## Global Entrepreneurship Monitor

Northern Ireland Report 2014



MM



**Global Entrepreneurship Monitor** 

#### GEM: Northern Ireland Report 2014

Mark Hart, Karen Bonner and Jonathan Levie

The Global Entrepreneurship Monitor (GEM) is an international project involving 73 countries in 2014 which seeks to provide information on their entrepreneurial landscape. Many studies have shown that entrepreneurship is an important driver for economic growth, competitiveness and job creation. The results of the GEM data analysis are used as key benchmarking indicators by regional and national authorities around the world. The sample size in Northern Ireland was 1,738 adults aged over 16 years of age in 2014.

### Main Findings

- The rate of early-stage entrepreneurship (TEA) in Northern Ireland for 2014 was 6.7%, compared to 5.1% in 2013. The increase was consistent with that for the UK as a whole, and the 2014 rate compared with 8.6% in the UK overall, 9.1% for the English regions, 5.4% in Scotland and 7.1% in Wales.
- Necessity-driven TEA in Northern Ireland stood at 0.7% in 2014 compared to 0.5% in 2013, while opportunity-driven TEA rose from 4.6% to 6.0%.
- The female TEA rate in Northern Ireland stood at 4.4% in 2014 which was its highest rate on record (UK 6.0%), however, the female to male ratio of TEA was 47%, which is still the lowest in the UK (UK 49%, down from 66%).
- The TEA rate of young adults aged 18 to 29 in Northern Ireland rose in 2014 continuing the general upward trend for this age group, rising from 4.1% in 2002 to 6.7% in 2014 (UK: 4.2% to 7.3%). There was a larger increase in the TEA rate among 30 to 64 year olds between 2002 and 2014, rising from 3.5% to 6.7% (UK: 5.8% to 9.3%).

- Attitudes among the non-entrepreneurial population are more optimistic in 2014 although somewhat still dampened compared to the pre-recession period. In 2014 25.2% of the non-entrepreneurial working age population in Northern Ireland agreed there were good opportunities for starting a business in their local area in the next six months, compared with 36.8% across the UK. The rate in Northern Ireland remains significantly lower than the peak of 39.0% in 2007.
- Some 43.7% of non-entrepreneurial individuals of working age in Northern Ireland (UK: 43.0%) who agreed there were good start-up opportunities reported they were afraid of starting a business in case it might fail.
- The proportion of non-entrepreneurial working age adults in Northern Ireland who expect to start a business within the next three years was up significantly from 3.4% in 2013 to 6.6% in 2014; this was consistent with the increase in the UK.
- Around 17% of TEA entrepreneurs in Northern Ireland had high growth expectations compared to only 2% of established business owners; the latter is around half that of the comparable UK rate.

#### Background

The Global Entrepreneurship Monitor (GEM) is based on the following premises. First, an economy's prosperity is highly dependent on a dynamic entrepreneurship sector. Second, an economy's entrepreneurial capacity is composed of individuals from all groups in society with the ability and motivation to start businesses, and requires positive societal perceptions about entrepreneurship. Third, high-growth entrepreneurship is a key contributor to new employment in an economy, and national competitiveness depends on innovative and cross-border entrepreneurial ventures.

Invest NI sponsored the Northern Ireland component of the GEM UK research project. Stimulating entrepreneurship remains an important challenge for the region and Invest NI (and previously Belfast City Council) have committed significant resources over the years in ensuring that it is embedded within their core activities.

This is the eleventh year in which Invest NI has participated in GEM. Of the 295,000 respondents to GEM UK surveys for the period 2002-2014, over 34,000 respondents were from Northern Ireland. Northern Ireland now has a large longitudinal database on entrepreneurial attitudes, activity and aspirations. This is particularly useful in conducting trend analysis for important sub-populations in Northern Ireland, such as young people, in relation to other home nations.

