stage entrepreneurs (59%).

It is not a surprise to note that a higher percentage of early stage entrepreneurs in Ireland (10%) report that they are using the very latest technology (less than one year) compared to established owner managers (2%). The rate among established owner managers (2%) is lower than the average across the OECD, EU-28 and EU-15 (4%, 6% and 4% respectively).

Growth Aspirations

An important impact of entrepreneurial activity is job creation. A significant majority of early stage entrepreneurs in Ireland expect to become employers (85%). This proportion is much higher than the average across the OECD (71%), EU-28 (72%) and EU-15 (68%).

A significant minority of early stage entrepreneurs in Ireland (22%) expect to have significant jobs growth (10 or more) within five years (Table Q). This rate is slightly higher than the average across the OECD (16%), EU-28 (17%) and EU-15 (13%).

Internationalisation

Nearly six in every ten Irish early stage entrepreneurs have, or expect to have, customers outside the country (59%). This is similar to other countries. The average across the OECD is 61%, EU-28 is 64%, and EU-15 is 55% (Table R).

53% of established owner manager entrepreneurs have customers outside the country. This is lower than the OECD average (57%). Established owner managers are more reliant on the domestic market and almost half of their customer base (47%) is located in Ireland (Table S).

2.14 ENTREPRENEURSHIP AND WELL-BEING

GEM introduced a special topic to the research in the 2013 cycle relating entrepreneurship to measures of well-being. GEM assessment involved the measurement of subjective well-being, defining it as the satisfaction with one's current work and work-life balance²³.

Results for Ireland, as in other developed countries, indicate a higher sense of well-being among early stage entrepreneurs and established owner managers than among other groups in the general population.

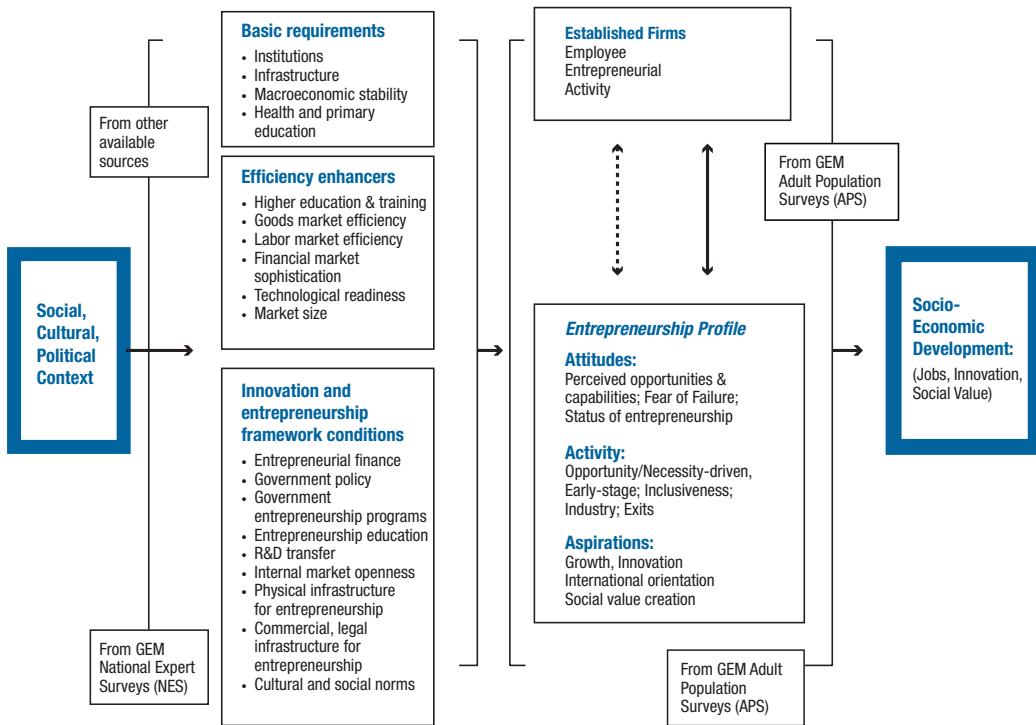
2.15 ENVIRONMENT AND ECOSYSTEM

The GEM conceptual model emphasises nine entrepreneurship framework conditions (EFC) (Figure 2). These nine entrepreneurship framework conditions exist as part of a broader model of the institutional environment and its effect on entrepreneurship. The GEM model suggests that two sets of conditions—basic requirements and efficiency enhancers—are foundation conditions that influence the way a society functions and the well-being of its people (Figure 2). These have been adopted from the World Economic Forum's (WEF) Global Competitiveness Report. They are general framework conditions that effect economic activity more broadly, but they are critical to entrepreneurship because, without a solid institutional foundation, the entrepreneurship-specific conditions cannot function effectively.

²³ The GEM Consortium will publish a report dedicated to this topic in 2014.

GEM national teams collect information on the nine entrepreneurship framework conditions through a national expert survey of members of a key informant panel made up of experts and entrepreneurs. The determinants of entrepreneurship are complex; the extent to which specific variables can be tied to the rate or profile of entrepreneurship in a particular economy is not well understood. The institutional environment is critical to the study of entrepreneurship, however, because it creates conditions that entrepreneurs must navigate and that policy makers can address. In the key informant survey the experts and entrepreneurs questioned were asked to indicate their perception of the constraints and positive factors that prevailed in Ireland in 2013. They were also asked for their recommendations as to the manner in which the environment for entrepreneurship in Ireland could be further improved.

FIGURE 2: THE GEM CONCEPTUAL FRAMEWORK



Source: Adapted from *Global Entrepreneurship Monitor 2013 Global Report*, José Ernesto Amorós and Niels Bosma, page 21.

PERCEIVED CONSTRAINTS

Entrepreneurial finance: Difficulties surrounding access and availability of finance was the framework condition singled out most frequently as a constraint by the GEM experts and entrepreneurs consulted in 2013, as it was in 2012.²⁴ Four out of every five experts and entrepreneurs consulted by the GEM team in 2013 highlighted difficulties in respect of obtaining necessary finance, mentioning in particular access to loan finance and credit facilities from the banks.

Those consulted recommended that more micro-finance schemes be introduced and that more State guarantees be given for bank finance for early stage entrepreneurs. A minority of experts and entrepreneurs consulted indicated that Microfinance Ireland was fostering entrepreneurial activity.²⁵

²⁴ Of the 36 strong panel 53% are entrepreneurs. The others are experts drawn from across academia, and from the public and private sectors. All are well informed in this area and have considerable experience in dealing with entrepreneurs and their new ventures and / or with the eco-system that impact on them.

²⁵ The Microenterprise Loan Fund was launched on the 27th September 2012 by Minister for Jobs, Enterprise and Innovation, Richard Bruton TD.

Government policy: One in three of the experts and entrepreneurs consulted felt that certain aspects of Government policy were constraining entrepreneurial activity in Ireland. Many have indicated that Government policy has made it even more risky for people to set up their own business. In particular the lack of a social welfare safety net for owner managers, if the business failed, was highlighted. Suggestions were made that support mechanisms should be put in place for entrepreneurs who try but fail, so called “*honest failures*”. There were recommendations that entrepreneurs, who become employers, should be given a taxation break (PRSI) in the early years after start-up. There were suggestions that regulations be simplified to make it easier to open a new business and that the volume and burden of state regulation for small business be reduced. A general view was also expressed that there is over-regulation in certain areas, particularly in relation to employment, and that this should be addressed.

The prevailing economic climate was also perceived as constraining entrepreneurial activity. Many noted that the recession has created a lack of business confidence and depressed economic activity with low demand for goods and services, as uncertainty in the economy means that spending decisions are being postponed.

Capacity for entrepreneurship was mentioned by a number of the experts and entrepreneurs as a constraint. A lack of confidence among women was cited frequently.

PERCEIVED STRENGTHS

The support of Government and the development agencies, in particular Enterprise Ireland (EI) and the City and County Enterprise Boards²⁶ were highlighted by the experts and entrepreneurs consulted as a major strength for entrepreneurial activity in Ireland. Particular programmes that were singled out for praise included EI’s HPSU supports, the supports available in the third level incubators, accelerator programmes and Going for Growth, a support initiative for female entrepreneurs. The supports available from EI for exporters were considered a real strength. It was suggested that EI need to promote the supports available to businesses that wish to become exporters, but that do not meet the minimum criteria to qualify for HPSU status.²⁷

Role models and the media: Many of those consulted felt that there was a higher level of media interest in entrepreneurship in 2013, most notably in relation to the “success stories” of start-ups. Many of the experts and entrepreneurs consulted felt the media has contributed to a change in attitude towards entrepreneurs. Many feel that the improved recognition of entrepreneurial success portrayed by the media has awoken an entrepreneurial spirit in Ireland. This is considered a key strength in the Irish ecosystem.

Education: Many of the experts and entrepreneurs consulted consider the education system as a key strength. They noted that primary and secondary schools have fostered entrepreneurial ideas and micro-businesses among students. School enterprise programmes such as the “*Young Entrepreneur*” scheme run by the City and County Enterprise Boards was mentioned specifically as being of merit in introducing students to entrepreneurial activity.

There was, however, a call for a greater emphasis on enterprise education at all educational levels and to have entrepreneurship education embedded in all third level courses. It was felt that the early education stage in particular, was imperative in supporting future entrepreneurial activity. Those consulted felt that there was a need for further input of entrepreneurial education at the early stages to ensure a greater nurturing of entrepreneurial mindsets in the future generation.

²⁶ In April 2014 the City and County Enterprise Boards were replaced by a nationwide system of 31 Local Enterprise Offices (LEOs) as a result of a restructuring of the system for the delivery of State supports to micro and small businesses. The LEOs are intended to be the First Stop Shop for anyone seeking information and support on starting or growing a business in Ireland. An initiative of the Action Plan for Jobs, the LEOs are committed to delivering an enhanced and more integrated support service for micro and small business in Ireland. It is intended that the new LEOs will build on the achievements of the County and City Enterprise Boards. <https://www.localenterprise.ie/>

²⁷ Employment of 10 or more and annual sales of €1million or more within 3 to 4 years of start up.

SECTION 3

POLICY SPOTLIGHT ON ENTREPRENEURSHIP

3.1 INTRODUCTION

Against a backdrop of a major unemployment crisis throughout Europe, there was particular attention paid to this area in 2013 as policy makers in Ireland and the European Union increasingly turned their attention to encouraging a higher rate of entrepreneurial activity, given the clear link between business start-ups and employment creation.

This section references a number of new EU and Irish reports published in 2013 and 2014 that have focussed on entrepreneurship. The reports are informed by data produced by the *Global Entrepreneurship Monitor*.

Section 3.2 reviews the European Commission's *Entrepreneurship 2020 Action Plan*²⁸ and *The Missing Entrepreneurs, Policies for Inclusive Entrepreneurship in Europe*, a report produced by OECD LEED and the European Commission.²⁹ Section 3.3 reviews two Irish reports, the *Report of the Entrepreneurship Policy Forum*,³⁰ and the Irish Government's latest *Action Plan for Jobs*.³¹

All of the reports focus on the job creation potential of entrepreneurial activity. As there is a clear recognition that those entrepreneurs who grow their businesses have the greatest economic impact, the twin aims are that (i) of creating a greater number of entrepreneurs who will start more businesses and (ii) for a greater percentage of these new businesses to grow substantially. Entrepreneurship as a means of achieving greater social inclusion is also highlighted in the EU reports and in the *Action Plan for Jobs*. All reach out to specific social groups, who are less involved in entrepreneurial activity, including women and young people.

The reports recognise the importance of bringing about cultural change, so that the contribution of entrepreneurs is more widely recognised and a greater number of individuals would consider entrepreneurship as a good career choice. Similarly all recognise the importance of the education system across all levels in nurturing entrepreneurial mind-sets and in producing enterprising individuals. The creation of a supportive and integrated ecosystem, in which all the players complement and reinforce each other in a coordinated manner, is particularly highlighted in the Irish reports.

The sections that follow briefly outline these various policy reports.

3.2 A FOCUS ON ENTREPRENEURSHIP IN EUROPE

ENTREPRENEURSHIP 2020 ACTION PLAN, *Reigniting the Entrepreneurial Spirit in Europe*, was published by the EU Commission in January 2013. It recognises that entrepreneurship is a powerful driver of economic growth and job creation and a catalyst to making countries more competitive and innovative.

Accordingly, underpinning the *2020 Action Plan* is a recognition that Europe needs more entrepreneurs and requires more of the new businesses that they establish to grow, as new enterprises that are established in Europe, grow more slowly than is the case in the US or emerging countries and fewer of the European firms join the ranks of the world's largest firms.

²⁸ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0795:FIN:EN:PDF>

²⁹ http://www.keepeek.com/Digital-Asset-Management/oced/industry-and-services/the-missing-entrepreneurs_9789264188167-en

³⁰ <http://www.djei.ie/enterprise/smes/EntrepreneurshipForumReport2014.pdf>

³¹ <http://www.djei.ie/publications/2014APJ.pdf>

It is recognised that not only is the environment challenging but the widespread culture does not recognise or reward entrepreneurial endeavours sufficiently for their contribution to job creation and prosperity. To make entrepreneurship the growth engine of Europe's economy, the *2020 Action Plan* recognises that a thorough, far reaching cultural change is needed.

The *2020 Action Plan* is based on three pillars: (i) developing entrepreneurial education and training; (ii) creating the right business environment; and (iii) role models and reaching out to specific groups.

In terms of creating an environment where entrepreneurs can flourish and grow, the *2020 Action Plan* identifies six key areas where action is needed to remove existing obstacles impeding business creation and growth:

- Access to finance
- Support for entrepreneurs in the crucial phases of the business lifecycle and their growth
- Unleashing new business opportunities in the digital age
- Transfers of businesses
- Bankruptcy procedures and second chance for honest entrepreneurs
- Regulatory burden reduction.

The *2020 Action Plan* points out that Europe has a limited number of known entrepreneurial success stories, as to date entrepreneurship has not been celebrated as a preferred career path. It advocates a change in the perception of entrepreneurs through practical and positive communication about the achievements of entrepreneurs, their value to society and the opportunities of new business creation or acquisition as a career choice.

The *2020 Action Plan* is also clear in recognising that some demographic groups have been under-represented within the entrepreneurial population, in particular women, young people, seniors,³² migrants, the unemployed and/or the disabled. It recommends that Europe has to open up suitable paths for these social groups into entrepreneurship in greater numbers than has been the case to date in order to create employment for them, to empower them economically and socially, and to leverage their creative and innovative capacities.³³

THE MISSING ENTREPRENEURS, *Policies for Inclusive Entrepreneurship in Europe* was jointly published by the OECD LEED and the European Commission in December 2013. The purpose behind this report, the first in a series of three annual reports, is a search for policy initiatives to tackle Europe's unemployment crisis and a recognition that a greater nurturing of entrepreneurship among certain under-represented groups, namely women, young people, seniors, migrants, people with disabilities and the unemployed, may positively contribute to growth and greater social inclusion.³⁴

It recognises that each of the specified social groups faces different barriers and that policy measures should be introduced by governments and agencies at national, regional and local levels to help these groups to overcome the particular barriers that they face.

It is suggested that a policy for supporting inclusive entrepreneurship among these groups should include building a supportive institutional environment; improving entrepreneurship skills; facilitating access to finance; and improving policy delivery, including using members of the target group in the delivery of the support.

Three programmes from Ireland are cited in the report as exemplars for different target groups:

- **Senior Enterprise** is put forward as a good practice particularly for the manner in which it uses role models to raise awareness and to diffuse relevant information about the potential of those aged 50+ to engage with enterprise in a variety of ways.³⁵

³² Specific reference is made to Senior Enterprise, an initiative which was led by the Mid-East Regional Authority in Ireland: Besides their potential as entrepreneurs... *Europe could take inspiration from programmes such as 'Senior Enterprise' (Ireland)... encouraging motivated seniors to serve as voluntary mentors, potential buyers of or investors in businesses, page 24.*

³³ These points are further developed in *The Missing Entrepreneurs* http://www.keepeek.com/Digital-Asset-Management/oeed/industry-and-services/the-missing-entrepreneurs_9789264188167-en

³⁴ *The Missing Entrepreneurs* emphasises the importance of self-employment among the target social groups, as a means to greater social inclusion.

³⁵ *Fostering Senior Entrepreneurship, Ireland*, Box 6.7, page 103. For more information please refer to www.seniorenterprise.ie

- **EMERGE**, directed at ethnic minority entrepreneurs, recognises that the challenge with this social group is not the lack of an entrepreneurial spirit but rather with the level of profitability and the growth performance of many of the businesses they create. This initiative is recognised for the manner in which it addresses these problems through a best practise training programme, networking strategy and improved connections to mainstream business services providers.³⁶
- **Going for Growth** is described as an *inspiring practice*. Considerations for the success of the initiative include the manner in which it is led and championed by the private sector and supported by the public sector; the continual focus on personal and business development which supports both the entrepreneur and her business to achieve their goals; the calibre of the volunteer Lead Entrepreneurs; the fact that the groups are composed exclusively of women, which contributes to a full engagement by the participants; and the relatively low cost of running the initiative, which is achieved through leveraging the voluntary contribution of successful entrepreneurs.³⁷

The Report recommends that appropriate policies and actions need to ensure that the support available is *visible* to the various groups, is tailored to their particular needs and is provided in a *language* that they are comfortable with, while at the same time offering bridges to mainstream support.

OECD LEED, working on behalf of the EU Commission (DG Employment, Social Affairs and Inclusion), has published a series of policy briefs which complement this report.³⁸

3.3 A FOCUS ON ENTREPRENEURSHIP IN IRELAND

ENTREPRENEURSHIP IN IRELAND, *Strengthening the Start-up Community*: The Report of the Entrepreneurship Forum, under the chairmanship of Sean O’Sullivan, was published in January 2014. The Forum was established in May 2013 to advise the Minister for Jobs, Enterprise and Innovation on policy in the area of entrepreneurship and to draft appropriate policy conclusions and recommendations which would support business start-ups, sustainable growth and long term job creation. The stated purpose of the Forum’s Report is to support the Government’s development of a National Entrepreneurship Policy Statement.

The Forum Report focuses on entrepreneurship and growth and not on self-employment.³⁹ The emphasis of this Report is on leadership by a strong self-reliant entrepreneurial community characterised by peer support, with Government the facilitator of a supportive ecosystem.

The Forum focused on the means of creating an entrepreneurial culture and supportive ecosystem which would result in more and stronger new businesses being started and greater entrepreneurial activity by all groups within the country, including under-represented groups.

Members of the Forum started with the conviction that growing the number of entrepreneurs and start-ups is a national priority, given their importance as a fundamental driving force of the economy. The members were concerned that the pipeline of entrepreneurs starting new businesses in Ireland is too small and had fallen in recent years.