The results from the GEM data analysis are used as key benchmarking indicators by regional and national authorities around the world. They also enable comparisons to be made with the other regions of the UK and other countries participating in GEM. Overall, GEM's unique ability to provide information on the entrepreneurial landscape of countries in a global context makes its data a necessary resource for any serious attempt to study and track entrepreneurial behaviour.

It is important that we better understand the determinants of early stage entrepreneurship, because there is evidence to suggest a connection between higher rates of entrepreneurship and overall economic prosperity, particularly in innovation-driven economies like Northern Ireland.

#### How GEM Measures Entrepreneurial Activity

The Global Entrepreneurship Monitor (GEM) research consortium has been measuring the entrepreneurial activity of working age adults across a wide range of countries in a comparable way since 1998. In 2014, the study conducted surveys in 73 sovereign nations and represented the world's most authoritative comparative study of entrepreneurial activity in the general adult population. A telephone survey of a random sample of the adult population is conducted each year between May and September.

GEM's primary focus is on the study of three areas:

- To measure differences in the level of entrepreneurial activity between countries.
- To uncover factors leading to appropriate levels of entrepreneurship.
- To suggest policies that may enhance the national level of entrepreneurial activity.

The 2014 GEM global study was based on an analysis of adult population survey (APS) results from 73 economies and more than 206,000 adults across the world. The core of the APS is identical in each country and asks respondents about their attitudes towards entrepreneurship, if they are involved in some form of entrepreneurial activity, and if so what their aspirations for their business are. The global GEM Executive 2014 Report was published in February 2015<sup>1</sup> and can be downloaded from www.gemconsortium.org

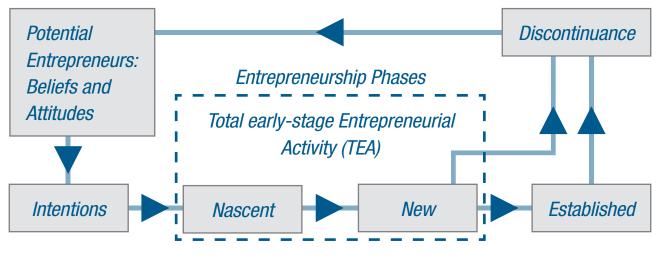
From the survey, we examine individual entrepreneurs at three key stages:

- Nascent entrepreneurs (NAE): The stage at which individuals begin to commit resources, such as time or money, to starting a business. To qualify as a nascent entrepreneur, the business must not have been paying wages for more than three months.
- New business owner-managers (NBO): Those whose business has been paying income, such as salaries or drawings, for more than three, but not more than forty-two, months.
- Established business owner-managers (EBO): Those whose business has been paying income, such as salaries or drawings, for more than forty-two months.

In addition, we measure general intention to start a business by asking individuals if they expect to start a business within the next three years. Finally, we ask individuals if they have sold, shut down, discontinued or quit a business, in the past year.

It is important to understand that the main subject of study in GEM is entrepreneurs rather than the businesses that they run. GEM measures the entrepreneurial activity of people from intention to exit. The first two stages of active business development, the nascent entrepreneur stage<sup>2</sup> and the new business owner-manager stage<sup>3</sup>, are combined into one index of Total early-stage Entrepreneurial Activity, or TEA, which is represented in Figure 1 below.

Figure 1: The Entrepreneurial Process and GEM Operational Definitions. (Source: Xavier et al., 2013, p.13)



The active planning phase in which the entrepreneur has done something during the past 12 months to help start a new business, a new business that he/she will at least part own, and which has not paid wages or other income to the owners in the past 3 months.
The second phase is defined as from 4 to 42 months after the new venture begins to provide income to the owners. Entrepreneurs who at least part own and manage a new business that has been paying some form of income to the owners for at least 4 and not more than 42 months are referred to as new firm entrepreneurs.

As much of this entrepreneurial activity is pre-start-up or includes very small new businesses that do not have to register, TEA rates will not necessarily match with published official statistics on business ownership and, indeed, should not be interpreted as such. Rather, GEM enables the measurement of the propensity of individuals in particular countries to be entrepreneurial given the current social, cultural and economic framework conditions that exist there.

The TEA index does not measure all entrepreneurial activity and is not based on a survey of business entities. It measures the characteristics of entrepreneurial individuals and the types of entities they establish. As such it is a unique and internationally comparative measure of the cultural propensity of a nation, or region, to be entrepreneurial.

> One way of distinguishing between different types of entrepreneurial activity is the extent to which the activity is based on necessity (i.e. there are no better alternatives for work) or opportunity (where entrepreneurs may be exploiting the potential for new market creation). In addition since 2011, entrepreneurial activity among employees

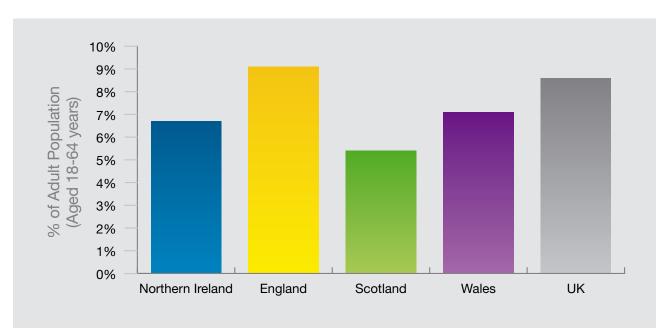
has been measured, adding to our knowledge about the variety of contexts in which entrepreneurial activity can be expressed. In addition to activity, the GEM survey asks all respondents about their attitudes to entrepreneurial activity, and asks entrepreneurs about their aspirations.

The methodology, sample sizes and weighting systems used for the GEM UK 2014 adult population survey are explained in more detail in the GEM UK 2014 report (www.gemconsortium.org). An important change in the sample design was introduced in 2010 when 10% of respondents in each Government Office Region (GOR) were selected at random from households which had mobile phones but not fixed phone landlines. In 2013, this was increased to 20%, in line with recent estimates in the proportion of mobile-only households in the UK. The following report presents a summary of the headline results, and key themes arising from the GEM survey in 2014 and the analysis of the twelve years of GEM data (2002-14).

#### Total Early-Stage Entrepreneurial Activity (the TEA Index)

The rate of early-stage entrepreneurship in Northern Ireland in 2014 is 6.7%. This compares to 8.6% in the UK overall, 7.1% in Wales, 9.1% in England and 5.4% in Scotland. The TEA rate for Northern Ireland is not significantly lower than that for England or the UK in 2014 (Figure 2).

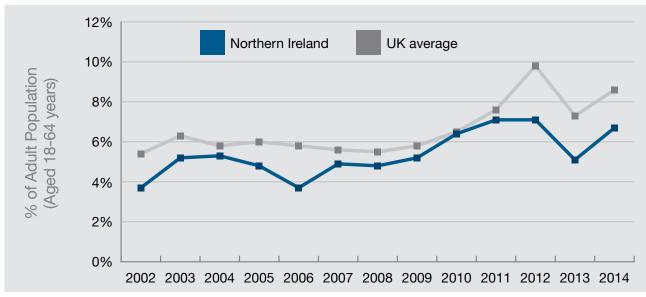
Overall, a TEA rate of 6.7% in Northern Ireland equates to around one in every fifteen adults aged 18-64 or over 75,000 individuals, 58% of whom were in the very early stages of starting a business (nascent entrepreneurs: 3.9%) and the remainder of those who had a new business which was between 3 and 42 months old (2.8%).





Looking at the 2002-2014 period we observe that the rate of early-stage entrepreneurial activity in Northern Ireland, as in the UK, has risen throughout the recession, peaking around 2011-12 (Figure 3). The level of early-stage entrepreneurial activity in Northern Ireland has typically tracked the UK trend very closely although there has been a divergence since 2011 with a gap of around 2-3 percentage points emerging between the two and remaining thereafter.