The Forum identified six distinct goals of a successful entrepreneurship policy:

- Strengthen the start-up community in Ireland
- Increase the pipeline of entrepreneurs
- Energise job creation
- Continue the growth of the indigenous export sector
- Capitalise on Ireland’s strengths in growth industries
- Use under-employed resources.

³⁶ *EMERGE, Ireland* Box 7.8, page 125. For more information please refer to <http://www.partas.ie/EUPProjects/EMERGE.aspx>

³⁷ *Ireland: Going for Growth*, page 210. For more information please refer to www.goingforgrowth.com

³⁸ These include *Youth Entrepreneurship; Senior Entrepreneurship; Social Entrepreneurship; Evaluation of Inclusive Entrepreneurship Programmes, Financing Inclusive Entrepreneurship; and Entrepreneurship among People with Disabilities* (forthcoming) <http://www.oecd.org/employment/leed/policy-briefs.htm>

³⁹ The Forum Report excludes self-employment from its definition of an entrepreneur – “*Entrepreneurship is more than an individual selling his time or expertise. Entrepreneurs attempt to develop new enterprises: corporate entities which normally employ staff and grow.*” (Page 12)

The key principles that guided the Forum's recommendations included a belief that entrepreneurship in Ireland starts with a culture of engaged citizenship; that entrepreneurs should be strong and self-reliant looking more towards their peers and less to government supports to achieve their goals; and that the Irish Government's role is that of facilitator, not leader.⁴⁰

The Forum identified six mutually reinforcing pillars of an effective start-up ecosystem, in order to achieve the entrepreneurship policy goals.

- **Pillar 1: Innovative 'can-do' culture:** Specific recommendations are (i) entrepreneurship should be promoted as an Irish cultural value and children should be inspired from a young age; (ii) an articulated entrepreneurship education policy/strategy that covers all levels of the education system is needed; and (iii) there should be encouragement for under-represented groups such as the unemployed, females, young people, immigrants and seniors, to become more involved in entrepreneurial activity.
- **Pillar 2: Mentorship & peer learning:** The Forum recommends that the emphasis should be on peer mentoring based on entrepreneurs supporting and helping each other in a voluntary capacity.
- **Pillar 3: Vibrant hotspots of activity:** The Forum argues that the main impetus here should come from the entrepreneurs themselves to form strong entrepreneurial communities of like-minded individuals to facilitate networking and connections. The Forum considers that greater numbers of accelerators and co-working spaces would further facilitate shared learning and the development of new businesses. Recommendations are also made about how to bring about closer working relationships and concrete joint actions between academia and industry.
- **Pillar 4: Access to talent:** Recognising that talented people are a key enabler for businesses, recommendations relating to helping start-ups to attract and reward talent include improvements to existing schemes for share remuneration of employees and for work placements, together with a reform of immigration regulations to make it easier for foreign entrepreneurs to set up businesses in Ireland.
- **Pillar 5: Access to finance:** Specific recommendations are made with a view to (i) increasing equity investment in start-ups through fiscal incentives; (ii) improving access to credit, including peer to peer lending; and (iii) encouraging timely payment of invoices through the establishment of a Prompt Payments Voluntary Code of Conduct.
- **Pillar 6: Public policy:** Issues raised in the Forum Report include the challenge of coordinating and integrating different Government policies affecting entrepreneurship. The Forum recommends the clear assignment of responsibility for the overall coordination and management of a national entrepreneurship policy. The Forum also recommends that the effectiveness of entrepreneurship policy should be monitored through the analysis of up-to-date, relevant performance data from a variety of sources and the collation of appropriate metrics; that access to relevant information about start-up programme supports should be made easier through a single website; compliance requirements, including taxation, should also be simplified and made more accessible; and that specific changes should be made to the taxation and social welfare codes.

The members of the Forum welcomed the strong focus that was placed on entrepreneurship policy in 2013 and wished to see this as the beginning of a permanent and ongoing commitment to entrepreneurship, rather than a once off prioritisation.

ACTION PLAN FOR JOBS 2014 was published by the Irish Government in February 2014. The Irish Government placed particular importance on entrepreneurship in the latest *Action Plan for Jobs* as entrepreneurs and their new businesses are considered to have a key role in job creation. While recognising that innovative, export oriented businesses, which achieve growth, contribute most to the economy, the *Action Plan for Jobs* emphasises that all entrepreneurial activity makes a contribution.

⁴⁰ The Forum recognises that the State has a role in creating a supportive ecosystem by developing supportive tax, financing, and immigration policies, providing accessible and reliable information, and aligning existing education and social welfare supports so that they are conducive to entrepreneurial development.

Action Plan for Jobs was the third in a series published annually as a key component to the Government's response to the unemployment crisis and its specific ambition to have 100,000 more people at work by 2016. The Government in recognising that it is enterprise and not government that creates jobs, has set out an objective to create a positive environment to support business start-ups and growth, drive exports and facilitate job creation and retention by the private sector.

In the latest *Action Plan for Jobs* there is a particular focus on entrepreneurship as one of three new *Disruptive Reforms* to be introduced in the current year. The stated ambition is for Ireland to be among the most entrepreneurial nations in the world and acknowledged as a world class environment in which to start and grow a business. This ambition is based on a recognition of the role that entrepreneurs play in employment creation and wealth generation. The aim is to build the pipeline of entrepreneurs, enhance entrepreneurial capability and create the right conditions for entrepreneurship.

The Government's aim is to create an ecosystem throughout the country that will engage, inspire and connect entrepreneurs, while strengthening the linkages and supporting mechanisms for further cooperation and entrepreneurial empowerment. To this end a network of 31 Local Enterprise Offices (LEOs) has been established across the country as a *first stop shop* providing financial and other supports. The LEOs have also been charged with promoting entrepreneurial activity at local level among school goers and other target social groups such as females, young people and graduates.

The *Action Plan for Jobs* recognises that a strong ecosystem for entrepreneurs must encompass an innovative can-do culture, active mentoring and peer learning and access to a talented and educated workforce. The importance of responsive public policies, including fiscal policy, is also acknowledged and a commitment given to review specific tax incentives currently provided, including the Seed Capital Scheme and the Employment and Investment Incentive Scheme, to ensure that they are fit for purpose.

The *Action Plan for Jobs* recognises that a small number of entrepreneurs will have a disproportionate positive economic impact, due to their ability to exploit new technologies, their degree of innovation, their export orientation and their growth aspiration. Notwithstanding all types of entrepreneurship are perceived as critical to the health of the Irish economy. The Government is committed to publishing a National Entrepreneurship Policy Statement later in the year.

Monitoring is an integral part of the proposed actions. Tracking will take place of the number of start-ups supported by Enterprise Ireland and the Local Enterprise Offices; the employment created and sustained by these start-ups; and the proportion of the start-ups being created by women and young people.

SECTION 4

A GENDER PERSPECTIVE

4.1 INTRODUCTION

There has been an increased spotlight on the relatively untapped potential of women as entrepreneurs for several years now at European and at national level and several initiatives have been implemented to encourage a higher involvement of women as entrepreneurs. Reflecting this policy priority, successive GEM reports have reported on the relative engagement of men and women in Ireland as entrepreneurs.

This year we report not only on the rate of total early stage entrepreneurial activity among men and women, but analyse this further in terms of those who have recently set up new businesses and those who are nascent entrepreneurs. In each case, we look at the trend since 2010.

We also look to the future and examine some indicators from GEM and the CSO that might indicate whether it is likely that women will further increase their involvement in entrepreneurship in the years ahead.

We report on the type and impact of the new businesses, noting the impact of gender on these. Finally we take a gender perspective in examining the rates of established owner managers, of entrepreneurs who are closing their business and of those within the general population that are informally investing in businesses being started by others.

4.2 MALE AND FEMALE EARLY STAGE ENTREPRENEURS IN IRELAND

Total Early Stage Entrepreneurs

In 2013 the rate of total early stage entrepreneurial activity increased significantly in Ireland from 6.1% in 2012 to 9.2%. This was the highest rate of early stage entrepreneurs recorded for Ireland since 2005. The increased rate was particularly marked among men (12.1% from 8.3% in 2012) but there was also a significant increase among women (6.4% from 4% in 2012) (Table 3).

The rate at which men are engaging as early stage entrepreneurs in Ireland (12.1%) is ahead of the average across the OECD (10.9%), EU-28 (10.4%) and EU-15 (8.4%). The highest rate across Europe among men is in Eastern Europe, particularly in Lithuania (17.5%), Estonia (17%) and Latvia (16.6%). Within the EU-15, the rate of early stage entrepreneurial activity among men ranks Ireland in highest place, just ahead of the Netherlands (11.7%) (Table T).

The rate of early stage entrepreneurial activity among women in Ireland in 2013 (6.4%) is now similar to that pertaining across the OECD (6.3%) and is well ahead of the average rate across the EU-28 (5.6%) and EU-15 (4.6%).

This increased rate has resulted in a further narrowing of the ratio of men to women early stage entrepreneurs and brings Ireland (1.9:1) into line with the average across the EU-28 (1.9:1) and EU-15 (1.8:1). The average across the OECD (1.7:1) demonstrates a relatively higher participation by women relative to men in entrepreneurial activities.

The high rate of engagement of women as well as men in early stage entrepreneurial activity in the US (15.1% and 10.4%) and Canada (14.5% and 9.9%) results in a ratio of men to women early stage entrepreneurs which is even lower (1.5:1) (Table T).

TABLE 3: EARLY STAGE ENTREPRENEURS BY GENDER 2010-2013

Year	Early stage entrepreneurs MEN Percentage of male adult population	Early stage entrepreneurs WOMEN Percentage of female adult population	Men:Women (Early stage entrepreneurs) Rate as a ratio
2013	12.1	6.4	1.9 : 1
2012	8.3	4.0	2.1 : 1
2011	10.3	4.2	2.5 : 1
2010	9.5	3.9	2.4 : 2

New Business Owners

Until recently, there were about two and half times as many men as women who had recently set up a new business in Ireland. This ratio has narrowed considerably.

The ratio between men and women who are owners of new businesses is now just 1.4:1. This is particularly good news, as the ratio did not narrow because fewer men were starting businesses, as it had in 2012. Quite the reverse as GEM research indicates that men as well as women have substantially increased the rate at which they are starting a new business (Table 4).

TABLE 4: NEW BUSINESS OWNERS BY GENDER 2010-2013

Year	New business owners MEN Percentage of male adult population	New business owners WOMEN Percentage of female adult population	Men:Women (New business owners) Rate as a ratio
2013	4.5	3.2	1.4 : 1
2012	2.8	1.8	1.6 : 1
2011	4.6	1.6	2.8 : 1
2010	3.6	1.5	2.5 : 1

There are now about 13,450 women starting new businesses in Ireland every year. That is the equivalent to over 1,100 women starting a new business in the country every month. This is the highest level for the 2010 to 2013 period. This represents 3.2% of women in Ireland aged 18-64 and is virtually double the rate of each of the previous three years (Table 4).

In 2013, men also significantly increased the rate at which they were starting a new business: 4.5%, up from 2.8% in 2012. This is the equivalent of approximately 18,400 men starting new businesses in Ireland in a single year, about 1,500 a month.

If women were to start new businesses in Ireland at the same rate as men, there would be more than 5,000 more individuals setting up new businesses in Ireland each year.

Nascent Entrepreneurs

In 2013 both men and women increased the rate at which they were active as nascent entrepreneurs. The rate for both men (8%) and women (3.2%) is higher than it was for the previous three years. There is a particularly marked increase among male nascent entrepreneurs, up from 5.6% in 2012. The gender difference is very significant with two and a half times as many men as women active as nascent entrepreneurs. This ratio has not changed in recent years (Table 5).

TABLE 5: NASCENT ENTREPRENEURS BY GENDER 2010-2013

Year	Nascent entrepreneurs MEN	Nascent entrepreneurs WOMEN	Men:Women (Nascent entrepreneurs)
	Percentage of male adult population	Percentage of female adult population	Rate as a ratio
2013	8.0	3.2	2.5 : 1
2012	5.6	2.5	2.5 : 1
2011	5.9	2.6	2.3 : 1
2010	6.2	2.5	2.5 : 1

4.3 PERSONAL CONTEXT

Certain factors in the personal context of individuals correlate strongly with entrepreneurial activity and suggest that individuals with these characteristics are more likely to be entrepreneurs than others in the population. They are alert to opportunities in their environment, believe that they have the knowledge and skills to successfully start and run a new business, are less susceptible to be inhibited by fear of failure and have entrepreneurial role models. As is the case internationally, men in Ireland continue to possess these characteristics to a much greater extent than do women (Table U).

The perception of opportunities to start a new business increased to 28% among the general population in Ireland in 2013. This was the case for men (35% in 2013, up from 28% the previous year) but remained the same among women (23%). The increase for men brought the perception of opportunities in Ireland more into line with the rates prevailing for men across the OECD, EU-27, and EU-15.⁴¹

Self-perception of entrepreneurial capabilities remained at broadly the same rates among men (53%) and women (33%) in 2013 as in the previous year. This represents the area of most pronounced difference between men and women across all the personal context indicators, with just one in three women having a positive view of her entrepreneurial capabilities. The difference in confidence levels between men and women is not unique to Ireland, however. The rates in Ireland are very similar to those prevailing across the OECD, EU-28 and EU-15, where a similar difference may be observed.⁴² A significant difference between men and women in this respect is even evident in those countries that the World Economic Forum ranks as having the narrowest gender gap – Finland (39%, 27%), Norway (46%, 22%) and Sweden (47%, 31%)⁴³. The United States, while reporting higher levels of self-confidence for both men and women than these other countries, is no different in the significant difference between men and women in this respect (63%, 48%).

Fear of failure as a deterrent inhibiting entrepreneurial behaviour continues to be slightly more prevalent among women in the general population (49%) than it is among men (42%) in 2013 and its rate has increased slightly among both men and women in Ireland compared to the previous year (46% and 37% respectively). The current levels are broadly similar to those occurring across the OECD, EU-28 and EU-15.⁴⁴

Entrepreneurial role models are considered to positively dispose an individual to entrepreneurial behaviour. In Ireland men report knowing someone who had recently started a new business more frequently than do women (35% compared to 28%). The rates are lower than in 2012 (44% and 31%) and are broadly similar to those pertaining across the OECD, EU-28 and EU-15.⁴⁵

⁴¹ The rate of perception of opportunities for an entrepreneurial venture among men across the OECD (37%), EU-28 (31%), and EU-15 (34%) is broadly similar to Ireland (34%) in 2013. The rate among women across the OECD (31%), EU-28 (26%), and EU-15 (27%) is higher than Ireland (23%) in 2013.

⁴² The rate at which men and women indicate self-confidence in entrepreneurial skills across the OECD (51%, 33%) EU-28 (51%, 34%) and EU-15 (48%, 32%) is broadly similar to Ireland (53%, 33%) in 2013.

⁴³ Iceland, which has the highest rank in this respect, was not included in the GEM 2013 research cycle and accordingly comparative figures are not available.

⁴⁴ The rate at which men and women indicate fear of failure as an inhibitor to start-up is broadly similar in Ireland (42%, 49%) as it is across the OECD (41%, 49%), EU-28 (42%, 52%) and EU-15 (44%, 52%) in 2013.

⁴⁵ The rate at which men and women report knowing someone who recently set up a new business is broadly similar in Ireland (35%, 28%) as it is across the OECD (36%, 29%), EU-28 (34%, 28%), and EU-15 (33%, 27%) in 2013.

4.4 FUTURE ENTREPRENEURS

Aspiring Entrepreneurs

The prevalence of those who express an expectation that they will start a business in the next three years significantly increased among the general population in Ireland in 2013 (14.7% compared to 8% in 2012). The rate is particularly high among men (20.4%) and is over twice the rate among women (9.2%). The percentage of women clearly stating their intention to become an entrepreneur has more than doubled in the last year, however (4% to 9.2%) (Table 6).

TABLE 6: ASPIRING ENTREPRENEURS BY GENDER 2010-2013

Year	Aspiring entrepreneurs MEN Percentage of male adult population	Aspiring entrepreneurs WOMEN Percentage of female adult population	Men:Women (Aspiring entrepreneurs) Rate as a ratio
2013	20.4	9.2	2.2 : 1
2012	12.0	4.0	3.0 : 1
2011	11.9	4.9	3.0 : 1
2010	11.6	5.2	2.3 : 1

Level of education as an indicator

Early stage entrepreneurs in Ireland are very well educated. This is true of both men and women, with the great majority educated beyond secondary school level (70% and 76% respectively) (Table 7).

The number of individuals in the general population with a third level qualification has increased significantly in recent years.⁴⁶ This is particularly the case among certain age groups (25-34 and 35-44). The number of highly educated women in the population has increased at an even higher rate than for men in recent years. Both trends look likely to continue. As the proportion of highly educated women increases, it is likely that the rate of early stage entrepreneurial activity among women will also increase.

Age as an indicator

The average age of an early stage entrepreneur in Ireland is broadly similar for men (39 years) and women (36 years).

The latest census (2011) indicates that the percentage of the population in the most entrepreneurial age group (35-44), and that immediately preceding it, has increased over the previous ten years. This is true for both men and women⁴⁷ and would suggest that there is a good feedstock of future entrepreneurs in the most entrepreneurial age groups.

⁴⁶ From the Census 2011 results, the CSO demonstrates that in April 2011 younger people were significantly better educated than their older counterparts, with almost 43 per cent of people aged 20 to 39 possessing a third level qualification, compared with only 13 per cent of those aged 65 and over. The educational attainment of people aged 15 and over improved significantly over the twenty years from 1991 to 2011 with the greatest gains in the numbers of those with a third level qualification, rising from just 14 per cent in 1991 to 31 per cent by 2011. In general, females were better educated than males in April 2011. One third of females aged 15 and over had a third level qualification, compared with only 27 per cent of males. Of the total number of graduates (739,992) in April 2011, 413,257 (56%) were women while 326,735 (44%) were men.
<http://www.cso.ie/en/media/csoie/census/documents/census2011profile9/Profile,9,What,we,know,full,doc,for,web.pdf>

⁴⁷ The percentage of population aged 35-44 years increased from 14.37% in 2002 to 15.15% in 2011 and the percentage aged 25-34 years increased from 15.7% to 16.46% over this same time period.

Labour force participation as an indicator

The labour force participation rates for men are 66.9% and for women are 52.4% with women making up 44.9% of the total labour force.⁴⁸ The participation rate of women is increasing slowly and has increased over the last ten years from 49.8% in 2004 to 52.4% in 2013.

The differences in the rates of labour force participation may be expected to have a bearing on the rate of entrepreneurial activity between men and women as the rate of early stage entrepreneurship is a percentage of the population and not of the labour force.