Figure 3: Total early-stage Entrepreneurial Activity in Northern Ireland and the UK (2002-2014). (Source: GEM APS)



TEA rates within Northern Ireland in 2014 vary across the region although the differences are not significant. However one year observations on GEM can be unreliable due to small sample sizes, thus Figure 4 plots the average TEA rates over the 2003-2014 period using the current council areas in Northern Ireland<sup>4</sup>; the pooled data averaging out any random annual fluctuations. It indicates that over the period the highest TEA rate was in the Mid Ulster area with a TEA rate of 6.6% whilst the lowest was the Derry City and Strabane area with a rate of just 4.2%; the difference between these two statistically significant. Notably Belfast is shown to lie below the Northern Ireland average with a TEA rate of 4.5%.

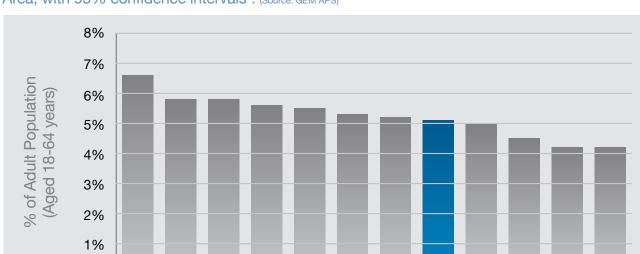


Figure 4: Total early-stage Entrepreneurial Activity in Northern Ireland in 2003-2014 by Council Area, with 95% confidence intervals<sup>5</sup>. (Source: GEM APS)

Ads and Host Down

nud and East Antim

Calennal Coat and Gents

Nothernteend

Animad hencemaber

Derri and Stratane

Arrost. Bathide ad Calenon

0%

Newd, Moure and Down

Lisbun and casheeast

Formate and Ormal

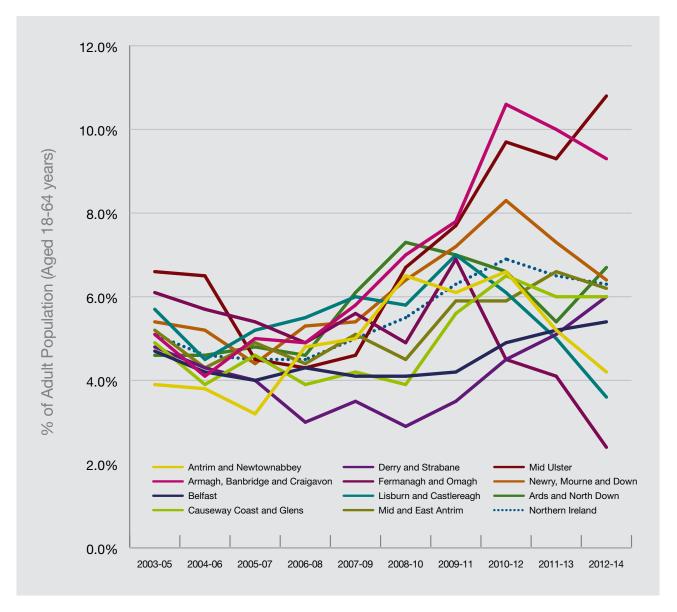
<sup>4.</sup> Council areas have been constructed based on District Council data; as a result those wards that have transferred between Council Areas will not have been allocated to their correct Council.

<sup>5.</sup> Confidence intervals for a mean specify a range of values within which the unknown population mean may lie. At the 95% level we are 95% confident that the interval contains the true population mean.

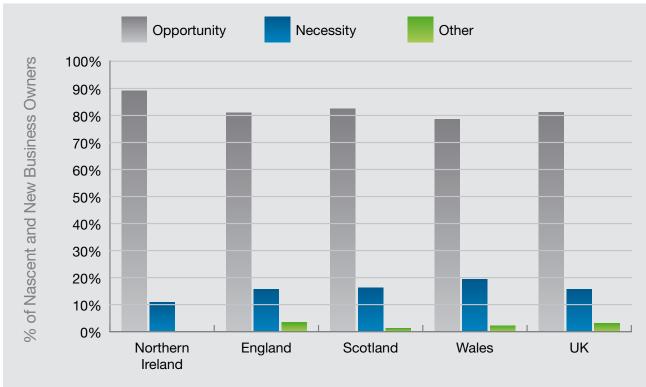
Depicting the TEA rates in a slightly different way; Figure 5 displays the trend in TEA rates by Council area, using 3 year rolling averages. The activity rates were relatively close in 2003-05 but diverged over time, ranging between 4-7% in 2003-05; and widening to a range of 2-11% in 2012-14.

Continuing the trend since 2008, the Armagh, Banbridge and Craigavon, and Mid Ulster Council areas had notably higher rates of entrepreneurial activity than the remainder; the latter also having the highest rate in 2003-05. The lowest entrepreneurial activity rates in 2012-14 were in the Fermanagh and Omagh, Lisburn and Castlereagh, and Antrim and Newtownabbey Council areas; all of which have had decreasing TEA rates since 2009-11.





The necessity-driven TEA rate in Northern Ireland is 0.7% in 2014 (0.5% in 2013), while opportunity-driven TEA is 6.0% (4.6% in 2013). Necessity-driven TEA as a proportion of all TEA is 10.9%, which is a lower share than in all the other home nations (Figure 6) although not significantly different.





# Who are the Entrepreneurs in Northern Ireland?

*Gender:* In Northern Ireland, England, Wales and the UK as a whole, males have significantly higher TEA rates than females. Neither the male nor female TEA rates in NI differ significantly from the other home nations' respective rates, although the male TEA rate in Scotland is significantly lower than that for England (Figure 7).

In a change from 2013 the ratio of female to male early-stage entrepreneurial activity varies little across the four home nations. The ratio in Northern Ireland at 47% is the lowest of all the home nations in 2014, although not significantly different. While annual ratios are likely to vary from year to year, the long run average ratios over the 2002 to 2014 period suggest similar rates in England (49%); Wales (54%) and Scotland (51%) and a lower rate in Northern Ireland (36%).

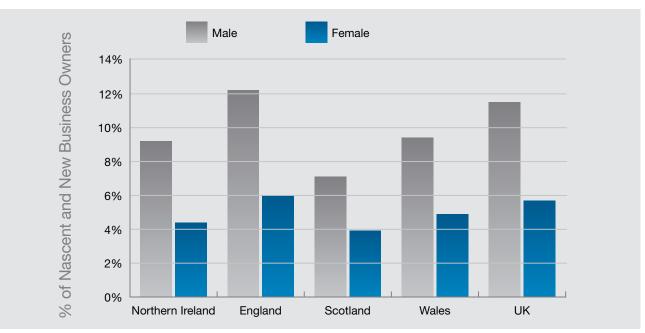
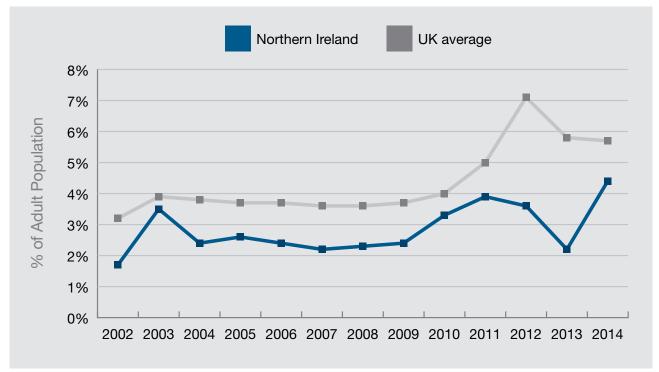


Figure 7: Total early-stage Entrepreneurial Activity in the UK Home Nations in 2014. (Source: GEM APS 2014)

The female TEA rate in Northern Ireland stood at 4.4% in 2014, the highest rate on record. We can see from Figure 8 that historically female TEA rates in Northern Ireland have generally matched the UK trend, albeit at very different levels. Since 2011 there has been a divergence in the two series, although in 2014 the gap appears to be returning to the long-run average.