Participation rates for men are highest in the 35-44 age group (92%) and 45-54 age group (91.2%). For women the highest participation rate occurs in the 25-34 age group, (73%) and 35-44 age group (72.4%). In the most entrepreneurial age group for men and women (35-44 age group), a lower proportion of the labour force in this age group comprise women (43.9% compared to 56.1% of men). Women are increasing their participation in the labour force in this age group, however, from 65.8% in 2004 to 72.4% and the indications are that this trend will continue.

4.5 NEW BUSINESS SECTORS AND START-UP LOCATIONS

While consumer orientated businesses are a major focus for early stage entrepreneurs in Ireland, regardless of gender, more female (67%) than male entrepreneurs (48%) are engaged in businesses of this nature. This sector has been increasing in importance for both men and women since 2011.⁴⁹ More than a quarter of early stage male entrepreneurs (29%) are active in the transforming sector, which is predominantly manufacturing and construction. This sector is of much less interest to women entrepreneurs (10%) (Table 7).

There is no difference in the location in which new businesses are being set up between men and women, with 50% of early stage entrepreneurs running or intending to run their new business from separate premises and 40% initially starting their new business from home.

4.6 IMPACT OF ENTREPRENEURIAL ACTIVITY

The economic impact of entrepreneurial activity is underpinned by the creation of employment and increased export sales.

The propensity of entrepreneurs to create jobs is particularly important at a time of high unemployment. The majority of those setting up new businesses expect to become employers (85%). This is true for both men (87%) and women (78%). The great majority, however, do not expect to grow their new business beyond a micro business. A small proportion is more ambitious. Those that achieve growth will have a disproportionate impact on the economy, in terms of employment creation and other value added benefits.

While having ambitions for growth is not the same as achieving growth, it is a good starting point. GEM research in 2013 indicates that male entrepreneurs are more ambitious for their new business, with 27% expecting to create at least 10 jobs within 5 years, compared to 12% of female entrepreneurs. Similarly 15% of male entrepreneurs expect to create 20 jobs within this period, compared to just 6% of female entrepreneurs. Accordingly, the ratio between men and women starting new businesses with significant growth potential is far wider than ratios relating to early stage entrepreneurial activity would suggest.

The majority of early stage male entrepreneurs expect to have some customers in overseas markets (68%) and a sizable proportion (17%) expects to have between 75% and 100% of their customers overseas. A greater proportion of female entrepreneurs are exclusively focused on the Irish market (58% compared to 32% of men) (Table 7).

⁴⁸ Labour force participation rate (ILO) by age group, 2013 from the Statistical Yearbook of Ireland, Source: CSO

⁴⁹ The rate at which early stage male and female entrepreneurs were engaged in consumer service sector businesses was 30% and 51% respectively in 2011 and 33% and 57% in 2012.

TABLE 7: COMPARISON OF EARLY STAGE ENTREPRENEURS BY GENDER

	MEN Percentage of all male early stage entrepreneurs	WOMEN Percentage of all female early stage entrepreneurs
EDUCATION		
Primary and/or some secondary	13%	6%
Secondary school	17%	18%
Post-secondary	49%	62%
Graduate education	21%	14%
SECTOR OF ACTIVITY		
Extractive	1%	5%
Transforming	29%	10%
Business Service Sectors	22%	18%
Customer Service Sectors	48%	67%
CUSTOMERS IN OVERSEAS MARKETS		
None	32%	58%
1% to 24%	40%	22%
25% to 74%	11%	13%
75% to 100%	17%	7%
GROWTH EXPECTATIONS		
At least 10 jobs within 5 years	27%	12%
At least 20 jobs within 5 years	15%	6%

4.7 OWNER MANAGERS OF ESTABLISHED BUSINESSES

The rate of owner managers of established businesses among the general population is relatively high in Ireland (7.5%),⁵⁰ although the rate has been steadily declining in recent years.⁵¹

The rate among men has remained more or less constant since 2010 (Table 8). The rate of established owner managers among men in Ireland (11.4%) is significantly higher than the rates for men across the OECD (9.1%), EU-28 (8.8%) and EU-15 (9.1%).

The rate of established owner managers among women in Ireland, however, declined in 2013. The current rate (3.6%) is slightly lower than the rate across the OECD (4.2%), EU-28 (3.9%) and EU-15 (4.0%).

The decline in the rate of established owner managers among women in Ireland, at the same time as the rate among men has remained more or less constant, has resulted in a widening of the ratio between men and women established business owners (3.1:1). This difference is higher than that across the OECD (2.2:1), EU-28 and EU-15 (both 2.3:1).

⁵⁰ The rate of owner managers of established business among the general population across the OECD (7.0%), EU-28 (6.4%) and EU-15 (6.6%) are slightly lower than in Ireland (7.5%) in 2013.

⁵¹ The rate in 2008 was 9%.

TABLE 8: OWNER MANAGERS OF ESTABLISHED BUSINESSES BY GENDER 2010-2013

Year	Established owner managers MEN	Established owner managers WOMEN	Men:Women (established owner managers) Rate as a ratio
	Percentage of male adult population	Percentage of female adult population	
2013	11.4	3.6	3.1 : 1
2012	11.8	4.7	2.5 : 1
2011	10.9	5.0	2.2 : 1
2010	11.8	5.2	2.3 : 1

4.8 DISCONTINUED BUSINESSES

In the year to June 2013, 1.9% of the population exited a business that they had previously owned and the business closed. A higher proportion of those closing businesses were men (2.5% compared to 1.2% for women).

4.9 BUSINESS ANGELS

In 2013 men were more involved as informal investors in Ireland in a business started by someone else than were women (66% compared to 34%).

SECTION 5

PROFILES OF RECENT ENTREPRENEURS

For many years the annual GEM report for Ireland has contained profiles of recent entrepreneurs. The reasoning behind this was to emphasise the point that entrepreneurs are people and not statistics. While this point may seem self-evident, in a report which examines entrepreneurship in terms of numbers and statistics, we believed that it was important to make this point.

These entrepreneurs were focused on a variety of sectors and had different motivations for starting a business. Some were focused primarily on serving the local market; others were more focused on export markets. Some were primarily creating a job for themselves; others expected to grow substantially.

The policy spotlight is increasingly being put on entrepreneurs, particularly those who are focused on growth and expect to become significant employers, as their contribution to employment creation is now well recognised. With this in mind, in selecting entrepreneurs to profile, we decided on this occasion to focus particularly on those who have recently started new businesses with a strong focus on growth.

What characterises these entrepreneurs is innovation, whether it is in high growth sectors or in more traditional areas. Much of the media attention in sectors such as software and medical devices is on foreign firms located in Ireland. These profiles illustrate that Irish entrepreneurs are also finding opportunities in these high growth markets as well as in more traditional sectors.

Setting up a new business is not easy. Besides passion and a vision, these profiles show the importance of strong management and businesses experience.

Some of those profiled are serial entrepreneurs. Previous GEM research suggests that one in four of those setting up new businesses are serial entrepreneurs. These entrepreneurs have drawn on their previous experience of starting a business to assist in their current venture. One of these is John Hughes, Insulcheck: *“Once you successfully start-up, you are constantly facing obstacles as you plan to grow and expand. Having been there before, I feel I have an advantage. I’m looking forward to facing the challenges.”*

Others, who are first time entrepreneurs, are drawing on their commercial and senior management experience. For example, Theresa Keady’s previous role enabled her to build on her experience in parking equipment and adapt this to the newly emerging market for electric charging stations. While Leonora O’Brien’s experience in the pharmacy sector gave her insights into an opportunity to prevent errors and medication related incidents by bringing pharmacists into the digital age.

The entrepreneurs are all characterised by a willingness to seek support from others. This may be from an accelerator programme, like that for example in Nova UCD, the National Digital Research Centre, and Wayera, or from Enterprise Ireland and the other development agencies.

None underestimate the challenges involved. According to Pat Phelan: *“It can be an emotional and physical rollercoaster. The high points are high but the low points are equally low. You have to be incredibly focused on delivery. Being an entrepreneur is not for dreamers or thinkers: it’s for doers!”*

The pages which follow contain profiles of eight entrepreneurs, who have recently set up new businesses in Ireland. The entrepreneurs featured are as follows:

- **Barbara Anne Murphy**
- **John Hughes**
- **Leonora O’Brien**
- **Marjorie O’Malley**
- **Pat O’Neill**
- **Pat Phelan**
- **Patrick Rigney**
- **Theresa Keady**



BARBARA ANNE MURPHY, **Equilume**

Equine technology company, *Equilume* was founded by Dr. Barbara Murphy as a result of her ground breaking research carried out in University College Dublin. As Head of the Animal Science Equine programme, Barbara has been involved in researching the impact of circadian rhythms on reproduction in horses since the early 2000s. *"Horses are naturally 'long-day' seasonal breeders and daylight is a primary regulator of reproduction in horses. As days start to get longer in spring, the inhibitory action of the hormone melatonin on a mare's reproduction activity is reduced and mares come into season."*

The universal birthday for a thoroughbred foal (born in the northern hemisphere) is January 1st, contrasting with the natural foaling season of May to October. This crucial industry wide date creates a demand for thoroughbred breeders to advance their mares' breeding season to produce early foals, to ensure mature yearlings for sales and precocious two-year olds for racing.

For decades, thoroughbred breeders have known about the importance of light on a mare's reproduction cycle. In order to fool a mare's reproductive system into activating early, many breeders currently maintain, at a significant cost, their non-pregnant mares indoors, under artificial lighting for 8 to 10 weeks before breeding begins.

Studying the effect of light on the reproductive system in 2011, Barbara discovered that using a headpiece that shines a blue light into just one of the mare's eyes for three months produced the same result as keeping the mare under stable lights for the same period.

In collaboration with the Professor of Optical Engineering, John Sheridan, Barbara developed a prototype light mask and tested it. *"We created the Equilume Light Mask to provide a safe and cost-effective method of administering an automated, low-level light to a single eye of a mare. It has been designed and tested to deliver sufficient light stimulus to inhibit melatonin production in the mare and brings the breeding season of mares forward to meet industry timelines."*

The *Equilume* Light masks are manufactured to fit comfortably under a horse's head collar. By using the innovative mobile device, thoroughbred breeders eliminate the need to keep their non-pregnant mares indoors under artificial lighting and could save at least €1,000 per mare per season. *"An important advantage of the Equilume Light Mask is that it also allows horses to be horses, and live outdoors in their natural environment where they are happier and healthier."*

In 2011, Barbara became a participant on the NovaUCD Campus Company Development Programme. This Programme assists UCD researchers in bringing their innovative ideas from intellectual concepts to fully developed and commercial businesses. Once work on the design of the *Equilume* mask had been completed, Barbara found a local Irish company to produce it. Barbara received a market feasibility support grant in 2011 from Enterprise Ireland and later secured a commercialisation grant in 2012, allowing her to further test the prototype on three continents – in Japan, in Kentucky USA and in Ireland. *"Enterprise Ireland has been very helpful. Through their global network, we have always found someone who has been able to support us or point us in the right direction."*

In November 2012, *Equilume* was officially established and the company participated in Enterprise Ireland's High Potential Start-Up (HPSU) Programme the following year. By June 2013, The *Equilume* light mask was ready for launch - perfect timing for the start of the horse breeding season in the southern hemisphere. The mask was later launched in Ireland, the UK and Kentucky in September 2013.

Now based in Kildare, the UCD spin-out company currently employs five people. They are now finalising funding, both from Enterprise Ireland and from private investors, which will help the company to move to the next level. *"Trying to communicate to potential investors that the product is a positive advance in technology is challenging. Many don't have a lot of knowledge of the industry and convincing them the mask is commercially valid has been challenging."*

Equilume is gearing up to sell in the southern hemisphere for the 2014 breeding season in the summer. The company has already got orders from Australia and New Zealand and is expecting to quadruple their sales from 2013. At present, *Equilume* are building up a distribution network in its target markets. *"We now have a distributor in Ireland, Canada, and Japan and are in discussions with several others. I have a very busy schedule ahead of me!"*

www.equilume.com



JOHN HUGHES, **Insulcheck**

Inspiration for an innovative idea can often develop from a significant or life-changing event. For serial entrepreneur John Hughes, a fatal overdose of insulin was the trigger.

For almost 20 years, John has had type 1 diabetes and is required to inject insulin four times per day. On an ordinary day when he set out for a walk in the park, John inadvertently took an extra shot. He collapsed in a coma and was rushed to hospital.

While recovering, John began to think about how he could make sure he and fellow patients with diabetes would not find themselves in this position again. And so the concept for InsulCheck was born. Along with his engineering colleague, William Cirillo, John began researching and looked to develop a simple solution. *“Our research identified approximately 50 million insulin-users worldwide who live with the double-injection threat every day. More than 30,000 of those are in Ireland alone. They use a pen-like injection device, and short of taking a note of the time they inject, there was no failsafe way for them to remember if and when they have taken their insulin.”*

With a little help from a diabetes professor, John and William designed, prototyped, tested and patented the InsulCheck device which automatically detects when an injection is completed. InsulCheck clips onto insulin pens and constantly displays the time since the last injection.

John advises other entrepreneurs to focus on their market research when they are first setting up. *“For those looking to turn their idea into a viable business venture, they need to ensure their product or service is appropriate to their customer base – is it necessary, will it solve a problem and will people buy it?”*

During the R&D stage, the company was included as one of Enterprise Ireland’s High Potential Start-Ups (HPSU). Receiving support from EI helped to ensure the product was piloted carefully. *“We didn’t want to make any big mistakes. I used InsulCheck myself for several months as part of our user trials and it really solved the problem for me. Even now, I can pick up my insulin pen at any time and it tells me for certain whether I have or have not injected.”*

InsulCheck removes the doubt for insulin pen users while offering their care team an extra level of security as their patients deal with their complex condition. John believes that InsulCheck has ensured people with diabetes and their families can now have peace-of-mind like never before. *“The objective of InsulCheck is to decrease the number of double injection incidents and provide reassurance to diabetes patients by providing the information they need to improve their safety and compliance. Studies have shown that approximately 40% of patients admit to having difficulty remembering whether or not they had in fact injected their insulin.”*

Halo Business Angel Partnership helped InsulCheck secure investment capital after matching the company with investors who have expertise in medical sales, marketing and distribution. With the support of its angel investors, the company has partnered with the main insulin pen producers to ensure the device is compatible with the most common pen designs.

A serial entrepreneur, John feels the experience he gained from his previous start-ups has been fundamental in setting up InsulCheck. In 1984, John founded one of Ireland’s first IT Training Companies, *The Company Learning Centre*, where he employed 15 staff. Later he built an e-learning software development company that grew to over 30 people operating in Ireland and the USA. *“Once you successfully start up, you are constantly facing obstacles as you plan to grow and expand. Having been here before, I feel I have an advantage and I’m looking forward to facing the challenges that lie ahead.”*

Since its launch in March 2012, InsulCheck has received interest from people with diabetes in the US, Australia, South Africa and across Europe. John and his team are well placed to work with potential distributors and customers throughout the world. The company is also developing other products in the medical space. *“The environment in Ireland is superb for research and innovation. We are getting great support from government, development agencies and academics – watch this space for more!”*

www.insulcheck.com



LEONORA O'BRIEN, Pharmapod

Leonora O'Brien is the founder and CEO of Pharmapod, which supplies pharmacists with a cloud-based platform to record and report adverse drug effects. Having worked in the pharmacy sector for 16 years, Leonora decided to become an entrepreneur in 2012 after spotting a niche to change the way pharmacies interact with each other and, ultimately, with patients.

Launched in November 2012, Pharmapod aims to improve knowledge sharing amongst pharmacists by bringing the industry into the digital age. The software caters for both community and hospital pharmacies, and aims to prevent errors and medication-related incidents. *"When you work in the industry you see patterns, such as prescribing errors and patients having adverse reactions to medicines. Because the same errors were happening again and again I felt compelled to set up Pharmapod, to prevent patients being harmed unnecessarily. We can also track patterns and trends in counterfeit medicines which is a huge benefit to the pharmaceutical manufacturers as well as for patient safety globally."*

Leonora left her job at the Pharmacy Regulator to devote herself to Pharmapod full time. *"You take a personal risk for the sake of solving a problem, to bring your idea to fruition, to contribute positively to society."*

The evolution of Pharmapod from a business idea to a fledgling start-up happened quickly. Leonora entered the 12-week LaunchPad start-up incubation programme at the National Digital Research Centre (NDRC) in Dublin. Today, the company is still based in the centre's office space for new ventures.

Describing the NDRC as a *"hub of positivity"*, Leonora found being part of the ecosystem there proved very helpful when getting Pharmapod up and running. *"Setting up a business can be isolating, but NDRC provides us with an energising base where we always feel supported."*

Having finished up on LaunchPad in May 2012, Pharmapod finished its software development and completed its beta testing with a number of Irish pharmacies before launching the product to the market in November. In 2013, the company was included on Enterprise Ireland High Potential Start-Up (HPSU) programme. Leonora also participates in the Going for Growth programme, a support initiative for ambitious female entrepreneurs.

In 2013, Leonora won the Laureate for Europe in The Global Cartier Women's Initiative Awards, held in Paris. She was selected as one of 18 Cartier finalists from more than 1,200 applicants around the globe. Pharmapod was one of only three European start-ups shortlisted and the only start-up from Ireland. Pharmapod also won the €5,000 prize fund at the Tech Entrepreneurs workshop in Dublin as part of the European Digital Agenda Assembly in June 2013.

Pharmapod runs on all platforms and is designed to cross borders, *"Pharmapod is the first international platform of its kind to pool information from country to country and monitor the trends and causes behind medication errors and adverse effects."*

The software gathers the data and sends it through the professional network – both the pharmacy and the patient remain anonymous throughout. *"Transparency is crucial to promote an open, no-blame culture. The data is shared back with the profession so it can learn from medication errors that are happening and based on this objective data, systems are now being improved."*

Available by monthly subscription, over 120 pharmacies are currently using the Pharmapod system. Leonora has found that the majority of their sales to date have come through word of mouth and believe this is down to the user-friendliness of the software. Recently, the Pharmapod system is also being rolled out across the schools of pharmacy in Ireland in order to train pharmacy undergraduates in risk management. Leonora believes this will be a powerful driver of sales.