The lower TEA rates for females in Northern Ireland compared to the UK average and other UK countries are likely to reflect a combination of reasons which include a more averse attitude to risk, greater availability of employment opportunities, particularly within the public sector, and cultural attitudes towards self-employment.

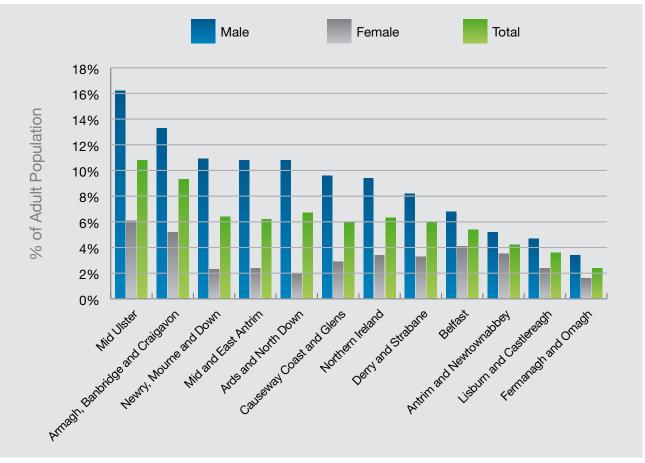
Figure 8: Total early-stage Female Entrepreneurial Activity in Northern Ireland and the UK, 2002-2014. (Source: GEM APS)



Examining the TEA rates for males and females by Council area (Figure 9) for 2012-2014 reveals a higher variability across Council areas for males (plotted in order) compared to females, whose rates lie within a much narrower range. Mid-Ulster has the highest male and female TEA rates but this correlation does not hold across all Councils. This is particularly noticeable for the Newry, Mourne and Down Council, with the third highest male TEA rate but the third lowest female TEA rate.

On average, female TEA rates over the 2012-2014 period are just over one third of male TEA rates, however this varies considerably from a ratio of 19% in North Down to 66% in Antrim and Newtownabbey. Those Council areas with the smallest gap between male and female TEA rates are typically those with the lowest male rates, suggesting that the narrow gap is due to males having lower than average entrepreneurial activity rather than females having a higher than average rate.





*Age:* As Figure 10 shows, individuals aged between 35-44 years display the highest rate of early-stage entrepreneurial activity in the UK in 2014. This is not the case for Wales, Northern Ireland and Scotland, although only the latter has a significantly lower rate than the UK for this age group. In Northern Ireland the 45-54 age group has the highest TEA rate although it is not significantly different to the other home nations.

A more meaningful analysis is to compare how TEA rates have changed in the 18-29 age group (where there seems to be a natural break in the UK GEM Activity Data) (Figure 11) and compare them to the 30-64 age group (Figure 12). In Northern Ireland the rates for these two age groups has moved in the same direction over time, and both are broadly of the same magnitude. In fact in 2014 the TEA rate for both these age groups was 6.7%, compared to around 4% for both in 2002. Since 2011 the TEA rates for 30-64 year olds in England has moved above that for the other home nations and in 2014, the rate is significantly higher.