For Leonora, the biggest challenge so far has been balancing funding activities with customer acquisition. However, Pharmapod has now successfully closed its seed round, reaching its investment target of €750K. With five staff members and currently recruiting, Pharmapod is now in the latter stages of localisation for the UK market and has a pilot group in place. The company has also begun localising for the Kenyan market and plans are in place to run their next pilot in Canada in late 2014.

www.pharmapod.ie



MARJORIE O'MALLEY, Achill Island Sea Salt

The company *Achill Island Sea Salt* was established by Marjorie O'Malley and her family in July 2013, renewing the age old tradition of salt production on the island. *"We began by researching the history of salt production in the local area. We wanted to revive an industry which had existed right up to the 1820's. We felt we could really make a go of it, as there was only one other company producing sea salt in Ireland."*

Achill Island Sea Salt is a natural Irish product; hand harvested in a traditional manner by the O'Malley family from the wild Atlantic waters of Keel Bay, Achill Island. Initially, the salt was produced in the family kitchen. Combined with a few modern necessities such as electricity, the production results in the creation of the *"white crunchy sea salt flakes that melt in the mouth"*. The O'Malley family are passionate about the new venture. Marjorie is responsible for the overall running of the business, while her husband Kieran and their eldest son focus on producing the Sea Salt.

In the beginning, Marjorie sold the Sea Salt at the local farmers markets. After a food tasting by chefs in Galway, food writers and chefs blogged and tweeted about the product. Orders came from all over the country but the family could only fill those from artisan shops, the local Supervalu and restaurants located in the west of Ireland. With such a positive response, the O'Malleys realised that they couldn't stay in the kitchen for long. In November 2013, the RTE programme *"Ear to the Ground"* produced a documentary on *Achill Island Sea Salt*. In the run up to Christmas 2013, the family were working 24/7. Increasing capacity became a priority.

The company received funding from the Mayo County Enterprise Board to scale up in 2014. As a result, production has now moved to a pilot plant in Keel, which contains a commercial kitchen fitted with four powerful gas burners and some dehydrators to dry the salt. *"The move to a pilot plant gives us the opportunity to explore the conditions for crystallisation which will produce the best crystals and to improve ways of handling, washing and drying crystals."*

Despite a sole focus on the Connacht region, word of mouth from existing customers has seen demand for *Achill Island Sea Salt* increase rapidly from all over the country. The product has gained much critical acclaim from chefs and cooks for its unique taste, texture and appearance. It has been endorsed by John & Sally McKenna - *McKenna Guides Best in Ireland 2014*.

The O'Malleys plan to expand nationwide once capacity allows. Using an innovation voucher from Enterprise Ireland, the company have been liaising with the Centre for Integration of Sustainable Energy Technologies in GMIT. *"We will move from the pilot plant at the end of 2014 to an Udaras na Gaeltachta factory on Achill Island and use a process being developed by GMIT which will incorporate a raft of renewable energy sources to evaporate the sea salt in a unique and sustainable manner."*

The process being developed will eventually allow the business to produce 1 tonne of salt per week. Marjorie feels the creation of a sustainable industry would benefit the entire community on Achill Island. *"The area is decimated by emigration and unemployment. We would like to create jobs and use the resources available around us. Achill itself is a strong brand - people know it immediately."*

The family has been overwhelmed by the positivity and goodwill from the local community. *"It is a really exciting time. The pride that people have for Achill Island has really spurred us on. They all feel a part of it - they see it as 'their salt' and they share it with family and friends abroad. That is most inspiring."*

www.achillislandseasalt.ie



PAT O'NEILL, Zenith Adhesive Components (ZAC)

Pat O'Neill never imagined wanting to set up his own business, as he was happy working for someone else. Circumstances were to change, however, and that is exactly what happened.

A graduate of Management Science from Trinity College, Dublin, Pat began his career with *Smurfit Ireland*, working in a number of production and quality management positions. In the late 1990's, he began working with *M&C Specialties*, a family-owned company headquartered in the USA. The company specialises in the manufacture of adhesive and tape diecuts for use in various products such as plastic mouldings, electronic products and medical devices. An Irish subsidiary of *M&C Specialties* was established in Athlone. Pat trained with the company in the USA and ran the operation in Ireland. He developed it from an empty shell to a busy manufacturing unit with 20 staff, which gained global customers in the medical device, industrial and automotive sectors.

In 2007, as the US family had no one left in the family to take over the business, they decided to sell *M&C Specialties* to a large multi-national, who at the time were buying a company a week. After the takeover, it became apparent to Pat that the Irish plant was going to be shut and production would not be staying in Ireland. *"They really didn't have enough managers to look after all their acquisitions. They started closing down some of their smaller businesses. Unfortunately, one of them was ours."*

In 2012, the impending closure proved to be the catalyst that stirred Pat's entrepreneurial aspiration. In September 2012, a few months before the company closed for good, Pat left to set up on his own. *"I wanted to keep my own job and those of my colleagues on the island of Ireland. I wanted to continue working in the same industry, so I used the opportunity to set up ZAC."*

By establishing *Zenith Adhesive Components (ZAC)* alongside engineering director Jonathan Whately, they managed to save a number of jobs and kept production in Athlone. Pat and his team succeeded in winning some old customers back and have won many more customers over the last eighteen months. *"Winning new customers is down to the flexible 'can-do' attitude of the staff and our ability to turn around ideas and orders in a timely fashion. For many of our Irish customers, we are supplying products that would otherwise have to be imported from the UK or the USA."*

In October 2013, ZAC moved to their current location in Blyry Business Park, Athlone. The facility has been ISO 9000 certified and contains a Class 8 Clean-room for manufacturing products in a controlled air environment. ZAC manufactures adhesive components for bonding, shielding, insulation, protection and skin attachment of devices. With a strong customer base in Ireland, ZAC has also begun exporting to the USA and the UK.

In February 2014, the company was included as one of Enterprise Ireland's High Potential Start-Ups (HPSU) and received a substantial investment to further penetrate international markets, increase their sales and employ more staff. *"Enterprise Ireland have been a great support. The funding alone allowed us to go ahead and purchase vital machinery to make more sophisticated parts. It has jumpstarted our production and increased our overall volume capacity. Without this help, it would've taken us much longer to get this far."*

For Pat, getting the business to be self-sufficient before concentrating on further development was important. *"We are almost halfway through our second year of trading and are breaking even. Now, we can focus on our long term strategy. We have various products in the pipeline that are very promising."* ZAC currently has eleven full time staff. Depending on customer orders, additional staff is also recruited on short term contracts on an ongoing basis.

Pat is a founding member of both the *Midlands Gateway Chamber of Commerce* and the *Midlands Manufacturing Meitheal*, a forum where business owners support each other and help overcome the vast array of issues that arise in their businesses. *"Supporting local entrepreneurs in the Midlands is crucial. I find it extremely rewarding to be able to mentor and advise others"*.

www.zac.ie



PAT PHELAN, Trustev

For serial entrepreneur Pat Phelan, there was never any doubt that he would become his own boss. Having started out as a butcher, Pat trained as a chef and opened his first business – a Thai restaurant in Cork. *“I always knew that I’d work for myself. I like to execute ideas and I like the freedom to try and explore opportunities where I can solve real problems for real people.”*

While running a number of restaurants, Pat discovered that many of the international chefs working for him found it difficult to stay in touch with their families overseas. This led to his first involvement with internet cafes and phone services, before he began exploring other business opportunities in the telecoms and international roaming sectors. *“Every business I’ve been involved in is really an evolution of a problem that I came across in the business before. Trustev was no different. The telecoms industry is one of the worst hit when it comes to fraud.”*

Established in 2012, Trustev is an identity verification platform focused on delivering real time information to combat e-commerce fraud. It provides a multi-layered approach to fraud detection to maximise revenue and minimise loss while reducing the cost of policing fraud. Through Trustev’s unique technology, online retailers can be certain that they are dealing with real human beings and it mirrors the way merchants make real life selling decisions. *“When we started Trustev, the vision of my co-founder Chris Kennedy and I was to make e-commerce open, safe and transparent. As more services and products move online, businesses have to be certain that they know exactly who they are doing business with - otherwise growth will eventually stall. Online retail is still only 5% of total global retail, so it is an exciting time to be in this space.”*

At Trustev, Pat drives a focussed approach to business operations, to deliver measurable results for customers, partners and investors. He believes very strongly in partnerships and personal relationships in doing business. *“Chris has been involved with me in a number of previous businesses. I think we’re the perfect team - I look after the commercial side of the business, he looks after the technology side but we both know enough about the other to be able to work together with one set of goals.”*

In October 2013, Trustev raised over €3million in one of Europe’s largest ever seed round investments. The company was also awarded the coveted title as Europe’s Top Technology Start-up by the EU Commission and was named one of the Top 10 global technology start-up companies by Forbes magazine in 2014.

In April 2014, Trustev took top prize at SXSW, the world’s largest technology festival. The company is already significantly reducing fraud and increasing revenues for some of the biggest E-commerce companies in the market. The firm has grown from three to 19 employees in less than 12 months and now has more than 100 customers in five countries. Getting this far in a very short period of time, Pat believes the support given to Trustev had a major impact. *“We got great support from Telefonica’s Wayra programme in Dublin and from Enterprise Ireland. We are also thankful for the fact that we’ve attracted investment from a team of investors who are very interested in Trustev and have taken a hands-on approach to help to grow the business.”*

For Pat, being an entrepreneur means taking the good with the bad. *“Especially in the early days of a business it can be an emotional and physical rollercoaster. The long hours, combined with, in my case, so much travel can be draining. The best feeling occurs when you see a happy customer deriving real value from something you’ve built. Then you know the hard work is worthwhile.”*

Pat advises those aspiring to become entrepreneurs to *“go into it with your eyes open and realise that it’s a difficult path you’re choosing. The high points are high but the low point points are as equally low. You have to be incredibly focused on delivery - being an entrepreneur is not for dreamers or thinkers: it’s for doers.”*

www.trustev.com



PATRICK RIGNEY, PJ Rigney Distillery & International Brand

Patrick Rigney is well known for his expertise in international business, brand development and marketing, as a brand inventor, champion marketer and entrepreneur. His latest venture is the creation of a new multi-purpose distillery in Drumshanbo, Co. Leitrim, in which he will distil and develop a new range of craft style spirit brands for international markets.

Patrick cut his teeth originally in Baileys, Gilbeys, C&C International and Grants of Ireland. During his time with Baileys Patrick managed the core business of the Americas and Australasia while he simultaneously developed the Sheridan's liqueur brand. In 1998 Patrick became the joint founder of Castle Brands, which developed Boru Vodka and a range of other successful brands before successfully exiting in 2005 through an IPO on the AMEX in New York. That same year, Patrick established Fastnet Brands and Dalcassian, a wine and spirits distribution company, and more recently has invested in a range of other companies in the drinks, pharmaceutical, tourism and equestrian sectors.

The catalyst for this latest start-up, "*PJ Rigney Distillery and International Brands Ltd*" was Bord Bia, who were seeking to support the creation of a new wave of strong brands out of Ireland. "*Bord Bia provided the kick-start and encouraged me to explore. I began developing a number of ideas and brands. I concentrated initially on the idea, particularly in the area of provenance in order to put together something that was unique and remarkable in terms of the distilling capability and brand story.*"

While on business in Germany, Patrick noticed an extraordinary smell coming into the bedroom where he was staying. He was intrigued to discover that a man was actually distilling alcohol in the room below. He later learned that distilling was part of the culture in that part of Germany and that distillery equipment was manufactured nearby. Enquiries quickly led to orders and at present, distillery equipment is being built in Germany, which will be transported and installed in Drumshanbo this summer. This will make *PJ Rigney Distillery* the first multi-purpose distillery of its kind in Ireland and the first distillery in Connaught for over 100 years.

For Patrick, the international connections and the experience he has gained over his career give him an advantage in this new business. "*I was not starting from the very beginning. Having set up a business before, I think you are less likely to make as many mistakes.*"

Patrick has found it quite challenging securing investment for his new venture given it is food/drink centred, but received support through Enterprise Ireland's High Potential Start-Up programme (HPSU). "*I am grateful that Enterprise Ireland has shown confidence in what we are trying to achieve and has supported us financially. Compared to technology, I think it's extremely difficult to get investment in the Food and Drinks industry. People really want to see success before they invest.*"

Not wedded to a particular location, through connections in the industry, Patrick visited Drumshanbo, Co Leitrim, where *Carrig Craft Brewing Company* had recently established a micro-brewery. He was impressed by what he saw and the welcome for the venture from the local community. "*There is a wonderful environment and a rich heritage here in Leitrim. Everyone wanted to support the project. I met with the community and asked their opinions. All were very encouraging and were happy for the business to come.*"

Patrick has assembled a strong management team, including a world-class distiller Robert Barrett and other veterans from the industry. In partnership with Dalcassian, the wine and spirit distribution company, which will provide the route to market in Ireland, *PJ Rigney Distillery* plans to develop a whole new range of international brands. "*Initially the focus will be on getting the business on a sound commercial footing, achieving a turnover of €5 -10 million, creating 10-15 permanent jobs, restoring the lost skills of distilling and creating a range of international brands. If we succeed in doing all of that, we will have done well.*"

Patrick would recommend becoming an entrepreneur to others, but knows it is not for everyone. "*A career as an entrepreneur is not for the faint-hearted. It pushes you outside your comfort zone. What makes it all worthwhile is knowing you have taken a risk and seeing it pay off. That's the best feeling in the world!*"



THERESA KEADY, EC Charging

Theresa Keady, the founder of EC Charging, has leveraged over 20 years' experience in the parking industry to create EC Charging. Located in Baldonnell Business Park, Dublin 22, EC Charging manufactures, installs and maintains Electric Vehicle (EV) charging stations and also operates a back-office communication system.

It was the identification of a clearly perceived opportunity that propelled Theresa to become an entrepreneur.

In 2010 the ESB announced plans to install 1,500 charging stations nationwide. *"These charging stations weren't being manufactured in Ireland and were being imported from the UK and Germany. I could see that there was a clear gap for an Irish producer."*

Immediately the company began developing an Irish-built EV charging station based on the requirements laid down by the ESB Ecars specification. As a result of rapid, focused development, EC Charging became the first Irish manufacturer of high speed, network enabled EV charging stations. The approach was to combine innovative technology, with robust design and a proven service management approach.

Once EC Charging had developed their first charging unit, they secured a contract with the ESB. *"Since January 2013 we have supplied a substantial number of units, which are being used throughout the country. There are now more than 600 electric cars in Ireland and the Government has set an ambitious target of having 10% of all cars electric by 2020."*

Theresa expects that further developments in battery technology, a reduction in EV prices and the nationwide rollout of charging infrastructure will lead to electric cars becoming much more widely used within the next few years. The growth in the EV market will continue to be driven by the need to bring down CO² emissions as well as concerns about air quality and rising oil prices. Europe 2020 targets require a cut in CO² emissions by 20%. Road transport accounts for a fifth of the EU's total emissions of CO². Transport is the only major sector in the EU where greenhouse gas emissions are still rising.

EC Charging are a founding member of UK EVSE (EV Trade Association) and held its UK launch at LCV Millbrook in September 2013 (UK's largest Low Carbon Vehicle Event). *"The trade event led to our first contracts with local authorities in the UK and we are now pursuing contracts in several UK locations as well as putting a plan in place to enter the Norwegian market at the end of the year"*.

The Norwegian market looks particularly attractive to EC Charging as Norway currently has more than 10,000 electric cars, the highest number per capita in the world. By developing sales to the UK, EC Charging expects to see 50% growth in turnover in 2014 and are confident that the EV industry is now in a significant growth phase, driven by the need to reduce greenhouse gases. Noting that the price of electric cars has come into line with combustion engine cars, Theresa believes that before long electric cars will become commonplace on our roads.

EC Charging is now well positioned to respond to a growing demand for its products from within Ireland and in export markets and is committed to product innovation based on real customer need. EC Charging specialises in the development and manufacture of network enabled onstreet public charging stations for Electric Vehicles. EC Charging provides the hardware, software, management information system installation and maintenance. *"The charging station identifies the customer, transfers power to the vehicle and transmits usage data to our in house management system. We offer these services to customers in the Energy sector as well as Parking operators, Local Authorities, Transport Hubs, Shopping centres, Hospital and Hotels. The current geographical markets we serve are Ireland, UK and Norway."*

EC Charging was recently backed as a High Potential Start-Up (HPSU) by Enterprise Ireland. HPSUs are start-up businesses with the potential to develop an innovative product or service for sale on international markets with the potential to create 10 jobs or more and €1m in sales within 3 to 4 years of starting up.

www.eccharging.co.uk

SECTION 6

COMPARATIVE DATA ON ENTREPRENEURSHIP IN 2013

TABLE A - POTENTIAL ENTREPRENEURS: PERSONAL CONTEXT OF GENERAL POPULATION

	Know a recent entrepreneur⁵ Percentage in adult population	Opportunities in local area⁶ Percentage in adult population	Skills & Knowledge to start-up Percentage in adult population	Fear of failure prevent start-up Percentage in adult population
Belgium ^{1 2 3 4}	19	31	34	51
Canada ¹	28	57	48	37
Chile ¹	42	68	60	31
Croatia ²	24	18	47	46
Czech Republic ^{1 2}	23	23	43	43
Estonia ^{1 2 4}	37	46	40	48
Finland ^{1 2 3 4}	45	44	33	41
France ^{1 2 3 4}	33	23	33	45
Germany ^{1 2 3 4}	25	31	38	48
Greece ^{1 2 3 4}	25	14	46	69
Hungary ^{1 2}	28	19	38	48
Ireland^{1 2 3 4}	31	28	43	45
Israel ¹	41	47	36	53
Italy ^{1 2 3 4}	17	17	29	56
Japan ¹	17	8	13	47
Korea ¹	31	13	28	45
Latvia ²	31	35	48	43
Lithuania ²	37	29	35	49
Luxembourg ^{1 2 3 4}	36	46	43	50
Mexico ¹	57	54	59	33
Netherlands ^{1 2 3 4}	35	33	42	41
Norway ¹	32	64	34	33
Poland ^{1 2}	38	26	52	56
Portugal ^{1 2 3 4}	26	20	49	48
Romania ²	28	29	46	46
Slovakia ^{1 2 4}	39	16	51	44
Slovenia ^{1 2 4}	39	16	51	42
Spain ^{1 2 3 4}	31	16	48	48
Sweden ^{1 2 3}	37	64	39	40
Switzerland ¹	30	42	45	35
United Kingdom ^{1 2 3}	29	36	44	40
United States ¹	27	47	56	35
BRIC countries				
Brazil	38	51	53	43
Russia	39	18	28	41
India	39	41	56	36
China	48	33	36	36
OECD average	32	34	42	45
EU-28 average	31	29	42	47
EU-15 average	30	31	40	48
EURO area average	31	27	42	48
BRIC average	41	36	43	39