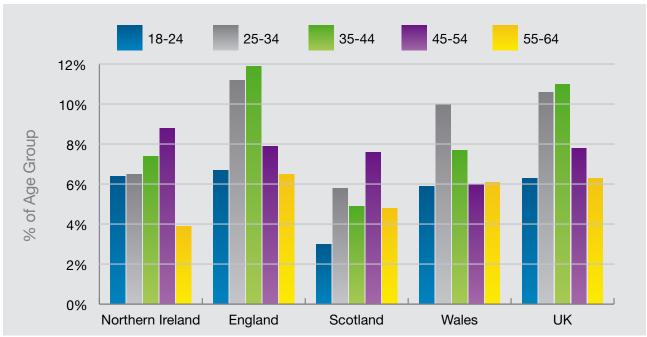
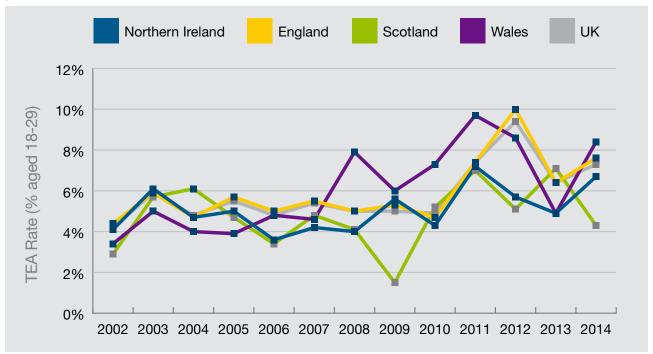
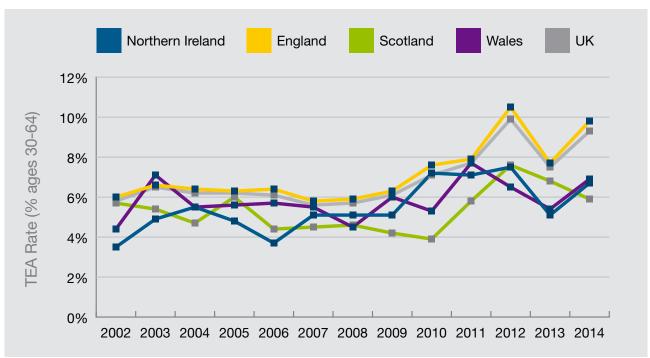


Figure 11: Trend in Total early-stage Entrepreneurial Activity in the UK Home Nations for 18-29 year olds, 2002-2014. (Source: GEM APS, 2002 to 2014)







*Education:* The average level of total early-stage entrepreneurial activity for graduates in the UK in 2014 was 10.8% (Figure 13), significantly higher than for non-graduates (7.4%). The comparable figure for graduates currently residing in Northern Ireland was 10.0% which was also significantly higher than the TEA rate for non-graduates (5.0%), likewise for England with a graduate rate of 11.4% and non-graduate rate of 7.8%. Graduate TEA rates in Wales and Scotland were not significantly different to their non-graduate counterparts.

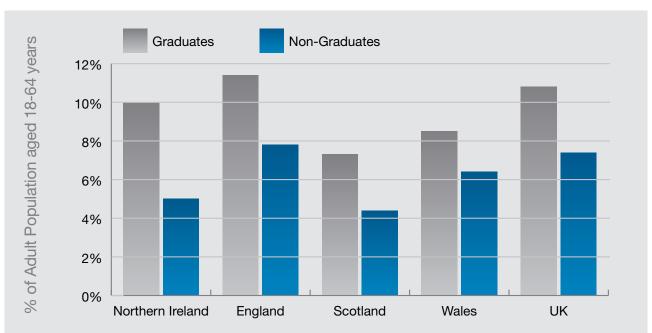
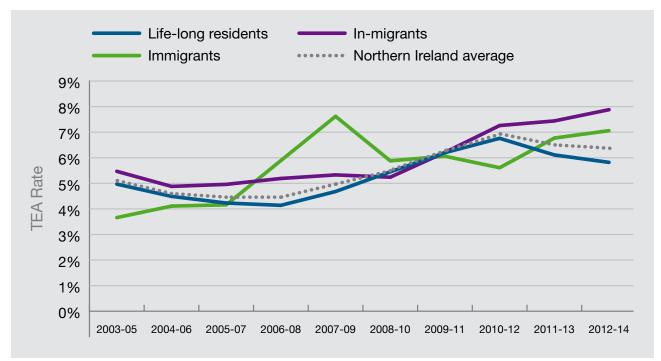


Figure 13: Total early-stage Entrepreneurial Activity in the UK Home Nations by Graduate Status, 2014. (Source: GEM APS, 2014)

*Migrant Status:* Figure 14 compares TEA rates for different types of immigrants compared to life-long residents in Northern Ireland using 3 year rolling averages. As life-long residents comprise the majority of the population their trend mirrors the overall Northern Ireland average trend and shows an increase in entrepreneurial activity between 2006-08 and 2010-12 but a continual decline thereafter. In contrast the TEA rate for in-migrants, which was relatively stable at around 5% in 2008-10, has continued to increase standing at almost 8% in 2012-14 with the gap between the TEA rates of in-migrants and life-long residents now at its widest. TEA rates for immigrants have also been on an upward trend since 2010-12; the increasing activity rates of both categories of migrant seen in contrast to the decline in entrepreneurial activity among the life-long resident population.