1 Member of OECD

2 Member of European Union - EU 28

3 Member of European Union - EU 15

4 Member of EURO

5 Knows someone who has started a business in the past 2 years

6 Opportunities to start a business in the next six months (July 2013-December 2013)

TABLE B - ENTREPRENEURIAL ACTIVITY

	Aspiring entrepreneurs Percentage in adult population	Nascent entrepreneurs Percentage in adult population	New business owners Percentage in adult population	Total early stage entrepreneurs (TEA) Percentage in adult population	Early stage entrepreneurs OECD Ranking (of 28)	Early stage entrepreneurs EU-28 Ranking (of 23)	Early stage entrepreneurs EU-15 Ranking (of 13)	Established owner managers Percentage in adult population
Belgium ^{1,2,3,4}	9.2	3.1	1.9	4.9	25	21	11	5.9
Canada ¹	17.0	7.8	4.7	12.2	5			8.4
Chile ¹	47.3	15.4	9.6	24.3	1			8.5
Croatia ²	24.1	6.3	2.0	8.3		11		3.3
Czech Republic ^{1,2}	15.3	4.9	2.7	7.3	16	14		5.3
Estonia ^{1,2,4}	22.9	8.8	4.5	13.1	3	2		5.0
Finland ^{1,2,3,4}	9.3	2.7	2.7	5.3	22	18	8	6.6
France ^{1,2,3,4}	13.7	2.7	1.8	4.6	26	22	12	4.1
Germany ^{1,2,3,4}	8.9	3.1	2.0	5.0	24	20	10	5.1
Greece ^{1,2,3,4}	8.9	3.3	2.3	5.5	21	17	7	12.6
Hungary ^{1,2}	17.4	6.0	3.7	9.7	7	5		7.2
Ireland^{1,2,3,4}	14.7	5.5	3.8	9.2	11	9	2	7.5
Israel ¹	26.7	5.3	4.8	10.0	6			5.9
Italy ^{1,2,3,4}	11.3	2.4	1.1	3.4	28	23	13	3.7
Japan ¹	7.1	2.2	1.5	3.7	27			5.7
Korea ¹	13.6	2.7	4.2	6.9	18			9.0
Latvia ²	26.7	8.1	5.3	13.3		1		8.8
Lithuania ²	25.7	6.1	6.4	12.4		3		8.3
Luxembourg ^{1,2,3,4}	19.2	6.0	2.8	8.7	12	10	3	2.4
Mexico ¹	23.5	11.9	3.3	14.8	2			4.2
Netherlands ^{1,2,3,4}	10.3	4.7	4.8	9.3	10	8	1	8.7
Norway ¹	6.2	2.9	3.4	6.3	20			6.2
Poland ^{1,2}	21.4	5.1	4.3	9.3	9	7		6.5
Portugal ^{1,2,3,4}	16.0	4.2	4.2	8.2	14	13	5	7.7
Romania ²	26.8	6.2	4.2	10.1		4		5.3
Slovakia ^{1,2,4}	20.3	6.1	3.6	9.5	8	6		5.4
Slovenia ^{1,2,4}	14.7	3.6	2.9	6.5	19	16		5.7
Spain ^{1,2,3,4}	9.3	3.1	2.2	5.2	23	19	9	8.4
Sweden ^{1,2,3}	11.0	5.9	2.5	8.2	13	12	4	6.0
Switzerland ¹	11.3	4.5	3.7	8.2	15			10.0
United Kingdom ^{1,2,3}	7.6	3.6	3.6	7.1	17	15	6	6.6
United States ¹	16.6	9.2	3.7	12.7	4			7.5
BRIC countries								
Brazil	29.4	5.1	12.6	17.3				15.4
Russia	4.7	3.0	2.8	5.8				3.4
India	25.5	5.1	4.9	9.9				10.7
China	16.6	5.2	8.9	14.0				11.0
OECD average	15.4	5.2	3.4	8.5				6.6
EU-28 average	15.9	4.8	3.3	8.0				6.4
EU-15 average	11.5	3.9	2.7	6.5				6.6
EURO area average	13.5	4.2	2.9	7.0				6.3
BRIC average	19.1	4.6	7.3	11.7				10.1

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TABLE C - 'CULTURE': PERCEPTIONS OF GENERAL POPULATION

	Entrepreneurship is a good career choice Percentage in adult population	Success at entrepreneurship has high status Percentage in adult population	Supportive media coverage of entrepreneurs Percentage in adult population
Belgium ^{1 2 3 4}	55	52	44
Canada ¹	61	70	70
Chile ¹	69	67	66
Croatia ²	61	43	43
Czech Republic ^{1 2}	n/a	48	n/a
Estonia ^{1 2 4}	53	59	41
Finland ^{1 2 3 4}	44	85	69
France ^{1 2 3 4}	55	70	41
Germany ^{1 2 3 4}	49	75	50
Greece ^{1 2 3 4}	60	65	32
Hungary ^{1 2}	46	74	28
Ireland ^{1 2 3 4}	50	81	60
Israel ¹	61	80	49
Italy ^{1 2 3 4}	66	72	48
Japan ¹	31	53	58
Korea ¹	51	68	68
Latvia ²	61	59	59
Lithuania ²	69	57	48
Luxembourg ^{1 2 3 4}	39	71	36
Mexico ¹	58	62	51
Netherlands ^{1 2 3 4}	79	66	55
Norway ¹	49	75	57
Poland ^{1 2}	67	60	59
Portugal ^{1 2 3 4}	n/a	n/a	n/a
Romania ²	74	73	61
Slovakia ^{1 2 4}	49	59	52
Slovenia ^{1 2 4}	57	68	51
Spain ^{1 2 3 4}	54	52	46
Sweden ^{1 2 3}	52	72	59
Switzerland ¹	41	65	48
United Kingdom ^{1 2 3}	54	79	50
United States ¹	n/a	n/a	n/a
BRIC countries			
Brazil	85	82	84
Russia	66	68	49
India	61	70	61
China	70	74	71
OECD average	54	67	51
EU-28 average	57	65	49
EU-15 average	55	70	49
EURO area average	55	67	48
BRIC average	70	74	66

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TABLE D - EXITS AND REASONS FOR EXITS

	Entrepreneurs exited in last 12 months & business discontinued Percentage in adult population	Entrepreneurs exited in last 12 months & business continued Percentage in adult population	Discontinued Reason: Opportunity to sell the business Percentage of all entrepreneurs exiting	Discontinued Reason: Business was not profitable Percentage of all entrepreneurs exiting	Discontinued Reason: Problems getting finance Percentage of all entrepreneurs exiting	Discontinued Reason: Found another job or business opportunity Percentage of all entrepreneurs exiting	Discontinued Reason: Exit was planned in advance Percentage of all entrepreneurs exiting	Discontinued Reason: Retirement Percentage of all entrepreneurs exiting	Discontinued Reason: Reason of personal nature Percentage of all entrepreneurs exiting	Discontinued Reason: Consequence of single incident Percentage of all entrepreneurs exiting
Belgium ^{1,2,3,4}	1.0	0.9	0	14	13	11	4	8	45	5
Canada ¹	2.6	1.7	5	25	2	31	3	10	24	0
Chile ¹	5.5	2.0	4	30	12	12	5	0	32	5
Croatia ²	2.8	1.7	1	35	20	9	4	7	18	5
Czech Republic ^{1,2}	2.2	1.1	2	35	9	11	9	4	25	5
Estonia ^{1,2,4}	1.3	0.8	0	33	11	6	3	6	27	0
Finland ^{1,2,3,4}	1.3	0.7	0	18	3	19	5	26	24	5
France ^{1,2,3,4}	1.3	0.6	0	25	14	8	0	9	39	5
Germany ^{1,2,3,4}	1.0	0.5	5	31	11	21	2	3	25	2
Greece ^{1,2,3,4}	4.1	1.0	4	52	9	3	0	28	4	0
Hungary ^{1,2}	2.5	0.5	0	27	33	12	4	8	9	1
Ireland ^{1,2,3,4}	1.9	0.6	0	59	10	13	0	5	13	0
Israel ¹	3.2	1.6	6	36	7	20	3	2	20	5
Italy ^{1,2,3,4}	1.4	0.5	0	20	16	8	3	10	43	0
Japan ¹	1.1	0.3	3	31	28	6	5	18	18	8
Korea ¹	1.8	0.7	4	41	8	4	2	20	0	0
Latvia ²	1.8	1.7	1	42	11	7	3	4	28	3
Lithuania ²	1.8	1.7	0	36	14	11	5	0	27	6
Luxembourg ^{1,2,3,4}	2.0	0.8	11	30	10	9	10	2	22	7
Mexico ¹	4.8	1.8	6	21	25	13	8	1	19	7
Netherlands ^{1,2,3,4}	1.6	0.5	4	27	11	13	5	7	29	3
Norway ¹	1.2	0.5	0	13	13	13	0	9	41	13
Poland ^{1,2}	2.6	1.4	2	42	21	9	1	3	7	15
Portugal ^{1,2,3,4}	1.1	0.7	0	56	9	5	5	0	21	3
Romania ²	3.4	0.8	3	42	31	2	0	0	17	5
Slovakia ^{1,2,4}	3.4	2.1	0	32	15	13	8	2	25	6
Slovenia ^{1,2,4}	1.9	0.7	4	31	17	11	6	13	15	4
Spain ^{1,2,3,4}	1.4	0.5	4	56	13	3	2	5	13	4
Sweden ^{1,2,3}	1.7	0.6	2	11	2	37	11	5	28	4
Switzerland ¹	1.4	0.9	14	12	9	18	9	9	24	6
United Kingdom ^{1,2,3}	1.4	0.5	5	30	5	26	4	6	21	3
United States ¹	2.5	1.3	3	44	8	12	1	3	22	7
BRIC countries										
Brazil	2.8	1.9	1	37	9	12	3	0	36	2
Russia	1.4	0.2	3	39	4	3	0	0	6	15
India	1.4	0.1	0	33	27	7	2	1	19	3
China	2.0	0.7	1	41	5	15	4	0	30	4
OECD average	2.1	0.9	3	32	13	13	4	7	23	4
EU-28 average	2.0	0.9	2	34	14	11	4	7	23	4
EU-15 average	1.7	0.7	3	33	10	13	4	9	25	3
EURO area average	1.8	0.8	2	35	12	10	4	9	25	3
BRIC average	1.9	0.7	1	38	11	9	2	0	23	6

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TABLE E - MOTIVATIONS OF EARLY STAGE ENTREPRENEURS

	Motivated by opportunity Percentage of all early stage entrepreneurs	Motivated by necessity Percentage of all early stage entrepreneurs
Belgium ^{1 2 3 4}	67	33
Canada ¹	84	16
Chile ¹	79	21
Croatia ²	62	38
Czech Republic ^{1 2}	77	23
Estonia ^{1 2 4}	84	16
Finland ^{1 2 3 4}	80	20
France ^{1 2 3 4}	84	16
Germany ^{1 2 3 4}	80	20
Greece ^{1 2 3 4}	76	24
Hungary ^{1 2}	71	29
Ireland ^{1 2 3 4}	81	19
Israel ¹	82	18
Italy ^{1 2 3 4}	80	20
Japan ¹	74	26
Korea ¹	62	38
Latvia ²	78	22
Lithuania ²	76	24
Luxembourg ^{1 2 3 4}	93	7
Mexico ¹	88	12
Netherlands ^{1 2 3 4}	92	8
Norway ¹	96	4
Poland ^{1 2}	51	49
Portugal ^{1 2 3 4}	78	22
Romania ²	68	32
Slovakia ^{1 2 4}	59	41
Slovenia ^{1 2 4}	75	25
Spain ^{1 2 3 4}	70	30
Sweden ^{1 2 3}	89	11
Switzerland ¹	92	8
United Kingdom ^{1 2 3}	83	17
United States ¹	77	23
BRIC countries		
Brazil	71	29
Russia	63	37
India	60	40
China	66	34
OECD average	79	21
EU-28 average	76	24
EU-15 average	82	18
EURO area average	79	21
BRIC average	66	34

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TABLE F - AGE OF EARLY STAGE ENTREPRENEURS

	Early stage entrepreneurs aged 18-24yrs As percentage of all adults in this age category	Early stage entrepreneurs aged 25-34yrs As percentage of all adults in this age category	Early stage entrepreneurs aged 35-44yrs As percentage of all adults in this age category	Early stage entrepreneurs aged 45-54yrs As percentage of all adults in this age category	Early stage entrepreneurs aged 55-64yrs As percentage of all adults in this age category	Early stage entrepreneurs aged 18-24yrs Percentage of all early stage entrepreneurs	Early stage entrepreneurs aged 25-34yrs Percentage of all early stage entrepreneurs	Early stage entrepreneurs aged 35-44yrs Percentage of all early stage entrepreneurs	Early stage entrepreneurs aged 45-54yrs Percentage of all early stage entrepreneurs	Early stage entrepreneurs aged 55-64yrs Percentage of all early stage entrepreneurs
Belgium ^{1,2,3,4}	3.0	7.9	6.0	4.3	2.7	8	33	27	21	11
Canada ¹	9.5	19.0	14.0	12.3	5.4	11	31	24	25	9
Chile ¹	14.0	31.4	29.3	25.4	17.8	11	29	27	22	11
Croatia ²	9.1	15.0	8.5	6.6	2.6	14	39	21	18	7
Czech Republic ^{1,2}	8.0	13.0	7.0	5.8	2.7	14	39	23	15	8
Estonia ^{1,2,4}	17.8	20.6	14.6	9.5	4.0	19	35	24	15	6
Finland ^{1,2,3,4}	6.0	5.3	6.1	5.8	3.6	16	21	23	24	16
France ^{1,2,3,4}	4.5	5.9	5.6	5.2	1.4	14	26	28	25	6
Germany ^{1,2,3,4}	3.0	6.8	5.6	5.9	2.7	8	26	24	31	11
Greece ^{1,2,3,4}	5.1	7.9	6.0	4.4	3.3	15	35	16	16	10
Hungary ^{1,2}	6.6	13.0	12.0	10.1	5.0	9	31	29	21	11
Ireland ^{1,2,3,4}	7.6	10.0	12.6	9.0	4.6	10	29	33	20	8
Israel ¹	9.2	11.9	14.5	6.7	5.7	17	32	30	12	9
Italy ^{1,2,3,4}	2.5	4.0	4.4	3.5	2.1	8	23	32	25	12
Japan ¹	0.5	4.5	5.1	4.6	2.6	2	25	32	24	17
Korea ¹	0.4	5.8	11.0	7.5	6.2	1	18	40	27	15
Latvia ²	17.6	21.0	14.6	7.8	5.2	19	37	23	13	7
Lithuania ²	14.4	18.8	16.8	9.1	3.3	19	30	29	18	5
Luxembourg ^{2,3,4}	6.6	10.3	9.9	9.1	5.8	10	26	25	28	11
Mexico ¹	14.8	15.9	15.7	15.9	8.9	22	28	25	18	7
Netherlands ^{1,2,3,4}	7.6	13.1	10.6	10.0	4.4	11	27	27	26	10
Norway ¹	3.7	8.1	7.9	5.3	5.2	9	30	30	18	16
Poland ^{1,2}	9.9	15.3	9.7	7.7	3.0	15	40	21	16	7
Portugal ^{1,2,3,4}	7.0	12.0	10.5	7.3	3.4	10	31	31	20	8
Romania ²	11.8	14.5	11.0	8.2	3.9	17	34	27	15	7
Slovakia ^{1,2,4}	8.6	14.8	11.8	8.6	2.0	13	37	27	18	4
Slovenia ^{1,2,4}	6.3	8.3	9.6	5.0	2.6	12	29	33	18	8
Spain ^{1,2,3,4}	3.3	6.1	7.1	5.5	1.9	7	28	35	23	6
Sweden ^{1,2,3}	6.4	8.5	9.1	9.2	7.4	12	21	24	24	18
Switzerland ¹	2.6	9.0	10.4	10.9	4.9	4	23	30	32	11
United Kingdom ^{1,2,3}	5.8	7.9	8.8	8.0	4.5	12	24	27	25	12
United States ¹	12.3	14.9	16.5	11.7	7.7	14	25	28	21	11
BRIC countries										
Brazil	16.2	21.9	19.9	15.2	8.8	17	33	26	17	7
Russia	7.9	7.0	6.8	4.2	3.1	22	29	24	16	10
India	14.3	13.7	9.8	8.5	8.1	17	39	22	14	9
China	14.3	21.3	16.5	10.5	5.9	15	29	32	16	7
OECD average	6.9	11.1	10.4	8.4	4.7	11	29	28	22	10
EU-28 average	7.8	11.3	9.5	7.2	3.6	13	30	27	21	9
EU-15 average	5.3	8.1	7.9	6.7	3.7	11	27	28	23	11
EURO area average	6.3	9.5	8.6	6.7	3.2	12	29	28	22	9
BRIC average	11.4	16.0	13.3	9.6	6.5	18	32	26	16	8

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TABLE G - EDUCATION LEVEL OF EARLY STAGE ENTREPRENEURS

	Early stage entrepreneurs with some secondary education as highest qualification As a percentage of all adults in this education category	Early stage entrepreneurs with secondary school as highest qualification As a percentage of all adults in this education category	Early stage entrepreneurs with post-secondary as highest qualification As a percentage of all adults in this education category	Early stage entrepreneurs with graduate education as highest qualification As a percentage of all adults in this education category	Early stage entrepreneurs with post-secondary education Percentage of all early stage entrepreneurs
Belgium ^{1 2 3 4}	2.8	4.6	4.2	7.8	57
Canada ¹	7.8	9.1	12.6	8.8	75
Chile ¹	16.6	22.9	28.5	27.3	42
Croatia ²	3.5	9.7	13.7	11.9	29
Czech Republic ^{1 2}	3.4	6.9	10.7	10.1	25
Estonia ^{1 2 4}	7.0	11.0	20.6	14.3	44
Finland ^{1 2 3 4}	3.2	5.9	3.5	6.0	25
France ^{1 2 3 4}	2.0	3.8	6.8	n/a	63
Germany ^{1 2 3 4}	3.3	4.9	6.3	n/a	38
Greece ^{1 2 3 4}	3.2	4.1	6.8	7.4	62
Hungary ^{1 2}	6.7	10.1	10.6	14.2	47
Ireland^{1 2 3 4}	6.3	6.0	9.2	12.1	70
Israel ¹	6.2	8.7	10.7	12.0	68
Italy ^{1 2 3 4}	2.2	4.7	n/a	3.5	15
Japan ¹	1.1	2.8	4.0	3.1	61
Korea ¹	2.1	6.5	6.7	8.5	71
Latvia ²	9.6	11.3	17.8	13.7	48
Lithuania ²	4.7	10.4	13.6	n/a	76
Luxembourg ^{1 2 3 4}	3.2	6.7	11.0	9.8	64
Mexico ¹	12.9	17.8	16.0	5.4	10
Netherlands ^{1 2 3 4}	5.3	8.8	11.0	16.8	41
Norway ¹	4.6	6.9	5.8	n/a	54
Poland ^{1 2}	7.1	8.3	14.1	8.7	34
Portugal ^{1 2 3 4}	5.0	6.9	11.0	14.8	50
Romania ²	4.4	7.9	14.1	11.1	48
Slovakia ^{1 2 4}	6.7	10.1	13.3	11.3	33
Slovenia ^{1 2 4}	2.7	6.1	7.8	14.2	53
Spain ^{1 2 3 4}	3.2	5.2	6.6	9.5	42
Sweden ^{1 2 3}	5.2	7.7	9.3	4.8	51
Switzerland ¹	2.8	6.0	12.8	18.7	53
United Kingdom ^{1 2 3}	4.1	4.5	8.9	8.5	64
United States ¹	9.3	9.3	13.1	11.1	66
BRIC countries					
Brazil	17.0	17.9	16.2	3.5	8
Russia	3.9	2.9	6.0	n/a	95
India	7.9	13.3	8.8	n/a	24
China	10.5	14.6	17.1	5.9	34
OECD average	5.2	7.7	10.4	10.7	49
EU-28 average	4.6	7.2	10.5	10.5	47
EU-15 average	3.8	5.7	7.9	9.2	50
EURO area average	4.0	6.3	9.1	10.6	47
BRIC average	9.8	12.2	12.0	n/a	40

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TABLE H - EMPLOYMENT STATUS AND HOUSEHOLD INCOME OF EARLY STAGE ENTREPRENEURS

	Early stage entrepreneurial activity by adults in employment	Early stage entrepreneurial activity by adults not working	Early stage entrepreneurial activity by students or retired	Early stage entrepreneurial activity by adult with household income in lowest third of population	Early stage entrepreneurial activity by adult with household income in middle third of population	Early stage entrepreneurial activity by adult with household income in highest third of population
	As percentage of all adults in this category	As percentage of all adults in this category	As percentage of all adults in this category	As percentage of all adults in this category	Percentage in of all adults in this category	Percentage in of all adults in this category
Belgium ^{1 2 3 4}	6.0	4.5	1.4	1.7	2.2	3.8
Canada ¹	14.3	5.5	3.2	8.5	8.7	9.2
Chile ¹	30.0	9.6	4.9	14.7	17.1	23.7
Croatia ²	10.6	5.8	3.8	3.7	5.0	9.5
Czech Republic ^{1 2}	8.9	2.2	0.6	3.8	5.3	8.6
Estonia ^{1 2 4}	14.3	5.3	2.7	3.8	7.2	10.6
Finland ^{1 2 3 4}	6.3	1.5	2.5	3.0	3.4	4.1
France ^{1 2 3 4}	5.1	3.7	1.5	1.2	2.6	4.2
Germany ^{1 2 3 4}	5.8	3.2	1.9	3.1	3.8	2.4
Greece ^{1 2 3 4}	9.9	n/a	n/a	n/a	n/a	n/a
Hungary ^{1 2}	12.7	6.4	1.9	5.0	8.0	9.5
Ireland ^{1 2 3 4}	11.9	3.2	3.1	2.8	4.3	4.1
Israel ¹	11.4	3.2	3.1	5.5	8.2	8.2
Italy ^{1 2 3 4}	5.1	1.9	0.5	1.5	1.4	1.0
Japan ¹	5.0	0.6	0.4	1.0	1.6	2.2
Korea ¹	10.0	0.8	0.3	3.4	5.8	5.8
Latvia ²	15.1	7.7	3.5	3.8	7.6	10.5
Lithuania ²	15.4	4.4	2.8	5.9	8.8	14.9
Luxembourg ^{1 2 3 4}	10.0	4.5	2.6	3.5	4.9	5.5
Mexico ¹	17.8	5.0	2.4	5.1	10.1	11.7
Netherlands ^{1 2 3 4}	10.7	1.7	0.4	4.0	5.0	9.6
Norway ¹	7.1	3.2	0.8	3.4	2.3	5.4
Poland ^{1 2}	11.0	4.0	2.0	4.2	8.3	10.8
Portugal ^{1 2 3 4}	10.2	3.6	2.8	n/a	n/a	n/a
Romania ²	14.5	2.9	2.0	5.0	5.0	12.5
Slovakia ^{1 2 4}	11.6	6.0	1.0	3.6	6.5	10.1
Slovenia ^{1 2 4}	7.9	5.9	2.8	2.1	4.1	4.6
Spain ^{1 2 3 4}	7.5	3.4	0.8	2.1	1.3	1.8
Sweden ^{1 2 3}	9.0	4.7	4.6	4.7	5.7	6.9
Switzerland ¹	9.4	3.3	2.0	4.3	4.9	5.9
United Kingdom ^{1 2 3}	8.4	2.0	2.3	2.4	3.5	3.8
United States ¹	14.3	9.7	7.1	7.3	8.6	10.4
BRIC countries						
Brazil	23.4	3.1	2.7	14.8	12.4	15.9
Russia	7.0	2.5	1.1	1.4	2.6	4.7
India	16.0	1.2	0.3	6.3	6.8	13.2
China	18.8	0.8	0.4	8.0	10.5	18.4
OECD average	10.4	4.0	2.2	4.1	5.6	7.1
EU-28 average	9.9	4.0	2.2	3.4	4.9	7.1
EU-15 average	8.1	3.2	2.0	2.7	3.5	4.3
EURO area average	8.7	3.7	1.9	2.7	3.9	5.1
BRIC average	16.3	1.9	1.1	7.6	8.1	13.0

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TABLE I - AGE OF ESTABLISHED OWNER MANAGERS

	Established owner managers aged 18-24 years As percentage of all adults in this age category	Established owner managers aged 25-34 years As percentage of all adults in this age category	Established owner managers aged 35-44 years As percentage of all adults in this age category	Established owner managers aged 45-54 years As percentage of all adults in this age category	Established owner managers aged 55-64 years As percentage of all adults in this age category	Established owner managers aged 18-24 years Percentage of all established owner managers	Established owner managers aged 25-34 years Percentage of all established owner managers	Established owner managers aged 35-44 years Percentage of all established owner managers	Established owner managers aged 45-54 years Percentage of all established owner managers	Established owner managers aged 55-64 years Percentage of all established owner managers
Belgium ^{1,2,3,4}	0.9	2.4	8.1	9.1	7.0	1	8	30	36	24
Canada ¹	0.8	4.4	9.4	12.7	11.7	2	10	23	37	28
Chile ¹	1.9	4.6	8.8	14.4	13.9	4	12	23	36	24
Croatia ²	0.4	2.2	4.3	4.9	3.3	2	14	27	22	22
Czech Republic ^{1,2}	0.4	3.0	6.6	8.0	6.6	1	12	30	29	27
Estonia ^{1,2,4}	n/a	1.9	6.4	9.5	5.8	n/a	8	28	41	24
Finland ^{1,2,3,4}	0.7	4.3	9.7	10.7	5.8	1	13	29	36	20
France ^{1,2,3,4}	n/a	3.0	5.4	5.9	4.6	n/a	15	30	32	23
Germany ^{1,2,3,4}	0.1	2.1	5.9	7.9	6.6	0	8	25	41	26
Greece ^{1,2,3,4}	8.7	12.2	16.4	14.7	9.3	11	24	29	23	13
Hungary ^{1,2}	1.2	4.3	6.7	11.0	11.0	2	14	22	30	32
Ireland ^{1,2,3,4}	0.4	2.2	8.5	13.7	12.2	1	8	28	37	26
Israel ¹	1.2	2.1	6.4	11.8	10.2	4	9	24	35	28
Italy ^{1,2,3,4}	1.8	2.3	4.0	6.2	2.6	6	12	27	41	14
Japan ¹	n/a	0.4	5.8	8.0	11.2	n/a	1	24	28	47
Korea ¹	0.4	1.0	7.1	16.7	17.5	2	2	19	45	32
Latvia ²	1.2	6.8	12.4	11.5	10.2	2	18	30	29	22
Lithuania ²	0.9	5.9	9.9	12.3	10.4	2	14	26	35	23
Luxembourg ^{1,2,3,4}	0.4	1.0	3.0	3.4	3.4	2	10	30	34	24
Mexico ¹	0.6	4.0	5.4	6.1	6.0	3	26	31	25	15
Netherlands ^{1,2,3,4}	0.2	5.8	10.2	14.1	9.0	0	13	28	39	21
Norway ¹	n/a	4.3	6.4	9.6	8.7	n/a	15	24	34	27
Poland ^{1,2}	0.5	5.3	8.2	7.9	8.8	1	20	26	24	28
Portugal ^{1,2,3,4}	0.4	2.8	10.4	12.1	9.3	1	8	33	35	24
Romania ²	2.0	3.8	5.1	9.2	6.5	5	17	24	31	23
Slovakia ^{1,2,4}	0.4	4.5	7.5	7.6	5.5	1	20	30	29	20
Slovenia ^{1,2,4}	1.8	1.9	9.2	7.8	6.0	4	7	36	21	21
Spain ^{1,2,3,4}	1.2	3.0	9.6	13.3	12.6	2	9	30	35	25
Sweden ^{1,2,3}	1.0	3.1	8.0	9.6	7.0	3	11	29	35	23
Switzerland ¹	0.5	4.7	11.2	14.3	15.4	1	10	26	34	29
United Kingdom ^{1,2,3}	0.9	1.9	7.3	11.9	9.2	2	6	25	40	26
United States ¹	4.1	4.1	8.1	9.5	10.8	8	12	23	30	27
BRIC countries										
Brazil	4.5	11.8	18.9	24.3	18.7	5	20	27	30	17
Russia	0.3	3.8	6.4	4.8	0.6	1	26	37	32	3
India	4.4	9.0	17.1	15.0	9.3	10	24	35	22	9
China	1.7	9.0	16.0	14.9	8.7	2	16	39	30	13
OECD average	1.3	3.4	7.8	10.3	8.8	3	12	27	34	25
EU-28 average	1.2	3.7	7.9	9.7	7.5	2	13	28	34	23
EU-15 average	1.4	3.6	8.2	10.2	7.6	3	11	29	36	22
EURO area average	1.4	3.5	8.2	9.7	7.1	3	12	29	35	22
BRIC average	2.7	8.4	14.6	14.8	9.3	5	21	35	29	11

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TABLE J - EDUCATION LEVEL AND HOUSEHOLD INCOME OF ESTABLISHED OWNER MANAGERS

	Established owner managers with some secondary education as highest qualification As percentage of all adults in this education category	Established owner managers with secondary school as highest qualification As percentage of all adults in this education category	Established owner managers with post-secondary as highest qualification As percentage of all adults in this education category	Established owner managers with graduate education as highest qualification As percentage of all adults in this education category	Established owner managers with household income in lowest third of population As percentage of all adults in this income category	Established owner managers with household income in middle third of population As percentage of all adults in this income category	Established owner managers with household income in highest third of population As percentage of all adults in this income category
Belgium ^{1,2,3,4}	4.4	3.5	7.3	9.6	1.1	2.4	5.5
Canada ¹	4.2	6.1	8.7	7.4	3.8	4.7	8.3
Chile ¹	5.8	6.6	9.6	8.3	5.2	5.3	8.5
Croatia ²	3.3	3.0	6.8	1.2	0.7	2.2	4.5
Czech Republic ^{1,2}	1.7	5.2	3.5	8.3	2.6	3.9	5.1
Estonia ^{1,2,4}	1.5	5.2	3.8	7.4	2.0	2.4	4.1
Finland ^{1,2,3,4}	7.7	7.0	5.6	5.6	1.7	5.3	7.0
France ^{1,2,3,4}	3.4	2.7	5.3	n/a	1.3	2.7	2.6
Germany ^{1,2,3,4}	3.5	4.1	7.9	n/a	1.7	3.0	5.2
Greece ^{1,2,3,4}	11.2	13.7	13.1	9.7	n/a	n/a	n/a
Hungary ^{1,2}	3.6	8.9	7.8	12.8	2.7	5.8	8.9
Ireland^{1,2,3,4}	3.9	7.9	6.3	9.1	1.6	3.1	5.2
Israel ¹	3.2	6.8	4.8	8.4	1.5	3.3	7.7
Italy ^{1,2,3,4}	3.1	4.1	n/a	3.8	0.5	1.3	1.7
Japan ¹	4.8	4.8	6.1	0.5	1.5	2.4	2.9
Korea ¹	12.0	12.5	6.2	7.3	5.8	4.8	8.0
Latvia ²	2.1	9.2	7.8	12.4	2.3	5.6	5.5
Lithuania ²	1.1	4.5	10.2	n/a	3.3	5.9	9.7
Luxembourg ^{1,2,3,4}	0.3	1.6	2.9	3.9	1.0	1.2	1.6
Mexico ¹	3.2	4.9	5.8	8.9	1.1	2.1	3.8
Netherlands ^{1,2,3,4}	6.0	8.5	9.5	13.0	2.1	5.8	9.6
Norway ¹	1.9	5.7	6.8	n/a	2.4	3.6	5.2
Poland ^{1,2}	4.9	5.5	6.5	9.4	3.1	3.8	7.6
Portugal ^{1,2,3,4}	5.9	6.0	8.6	10.0	2.4	5.3	n/a
Romania ²	1.5	2.9	8.4	10.8	1.0	2.6	8.0
Slovakia ^{1,2,4}	4.7	5.4	3.0	8.4	1.6	3.3	6.8
Slovenia ^{1,2,4}	4.9	5.6	5.7	10.3	1.9	3.1	3.8
Spain ^{1,2,3,4}	9.5	7.1	8.4	6.6	2.5	2.1	2.9
Sweden ^{1,2,3}	6.2	4.9	7.3	n/a	1.8	4.1	5.9
Switzerland ¹	2.5	9.1	13.0	3.9	5.5	6.0	8.1
United Kingdom ^{1,2,3}	6.8	4.7	5.2	8.6	0.9	3.4	4.2
United States ¹	3.0	4.9	8.2	8.2	2.5	3.4	7.8
BRIC countries							
Brazil	15.7	13.4	12.5	15.9	9.8	13.4	15.2
Russia	2.9	3.9	3.4	n/a	0.4	0.5	2.9
India	11.2	11.4	7.5	1.7	10.2	11.7	7.5
China	14.0	10.2	7.2	n/a	9.2	8.3	12.7
OECD average	4.8	6.2	6.9	7.9	2.3	3.6	5.7
EU-28 average	4.4	5.7	6.9	8.5	1.8	3.6	5.5
EU-15 average	5.5	5.8	7.3	8.0	1.6	3.3	4.7
EURO area average	5.0	5.9	6.7	8.1	1.7	3.1	4.7
BRIC average	10.9	9.7	7.7	n/a	7.4	8.5	9.6

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TABLE K - EARLY STAGE ENTREPRENEURIAL ACTIVITY BY IMMIGRANTS

	EARLY STAGE ENTREPRENEURS			NEW BUSINESS OWNERS			EARLY STAGE ENTREPRENEURS		
	Immigrant (parent or respondent) early stage entrepreneurs Percentage in immigrant (respondent or parent) adult population	First generation immigrant early stage entrepreneurs Percentage in first generation immigrant adult population	Non immigrant (neither parents or respondent) early stage entrepreneurs Percentage in non immigrant (respondent not immigrant) adult population	Immigrant (parent or respondent) new firm entrepreneurs Percentage in immigrant (respondent or parent) adult population	First generation immigrant new firm entrepreneurs Percentage in first generation immigrant adult population	Non immigrant (neither parents or respondent) new firm entrepreneurs Percentage in non immigrant (respondent not immigrant) adult population	Immigrants with opportunity motives Percentage of immigrant (respondent or parent) entrepreneurs	Non immigrants with opportunity motives Percentage of non immigrant (respondent not immigrant) entrepreneurs	
Belgium ^{1,2,3,4}	7.2	7.2	4.7	2.0	2.0	1.9	60	60	
Canada ¹	13.3	14.5	11.6	4.9	5.7	4.4	75	85	
Chile ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Croatia ²	7.7	7.7	8.4	0.7	0.7	2.2	55	61	
Czech Republic ^{1,2}	9.8	9.8	7.2	2.9	2.9	2.7	75	76	
Estonia ^{1,2,4}	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Finland ^{1,2,3,4}	3.5	3.5	5.3	1.7	1.7	2.7	50	73	
France ^{1,2,3,4}	5.1	5.1	4.5	2.9	2.9	1.7	100	77	
Greece ^{1,2,3,4}	6.2	6.7	4.8	2.2	2.8	1.9	71	79	
Ireland ^{1,2,3,4}	11.0	11.0	8.8	5.4	5.4	3.4	68	83	
Israel ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Italy ^{1,2,3,4}	3.0	3.7	3.4	0.8	1.2	1.1	60	75	
Japan ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Korea ¹	23.4	25.1	6.8	7.8	25.1	4.2	33	61	
Latvia ²	8.4	8.4	13.9	4.1	4.1	5.4	61	78	
Lithuania ²	16.6	16.6	12.3	8.3	8.3	6.3	56	76	
Luxembourg ^{1,2,3,4}	10.0	10.5	7.9	3.4	2.8	2.8	73	81	
Mexico ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Netherlands ^{1,2,3,4}	9.6	9.6	9.2	5.9	5.9	4.7	87	87	
Norway ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Poland ^{1,2}	10.2	10.2	9.3	10.2	10.2	4.3	0	49	
Portugal ^{1,2,3,4}	17.0	17.0	7.5	8.2	8.2	3.8	73	76	
Romania ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Slovakia ^{1,2,4}	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Slovenia ^{1,2,4}	5.0	5.0	6.5	0	0	3.0	64	72	
Spain ^{1,2,3,4}	8.4	8.9	5.0	3.3	3.5	2.1	65	67	
Sweden ^{1,2,3}	8.9	8.9	8.2	1.9	1.9	2.5	83	83	
Switzerland ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
United Kingdom ^{1,2,3}	8.6	11.4	6.8	3.0	4.8	3.6	85	80	
United States ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
OECD average	9.6	10.0	7.1	3.7	4.8	3.0	67	74	
EU-28 average	8.9	9.1	7.5	3.5	3.7	3.2	67	74	
EU-15 average	7.4	7.9	6.2	3.0	3.2	2.6	73	77	
EURO area average	7.8	8.0	6.2	3.2	3.3	2.7	70	75	

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TABLE L - ENTREPRENEURIAL TEAMS

	Nascent entrepreneurs Expected number of owners	New business owners Number of owners	Early stage entrepreneurs Number of expected or actual owners	Established owner managers Number of owners
Belgium ^{1 2 3 4}	2.1	1.8	2.0	1.7
Canada ¹	2.1	1.8	2.0	1.7
Chile ¹	1.9	1.7	1.8	1.3
Croatia ²	2.1	1.6	2.0	1.9
Czech Republic ^{1 2}	1.7	1.8	1.7	1.4
Estonia ^{1 2 4}	1.9	2.1	2.0	2.0
Finland ^{1 2 3 4}	1.9	1.6	1.7	1.8
France ^{1 2 3 4}	1.8	1.8	1.8	1.4
Germany ^{1 2 3 4}	2.1	1.5	1.9	1.3
Greece ^{1 2 3 4}	1.8	1.5	1.7	1.6
Hungary ^{1 2}	1.7	1.7	1.7	1.7
Ireland ^{1 2 3 4}	1.7	2.1	1.9	1.6
Israel ¹	1.9	1.8	1.9	1.6
Italy ^{1 2 3 4}	1.8	2.1	1.9	2.9
Japan ¹	3.2	1.9	2.7	1.9
Korea ¹	1.6	1.6	1.6	1.2
Latvia ²	2.0	1.7	1.9	1.8
Lithuania ²	1.9	2.0	2.0	1.7
Luxembourg ^{1 2 3 4}	2.0	2.1	2.0	2.4
Mexico ¹	1.9	1.7	1.8	1.7
Netherlands ^{1 2 3 4}	1.8	1.4	1.6	1.9
Norway ¹	1.5	1.6	1.6	2.0
Poland ^{1 2}	1.4	1.3	1.3	1.4
Portugal ^{1 2 3 4}	2.1	1.8	1.9	1.5
Romania ²	1.9	1.5	1.8	1.8
Slovakia ^{1 2 4}	1.9	1.9	2.0	1.5
Slovenia ^{1 2 4}	1.9	1.7	1.8	1.7
Spain ^{1 2 3 4}	1.9	1.6	1.8	1.8
Sweden ^{1 2 3}	1.9	1.4	1.7	2.1
Switzerland ¹	1.8	1.6	1.7	1.5
United Kingdom ^{1 2 3}	1.9	1.7	1.9	1.7
United States ¹	1.9	1.9	1.8	2.0
BRIC countries				
Brazil	1.6	1.2	1.3	1.2
Russia	1.5	1.4	1.5	1.4
India	1.5	1.5	1.5	1.6
China	1.9	1.5	1.7	1.4
OECD average	1.9	2.0	1.8	2.5
EU-28 average	1.9	1.7	1.8	2.7
EU-15 average	1.9	1.7	1.8	3.5
EURO area average	1.9	1.8	1.9	3.3
BRIC average	1.6	1.4	1.5	1.4

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TABLE M - INFORMAL INVESTORS: RATES AND AMOUNTS

	Informal investors⁵ Percentage in adult population	Total invested in past 3 years⁶ €
Belgium ^{1 2 3 4}	2.8	56,400
Canada ¹	5.7	24,000
Chile ¹	15.6	6,100
Croatia ²	3.4	40,100
Czech Republic ^{1 2}	7.7	11,500
Estonia ^{1 2 4}	6.6	7,100
Finland ^{1 2 3 4}	2.9	6,400
France ^{1 2 3 4}	3.3	21,400
Germany ^{1 2 3 4}	3.4	21,300
Greece ^{1 2 3 4}	2.5	14,500
Hungary ^{1 2}	3.4	10,200
Ireland ^{1 2 3 4}	3.4	18,700
Israel ¹	5.0	45,200
Italy ^{1 2 3 4}	1.7	41,000
Japan ¹	1.3	30,600
Korea ¹	3.2	36,900
Latvia ²	7.9	22,400
Lithuania ²	7.3	13,100
Luxembourg ^{1 2 3 4}	5.6	36,200
Mexico ¹	7.8	1,100
Netherlands ^{1 2 3 4}	3.5	30,100
Norway ¹	3.3	21,300
Poland ^{1 2}	3.1	6,800
Portugal ^{1 2 3 4}	2.4	9,100
Romania ²	5.2	16,400
Slovakia ^{1 2 4}	7.3	27,000
Slovenia ^{1 2 4}	3.7	29,000
Spain ^{1 2 3 4}	3.3	17,900
Sweden ^{1 2 3}	5.9	16,200
Switzerland ¹	6.4	36,600
United Kingdom ^{1 2 3}	2.1	24,300
United States ¹	4.6	38,600
BRIC countries		
Brazil	2.4	3,000
Russia	2.3	4,500
India	1.4	n/a
China	3.7	13,100
OECD average	4.6	23,000
EU-28 average	4.3	21,600
EU-15 average	3.3	24,100
EURO area average	3.8	24,000
BRIC average	2.4	5,000

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5 Provided funds for a new business in the past three years

6 Exchange rate US\$1.31 to Euro

TABLE N - SECTOR OF ACTIVITY OF EARLY STAGE ENTREPRENEURS AND ESTABLISHED OWNER MANAGERS

	Extractive sectors Percentage of all early stage entrepreneurs	Transformative sectors ⁵ Percentage of all early stage entrepreneurs	Business service sectors ⁶ Percentage of all early stage entrepreneurs	Consumer service sectors ⁷ Percentage of all early stage entrepreneurs	High or medium technology sectors ⁸ Percentage of all early stage entrepreneurs	Extractive sectors Percentage of all established owner managers	Transformative sectors ⁵ Percentage of all established owner managers	Business service sectors ⁶ Percentage of all established owner managers	Consumer service sectors ⁷ Percentage of all established owner managers	High or medium technology sectors ⁸ Percentage of all established owner managers
Belgium ^{1,2,3,4}	3	19	28	49	4	7	22	31	40	8
Canada ¹	4	20	43	33	9	7	22	41	30	4
Chile ¹	3	24	15	57	5	2	34	14	50	4
Croatia ²	13	23	22	42	8	15	30	22	34	4
Czech Republic ^{1,2}	3	28	28	41	8	6	41	22	32	6
Estonia ^{1,2,4}	7	32	39	27	7	26	32	20	22	3
Finland ^{1,2,3,4}	10	24	26	39	6	28	27	20	25	5
France ^{1,2,3,4}	7	18	30	45	10	20	23	33	23	4
Germany ^{1,2,3,4}	0	16	30	54	6	2	32	30	36	10
Greece ^{1,2,3,4}	3	17	27	53	9	5	32	14	49	3
Hungary ^{1,2}	13	27	22	38	5	12	32	23	32	7
Ireland ^{1,2,3,4}	2	22	21	55	9	15	30	29	26	4
Israel ¹	2	13	32	53	10	3	18	41	38	3
Italy ^{1,2,3,4}	13	30	25	30	4	9	33	31	27	9
Japan ¹	1	16	24	59	12	3	39	24	34	7
Korea ¹	2	31	19	47	9	5	37	17	41	10
Latvia ²	12	30	23	35	7	27	31	15	27	3
Lithuania ²	8	33	24	35	7	19	27	25	28	6
Luxembourg ^{1,2,3,4}	2	16	38	44	14	0	16	50	33	11
Mexico ¹	0	13	5	81	0	1	12	7	80	1
Netherlands ^{1,2,3,4}	5	19	32	43	8	11	27	29	33	7
Norway ¹	8	26	36	30	11	23	22	30	25	4
Poland ^{1,2}	5	45	15	34	3	12	40	19	29	4
Portugal ^{1,2,3,4}	10	18	28	44	3	10	25	23	42	4
Romania ²	21	22	18	39	3	7	25	26	42	6
Slovakia ^{1,2,4}	5	34	24	36	5	3	44	25	28	5
Slovenia ^{1,2,4}	3	30	37	30	5	12	42	28	18	6
Spain ^{1,2,3,4}	4	15	28	54	8	13	24	21	43	7
Sweden ^{1,2,3}	5	16	40	38	11	23	16	38	23	10
Switzerland ¹	3	14	31	51	4	11	20	27	42	5
United Kingdom ^{1,2,3}	0	19	36	45	5	3	36	34	27	6
United States ¹	4	16	37	42	8	7	25	38	30	3
BRIC countries										
Brazil	1	29	7	63	3	2	41	6	52	2
Russia	5	33	12	50	2	4	31	6	58	3
India	8	22	4	65	0	9	32	3	56	1
China	2	11	10	77	1	2	14	4	79	1
OECD average	5	22	28	45	7	10	29	27	34	6
EU-28 average	7	24	27	42	7	12	30	26	31	6
EU-15 average	5	19	30	46	7	11	26	30	33	7
EURO area average	5	22	28	44	7	11	29	28	32	6
BRIC average	4	24	8	64	2	4	30	5	62	2

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5 includes construction, manufacturing, transport, wholesale, utilities.

6 includes finance, insurance, real estate, all business services.

7 includes retail, motor, lodgings, restaurants, personal services, health, education, recreation

8 OECD classifications of sectors

TABLE 0 - INNOVATIVENESS OF EARLY STAGE ENTREPRENEURS

	Product/service is new to no customers Percentage of all early stage entrepreneurs	Product/service is new to some customers Percentage of all early stage entrepreneurs	Product/service is new to all customers Percentage of all early stage entrepreneurs	Many businesses offer the same product/service Percentage of all early stage entrepreneurs	Few businesses offer the same product/service Percentage of all early stage entrepreneurs	No businesses offer the same product/service Percentage of all early stage entrepreneurs	Business uses no new technology Percentage of all early stage entrepreneurs	Business uses new technology (available 1-5 years) Percentage of all early stage entrepreneurs	Business uses the very latest technology (available less than 1 year) Percentage of all early stage entrepreneurs
Belgium ^{1,2,3,4}	62	17	21	50	37	13	67	12	21
Canada ¹	52	29	19	40	43	17	71	21	8
Chile ¹	15	38	47	44	47	10	63	24	13
Croatia ²	70	22	8	45	45	9	53	27	20
Czech Republic ^{1,2}	48	35	18	59	34	7	65	25	11
Estonia ^{1,2,4}	51	33	16	41	46	13	70	21	9
Finland ^{1,2,3,4}	54	32	14	66	26	8	77	14	9
France ^{1,2,3,4}	63	27	10	45	48	7	72	19	9
Germany ^{1,2,3,4}	59	26	15	54	36	10	80	13	7
Greece ^{1,2,3,4}	52	31	17	53	40	7	51	24	25
Hungary ^{1,2}	73	21	6	62	28	10	81	13	6
Ireland^{1,2,3,4}	54	19	27	41	41	18	70	19	10
Israel ¹	43	35	22	52	28	8	61	20	8
Italy ^{1,2,3,4}	38	31	31	64	28	8	53	20	27
Japan ¹	45	39	17	72	23	5	70	22	8
Korea ¹	50	42	7	72	22	6	79	15	7
Latvia ²	48	37	15	51	42	7	70	20	9
Lithuania ²	57	30	13	58	34	8	67	22	11
Luxembourg ^{1,2,3,4}	37	46	17	36	50	14	54	25	21
Mexico ¹	66	25	9	72	25	3	89	6	5
Netherlands ^{1,2,3,4}	56	22	22	50	43	7	73	15	11
Norway ¹	74	18	9	54	28	18	79	15	6
Poland ^{1,2}	35	46	19	67	27	6	74	19	7
Portugal ^{1,2,3,4}	54	31	15	46	41	13	58	26	17
Romania ²	53	33	14	61	31	8	53	30	17
Slovakia ^{1,2,4}	49	44	8	67	33	0	62	21	17
Slovenia ^{1,2,4}	52	32	15	43	44	13	74	15	11
Spain ^{1,2,3,4}	66	19	15	51	37	11	71	17	12
Sweden ^{1,2,3}	54	31	14	49	39	12	69	22	8
Switzerland ¹	55	32	14	53	42	5	79	16	5
United Kingdom ^{1,2,3}	57	25	18	49	38	13	72	19	9
United States ¹	55	26	18	40	39	21	71	18	11
BRIC countries									
Brazil	99	1	0	63	30	7	99	1	0
Russia	71	19	10	72	27	2	86	13	1
India	62	21	17	47	42	11	43	34	23
China	37	46	17	70	27	3	76	18	6
OECD average	52	30	17	53	37	10	70	19	11
EU-28 average	54	30	16	53	38	10	67	20	13
EU-15 average	54	28	18	50	39	11	67	19	14
EURO area average	53	29	17	50	39	10	67	19	15
BRIC average	67	22	11	63	31	6	76	16	7

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TABLE P - INNOVATIVENESS OF ESTABLISHED OWNER MANAGERS

	Product/service is new to no customers Percentage of all established owner managers	Product/service is new to some customers Percentage of all established owner managers	Product/service is new to all customers Percentage of all established owner managers	Many businesses offer the same product/service Percentage of all established owner managers	Few businesses offer the same product/service Percentage of all established owner managers	No businesses offer the same product/service Percentage of all established owner managers	Business uses no new technology Percentage of all established owner managers	Business uses new technology (available 1-5 years) Percentage of all established owner managers	Business uses the very latest technology (available less than 1 year) Percentage of all established owner managers
Belgium ^{1,2,3,4}	72	18	10	57	40	2	84	12	4
Canada ¹	66	25	9	56	38	6	93	7	0
Chile ¹	20	35	45	63	33	4	81	15	3
Croatia ²	90	4	5	68	28	4	71	15	15
Czech Republic ^{1,2}	69	22	9	80	18	2	63	22	15
Estonia ^{1,2,4}	76	14	10	57	36	7	84	9	7
Finland ^{1,2,3,4}	68	26	7	68	25	7	83	8	9
France ^{1,2,3,4}	69	18	13	62	29	9	81	13	6
Germany ^{1,2,3,4}	78	18	4	74	24	2	96	3	1
Greece ^{1,2,3,4}	81	15	4	63	33	4	71	12	17
Hungary ^{1,2}	79	15	5	64	28	8	93	6	1
Ireland ^{1,2,3,4}	75	15	10	63	23	14	86	12	2
Israel ¹	70	19	11	73	26	1	79	15	6
Italy ^{1,2,3,4}	16	63	21	71	23	6	88	8	4
Japan ¹	70	21	10	64	32	4	93	5	2
Korea ¹	66	26	8	72	22	6	92	6	2
Latvia ²	69	22	9	66	29	5	84	9	7
Lithuania ²	74	18	9	65	30	6	74	21	6
Luxembourg ^{1,2,3,4}	36	55	8	67	32	2	88	10	2
Mexico ¹	47	41	12	58	38	3	87	9	3
Netherlands ^{1,2,3,4}	77	12	10	72	23	4	92	6	2
Norway ¹	86	11	2	61	24	15	91	3	6
Poland ^{1,2}	42	41	17	79	20	1	89	5	6
Portugal ^{1,2,3,4}	77	14	8	62	35	4	87	10	3
Romania ²	59	26	15	75	22	3	77	20	3
Slovakia ^{1,2,4}	71	25	5	83	15	3	82	6	12
Slovenia ^{1,2,4}	70	22	8	66	31	4	93	5	2
Spain ^{1,2,3,4}	90	7	3	71	23	5	88	9	3
Sweden ^{1,2,3}	71	23	6	65	31	3	90	9	2
Switzerland ¹	68	24	9	60	35	4	93	4	3
United Kingdom ^{1,2,3}	79	15	6	64	32	4	91	7	1
United States ¹	74	20	7	65	30	4	87	11	2
BRIC countries									
Brazil	100	0	0	70	24	6	100	0	0
Russia	78	12	10	77	23	0	92	8	0
India	68	17	15	60	35	5	81	15	3
China	39	43	18	75	21	4	86	13	1
OECD average	67	24	10	66	29	5	87	9	4
EU-28 average	69	22	9	68	27	5	84	10	6
EU-15 average	68	23	8	66	29	5	86	9	4
EURO area average	68	23	9	67	28	5	86	9	5
BRIC average	71	18	11	71	26	4	90	9	1

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TABLE Q - GROWTH ASPIRATIONS OF EARLY STAGE ENTREPRENEURS AND ESTABLISHED OWNER MANAGERS

	Early stage entrepreneurs Any jobs now or expected in five years Percentage in adult population	Early stage entrepreneurs Expect 20 or more jobs within 5 years Percentage in adult population	Early stage entrepreneurs Any jobs now or any jobs expected Percentage of all early stage entrepreneurs	Early stage entrepreneurs Expect 10 or more jobs within 5 years ⁵ Percentage of all early stage entrepreneurs	Early stage entrepreneurs Expect 20 or more jobs within 5 years Percentage of all early stage entrepreneurs	Established owner managers Expect 10 or more jobs within 5 years ⁵ Percentage of all established owner managers
Belgium ^{1 2 3 4}	3.4	0.4	69	16	8	1
Canada ¹	8.7	1.6	72	22	13	6
Chile ¹	21.3	3.1	87	24	13	5
Croatia ²	6.1	1.0	74	23	12	8
Czech Republic ^{1 2}	5.2	0.9	70	19	12	4
Estonia ^{1 2 4}	10.2	0.8	78	15	6	1
Finland ^{1 2 3 4}	3.7	0.4	70	12	8	2
France ^{1 2 3 4}	3.0	0.2	65	16	5	2
Germany ^{1 2 3 4}	3.0	0.5	61	16	10	3
Greece ^{1 2 3 4}	3.6	0.2	65	5	4	1
Hungary ^{1 2}	7.3	1.4	76	19	14	7
Ireland ^{1 2 3 4}	7.8	1.1	85	22	12	5
Israel ¹	7.3	1.4	72	18	14	7
Italy ^{1 2 3 4}	2.5	0.2	72	7	6	4
Japan ¹	2.6	1.0	70	35	26	10
Korea ¹	5.6	0.8	82	14	12	6
Latvia ²	10.8	2.8	82	32	21	9
Lithuania ²	10.1	1.7	81	24	14	4
Luxembourg ^{1 2 3 4}	5.8	0.5	67	11	6	0
Mexico ¹	6.8	0.1	46	4	1	4
Netherlands ^{1 2 3 4}	6.1	0.5	66	8	6	1
Norway ¹	4.5	0.5	72	10	8	3
Poland ^{1 2}	7.9	1.2	85	27	13	7
Portugal ^{1 2 3 4}	5.7	0.8	69	16	10	3
Romania ²	8.2	1.8	81	33	18	5
Slovakia ^{1 2 4}	7.1	1.2	75	21	12	7
Slovenia ^{1 2 4}	5.2	0.7	81	23	11	9
Spain ^{1 2 3 4}	3.5	0.2	68	9	4	1
Sweden ^{1 2 3}	5.5	0.7	67	11	8	3
Switzerland ¹	5.5	0.3	68	9	4	1
United Kingdom ^{1 2 3}	4.2	0.8	58	16	11	3
United States ¹	8.7	1.7	69	23	13	2
BRIC countries						
Brazil	9.1	0.4	53	5	2	2
Russia	4.2	0.5	72	19	9	4
India	6.1	0.1	62	3	1	1
China	11.9	1.7	85	16	12	8
OECD average	6.1	0.8	71	16	10	4
EU-28 average	5.9	0.9	72	17	11	4
EU-15 average	4.4	0.5	68	13	8	2
EURO area average	5.0	0.6	71	14	8	3
BRIC average	7.8	0.7	68	11	6	4

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5 If the business is already operational, jobs 5 years from now; in which case an extra requirement is that job growth is at least 50%.

TABLE R - INTERNATIONAL ORIENTATION OF EARLY STAGE ENTREPRENEURS

	More than 50% of customers outside country Percentage in adult population	More than 50% of customers outside country Percentage of all early stage entrepreneurs	No customers outside country Percentage of all early stage entrepreneurs	1-25% customers outside country Percentage of all early stage entrepreneurs	26-75% customers outside country Percentage of all early stage entrepreneurs	76-100% customers outside country Percentage of all early stage entrepreneurs
Belgium ^{1 2 3 4}	1.0	20	28	44	17	11
Canada ¹	1.5	12	16	70	7	7
Chile ¹	2.0	8	19	68	10	4
Croatia ²	2.3	28	16	43	21	20
Czech Republic ^{1 2}	0.7	10	20	64	11	5
Estonia ^{1 2 4}	1.8	14	31	43	15	11
Finland ^{1 2 3 4}	0.3	7	59	30	7	4
France ^{1 2 3 4}	0.4	9	45	36	13	6
Germany ^{1 2 3 4}	0.5	9	46	38	11	5
Greece ^{1 2 3 4}	0.6	12	44	43	6	7
Hungary ^{1 2}	1.1	11	37	41	16	6
Ireland ^{1 2 3 4}	1.6	18	41	34	12	13
Israel ¹	2.0	20	47	29	11	13
Italy ^{1 2 3 4}	0.3	9	56	27	10	7
Japan ¹	0.2	6	40	49	10	1
Korea ¹	0.5	7	54	34	8	4
Latvia ²	2.7	21	32	34	23	11
Lithuania ²	1.9	16	31	43	17	9
Luxembourg ^{1 2 3 4}	1.8	21	12	54	19	15
Mexico ¹	0.3	2	90	5	4	1
Netherlands ^{1 2 3 4}	0.8	8	47	39	9	5
Norway ¹	0.7	10	60	23	7	9
Poland ^{1 2}	1.2	13	21	55	14	10
Portugal ^{1 2 3 4}	1.3	16	27	43	18	12
Romania ²	2.1	21	30	39	21	11
Slovakia ^{1 2 4}	1.1	12	13	66	15	6
Slovenia ^{1 2 4}	1.2	18	26	48	11	16
Spain ^{1 2 3 4}	0.3	6	73	18	4	5
Sweden ^{1 2 3}	1.0	12	43	35	13	10
Switzerland ¹	1.2	15	19	53	20	7
United Kingdom ^{1 2 3}	0.8	12	62	21	9	8
United States ¹	0.7	6	15	74	8	4
BRIC countries						
Brazil	0.0	0	99	1	0	0
Russia	0.3	5	91	3	1	5
India	0.2	2	83	11	5	1
China	0.1	0	78	22	0	0
OECD average	1.0	11	39	42	11	8
EU-28 average	1.2	15	36	41	14	9
EU-15 average	0.8	13	45	36	11	8
EURO area average	0.9	13	39	40	12	9
BRIC average	0.2	1	88	9	2	1

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TABLE S - INTERNATIONAL ORIENTATION OF ESTABLISHED OWNER MANAGERS

	More than 50% of customers outside country Percentage in adult population	More than 50% of customers outside country Percentage of all established owner managers	No customers outside country Percentage of all established owner managers	1-25% customers outside country Percentage of all established owner managers	26-75% customers outside country Percentage of all established owner managers	76-100% customers outside country Percentage of all established owner managers
Belgium ^{1 2 3 4}	0.8	13	32	52	8	8
Canada ¹	0.5	5	22	70	5	3
Chile ¹	0.4	5	32	60	6	2
Croatia ²	0.8	24	27	44	17	12
Czech Republic ^{1 2}	0.3	6	28	61	7	4
Estonia ^{1 2 4}	0.7	15	40	43	8	9
Finland ^{1 2 3 4}	0.4	7	59	33	3	5
France ^{1 2 3 4}	0.3	7	56	31	8	6
Germany ^{1 2 3 4}	0.3	7	40	50	6	4
Greece ^{1 2 3 4}	0.9	7	50	40	5	5
Hungary ^{1 2}	1.0	14	40	38	13	9
Ireland ^{1 2 3 4}	1.0	13	47	32	12	8
Israel ¹	0.7	12	45	41	5	9
Italy ^{1 2 3 4}	0.4	11	51	36	9	3
Japan ¹	0.1	2	61	34	2	2
Korea ¹	0.4	4	61	32	4	3
Latvia ²	1.5	17	33	42	14	11
Lithuania ²	1.2	14	33	48	11	8
Luxembourg ^{1 2 3 4}	0.6	24	16	58	12	14
Mexico ¹	0.1	2	85	10	4	1
Netherlands ^{1 2 3 4}	0.8	10	38	49	7	6
Norway ¹	0.3	4	72	18	6	4
Poland ^{1 2}	0.3	5	22	68	7	3
Portugal ^{1 2 3 4}	0.9	11	37	48	9	6
Romania ²	0.3	6	36	46	15	3
Slovakia ^{1 2 4}	0.8	15	19	63	9	9
Slovenia ^{1 2 4}	0.9	15	26	52	15	8
Spain ^{1 2 3 4}	0.3	3	74	21	4	2
Sweden ^{1 2 3}	0.6	10	43	40	9	7
Switzerland ¹	1.2	12	19	57	17	7
United Kingdom ^{1 2 3}	0.4	7	64	26	7	4
United States ¹	0.4	5	26	67	4	3
BRIC countries						
Brazil	0.0	0	99	1	0	0
Russia	0.1	3	89	7	2	2
India	0.1	1	88	11	1	1
China	0.0	0	88	12	0	0
OECD average	0.6	9	43	44	8	6
EU-28 average	0.7	11	40	44	9	7
EU-15 average	0.6	9	47	40	8	6
EURO area average	0.7	10	42	43	8	7
BRIC average	0.1	1	91	8	1	1

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TABLE T - GENDER: ENTREPRENEURIAL ACTIVITY

	Men early stage entrepreneurs Percentage in male adult population	Women early stage entrepreneurs Percentage in female adult population	Men:Woman (early stage entrepreneurs) Rate as a ratio	Men established owner managers Percentage in male adult population	Women established owner managers Percentage in female adult population	Men:Women (established owner managers) Rate as a ratio
Belgium ^{1 2 3 4}	6.4	3.4	1.9 : 1	8.3	3.5	2.4 : 1
Canada ¹	14.5	9.9	1.5 : 1	11.2	5.8	1.9 : 1
Chile ¹	30.0	19.0	1.6 : 1	10.5	6.5	1.6 : 1
Croatia ²	11.5	5.1	2.2 : 1	3.8	2.7	1.4 : 1
Czech Republic ^{1 2}	10.5	4.1	2.6 : 1	7.1	3.4	2.1 : 1
Estonia ^{1 2 4}	17.0	9.4	1.8 : 1	7.4	2.7	2.7 : 1
Finland ^{1 2 3 4}	6.5	4.0	1.6 : 1	9.6	3.6	2.7 : 1
France ^{1 2 3 4}	6.1	3.1	2.0 : 1	5.8	2.4	2.4 : 1
Germany ^{1 2 3 4}	6.0	3.9	1.5 : 1	6.1	4.0	1.5 : 1
Greece ^{1 2 3 4}	7.8	3.2	2.4 : 1	18.4	6.8	2.7 : 1
Hungary ^{1 2}	12.4	7.0	1.8 : 1	9.6	4.9	2.0 : 1
Ireland^{1 2 3 4}	12.1	6.4	1.9 : 1	11.4	3.6	3.1 : 1
Israel ¹	13.7	6.5	2.1 : 1	8.3	3.7	2.3 : 1
Italy ^{1 2 3 4}	4.8	2.1	2.3 : 1	6.1	1.3	4.6 : 1
Japan ¹	4.8	2.7	1.8 : 1	8.4	2.9	2.9 : 1
Korea ¹	9.7	3.9	2.5 : 1	12.6	5.3	2.4 : 1
Latvia ²	16.6	10.1	1.6 : 1	12.2	5.6	2.2 : 1
Lithuania ²	17.5	7.8	2.2 : 1	12.1	4.9	2.5 : 1
Luxembourg ^{1 2 3 4}	11.6	5.6	2.1 : 1	2.8	2.0	1.4 : 1
Mexico ¹	16.8	13.0	1.3 : 1	5.7	2.7	2.1 : 1
Netherlands ^{1 2 3 4}	11.7	6.8	1.7 : 1	11.8	5.6	2.1 : 1
Norway ¹	8.9	3.6	2.5 : 1	9.1	3.2	2.8 : 1
Poland ^{1 2}	12.4	6.2	2.0 : 1	9.2	3.8	2.4 : 1
Portugal ^{1 2 3 4}	10.8	5.8	1.9 : 1	10.5	5.1	2.1 : 1
Romania ²	12.4	7.9	1.6 : 1	6.8	3.9	1.7 : 1
Slovakia ^{1 2 4}	11.7	7.3	1.6 : 1	8.1	2.7	3.1 : 1
Slovenia ^{1 2 4}	8.8	4.0	2.2 : 1	8.2	3.0	2.7 : 1
Spain ^{1 2 3 4}	6.2	4.2	1.5 : 1	10.4	6.3	1.6 : 1
Sweden ^{1 2 3}	10.2	6.2	1.7 : 1	8.0	4.0	2.0 : 1
Switzerland ¹	8.3	8.0	1.0 : 1	12.3	7.6	1.6 : 1
United Kingdom ^{1 2 3}	8.8	5.5	1.6 : 1	9.1	4.0	2.3 : 1
United States ¹	15.1	10.4	1.5 : 1	8.5	6.5	1.3 : 1
BRIC countries						
Brazil	17.2	17.4	1.0 : 1	18.6	12.6	1.5 : 1
Russia	6.2	5.3	1.2 : 1	4.6	2.3	2.0 : 1
India	13.2	6.4	2.1 : 1	14.8	6.3	2.4 : 1
China	15.8	12.2	1.3 : 1	14.1	8.0	1.8 : 1
OECD average	10.9	6.3	1.7 : 1	9.1	4.2	2.2 : 1
EU-28 average	10.4	5.6	1.9 : 1	8.8	3.9	2.3 : 1
EU-15 average	8.4	4.6	1.8 : 1	9.1	4.0	2.3 : 1
EURO area average	9.1	4.9	1.8 : 1	8.9	3.8	2.4 : 1
BRIC average	13.1	10.3	1.3 : 1	13.0	7.3	1.8 : 1

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4 Member of EURO

TABLE U - GENDER: PERSONAL CONTEXT OF GENERAL POPULATION

	Know a recent entrepreneur ⁶ (men) Men as a percentage of all men in adult population	Know a recent entrepreneur ⁶ (women) Women as a percentage of all women in adult population	Opportunities in local area ⁷ (men) Men as a percentage of all men in adult population	Opportunities in local area ⁷ (women) Women as a percentage of all women in adult population	Skills & knowledge to start-up (men) Men as a percentage of all men in adult population	Skills & knowledge to start-up (women) Women as a percentage of all women in adult population	Fear of failure prevent start-up (men) Men as a percentage of all men in adult population	Fear of failure prevent start-up (women) Women as a percentage of all women in adult population
Belgium ^{1,2,3,4}	23	14	35	27	44	23	46	55
Canada ¹	32	24	62	53	56	41	35	40
Chile ¹	48	37	70	67	67	53	26	36
Croatia ²	28	21	20	15	57	38	42	50
Czech Republic ^{1,2}	25	21	25	21	52	33	38	48
Estonia ^{1,2,4}	38	35	46	47	46	34	43	52
Finland ^{1,2,3,4}	47	44	44	43	39	27	34	49
France ^{1,2,3,4}	36	30	26	20	41	26	41	49
Germany ^{1,2,3,4}	27	23	33	29	43	32	41	56
Greece ^{1,2,3,4}	27	22	14	13	55	37	68	70
Hungary ^{1,2}	33	23	20	17	49	26	42	53
Ireland ^{1,2,3,4}	35	28	34	23	53	33	42	49
Israel ¹	49	33	49	45	48	26	51	56
Italy ^{1,2,3,4}	21	12	24	11	37	22	52	61
Japan ¹	20	14	9	6	18	7	47	47
Korea ¹	35	26	16	10	37	19	44	45
Latvia ²	33	29	35	35	55	41	37	48
Lithuania ²	42	33	31	26	47	25	41	57
Luxembourg ^{1,2,3,4}	41	31	49	41	53	34	47	53
Mexico ¹	60	54	57	51	64	53	30	35
Netherlands ^{1,2,3,4}	40	29	38	27	54	30	37	45
Norway ¹	39	26	70	57	46	22	34	33
Poland ^{1,2}	41	35	23	29	64	40	53	59
Portugal ^{1,2,3,4}	29	22	26	15	58	40	44	52
Romania ²	34	23	31	27	35	35	39	53
Slovakia ^{1,2,4}	40	38	18	14	62	40	35	53
Slovenia ^{1,2,4}	42	36	20	12	59	44	36	48
Spain ^{1,2,3,4}	33	28	18	14	53	43	44	52
Sweden ^{1,2,3}	39	36	66	62	47	31	37	43
Switzerland ¹	36	24	44	39	56	33	28	43
United Kingdom ^{1,2,3}	32	27	41	30	52	36	37	43
United States ¹	28	26	50	44	63	48	32	36
BRIC countries								
Brazil	44	33	53	49	58	47	37	48
Russia	44	35	19	17	30	26	36	44
India	49	27	50	32	68	43	37	34
China	52	45	36	30	43	30	37	35
OECD average	36	29	37	31	51	33	41	49
EU-28 average	34	28	31	26	51	34	42	52
EU-15 average	33	27	34	27	48	32	44	52
EURO area average	34	28	30	24	50	33	44	53
BRIC average	47	35	40	32	50	36	37	40

1 Member of OECD

4 Member of EURO

2 Member of European Union - EU 28

6 Knows someone who has started a business in the past 2 years

7 Opportunities to start a business in the next six months (July 2012-December 2013)

APPENDIX 1: GLOBAL RESULTS

The GEM study includes a wider group of countries than those referenced in this report. GEM groups the participating countries into three levels: factor driven, efficiency driven and innovation driven. These are based on World Economic Forum's (WEF) Global Competitiveness Report, which identifies three phases of economic growth based on GDP per capita and the share of exports comprising primary goods.

The table below provides an overview of the results of the GEM 2013 research cycle which was carried out through surveying more than 190,000 individuals across the 67 economies involved, spanning diverse geographies and a range of development levels.

	Nascent entrepreneurship rate	New business ownership rate	Early stage entrepreneurial activity (TEA)	Owner managers of established business ownership rate
Factor-driven economies	%	%	%	%
Algeria	2.2	2.6	4.9	5.4
Angola	8.0	14.7	22.2	8.5
Botswana	11.0	10.2	20.9	3.4
Ghana	8.5	17.7	25.8	25.9
India	5.1	4.9	9.9	10.7
Iran	6.4	6.1	12.3	10.6
Libya	6.6	4.7	11.2	3.4
Malawi	10.1	18.8	28.1	12.0
Nigeria	20.0	20.7	39.9	17.5
Philippines	12.0	6.7	18.5	6.6
Uganda	5.6	20.0	25.2	36.1
Vietnam	4.0	11.5	15.4	16.4
Zambia	22.6	18.0	39.9	16.6
<i>average (unweighted)</i>	<i>9.4</i>	<i>12.0</i>	<i>21.1</i>	<i>13.3</i>
Efficiency-driven economies	%	%	%	%
Argentina	10.5	5.6	15.9	9.6
Bosnia and Herzegovina	5.8	4.6	10.3	4.5
Brazil	5.1	12.6	17.3	15.4
Chile	15.4	9.6	24.3	8.5
China	5.2	8.9	14.0	11.0
Colombia	13.6	10.3	23.7	5.9
Croatia	6.3	2.0	8.3	3.3
Ecuador	25.3	13.6	36.0	18.0
Estonia	8.8	4.5	13.1	5.0
Guatemala	7.6	4.9	12.3	5.1
Hungary	6.0	3.7	9.7	7.2
Indonesia	5.7	20.4	25.5	21.2
Jamaica	8.0	6.0	13.8	6.3
Latvia	8.1	5.3	13.3	8.8
Lithuania	6.1	6.4	12.4	8.3
Macedonia	3.4	3.5	6.6	7.3
Malaysia	1.5	5.2	6.6	6.0

continued over

	Nascent entrepreneurship rate	New business ownership rate	Early stage entrepreneurial activity (TEA)	Owner managers of established business ownership rate
Efficiency-driven economies	%	%	%	%
Mexico	11.9	3.3	14.8	4.2
Panama	15.4	5.2	20.6	3.5
Peru	17.8	5.9	23.4	5.4
Poland	5.1	4.3	9.3	6.5
Romania	6.2	4.2	10.1	5.3
Russia	3.0	2.8	5.8	3.4
Slovakia	6.1	3.6	9.5	5.4
South Africa	6.6	4.0	10.6	2.9
Suriname	3.9	1.3	5.1	1.7
Thailand	7.9	10.4	17.7	28.0
Uruguay	8.5	5.7	14.1	4.9
<i>average (unweighted)</i>	<i>8.4</i>	<i>6.4</i>	<i>14.4</i>	<i>8.0</i>
Innovation-driven economies	%	%	%	%
Belgium	3.1	1.9	4.9	5.9
Canada	7.8	4.7	12.2	8.4
Czech Republic	4.9	2.7	7.3	5.3
Finland	2.7	2.7	5.3	6.6
France	2.7	1.8	4.6	4.1
Germany	3.1	2.0	5.0	5.1
Greece	3.3	2.3	5.5	12.6
Ireland	5.5	3.8	9.2	7.5
Israel	5.3	4.8	10.0	5.9
Italy	2.4	1.1	3.4	3.7
Japan	2.2	1.5	3.7	5.7
Republic of Korea	2.7	4.2	6.9	9.0
Luxembourg	6.0	2.8	8.7	2.4
Netherlands	4.7	4.8	9.3	8.7
Norway	2.9	3.4	6.3	6.2
Portugal	4.2	4.2	8.2	7.7
Puerto Rico	6.6	1.8	8.3	2.0
Singapore	6.4	4.4	10.7	4.2
Slovenia	3.6	2.9	6.5	5.7
Spain	3.1	2.2	5.2	8.4
Sweden	5.9	2.5	8.2	6.0
Switzerland	4.5	3.7	8.2	10.0
Taiwan	3.3	5.0	8.2	8.3
Trinidad and Tobago	11.4	8.5	19.5	11.4
United Kingdom	3.6	3.6	7.1	6.6
United States	9.2	3.7	12.7	7.5
<i>average (unweighted)</i>	<i>4.7</i>	<i>3.3</i>	<i>7.9</i>	<i>6.7</i>