The sample sizes for the ethnic population in NI were too small to produce reliable estimates for entrepreneurial activity rates by ethnicity. However combining the 2002-2014 data resulted in an average TEA rate of 5.1% for the white population and 5.0% for the non-white population, indicating no significant difference between the two.





#### Entrepreneurial Attitudes and Intentions

GEM has developed a number of attitudinal statements which provide a proxy for entrepreneurial potential in a country/region. They include knowing a person who has started a business in the last 2 years, perception of good opportunities for start-up, self-belief in possessing the relevant skills to set up in business and the prevalence of fear of failure as a deterrent to setting up in business.

GEM attitudinal data is best treated at the group rather than individual level, because individuals who are already entrepreneurs may feel compelled to provide positive answers in the Adult Population Survey (APS). Here, as in the last two years, we report attitudinal data only for that portion of the population who are not already entrepreneurs.

In Northern Ireland, almost one in four (23.8%) individuals state that they know an entrepreneur compared to 24.7% in the UK as a whole (Figure 15), both largely unchanged on 2013. In Northern Ireland 36.1% of non-entrepreneurs believe they have the skills to set up in business, again similar to the UK average at 38.4%.

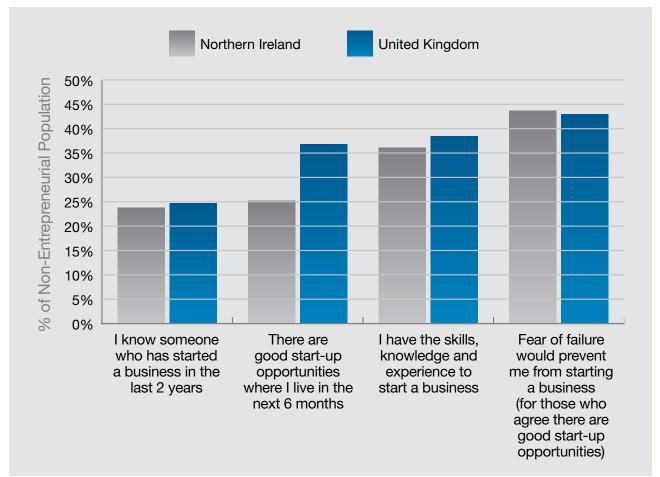
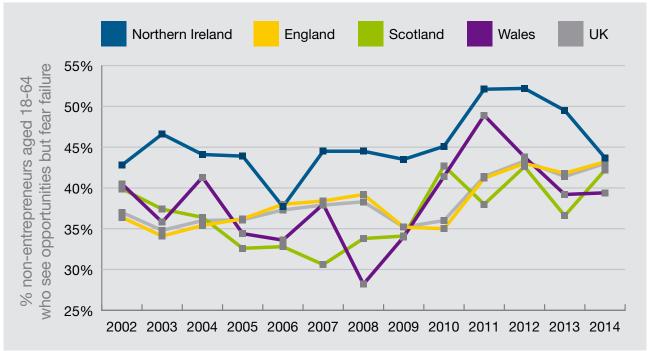


Figure 15: Entrepreneurial Attitudes and Perceptions in Northern Ireland and the UK 2014. (Source: GEM APS, 2014) The proportion of the non-entrepreneurial population of Northern Ireland reporting that the fear of failure would prevent them starting a business stood at 43.7% in 2014, which was not significantly different to the 2013 figure (51.3%). In the UK, the drop from 42.6% in 2013 to 43.0% in 2014 was also not significant.

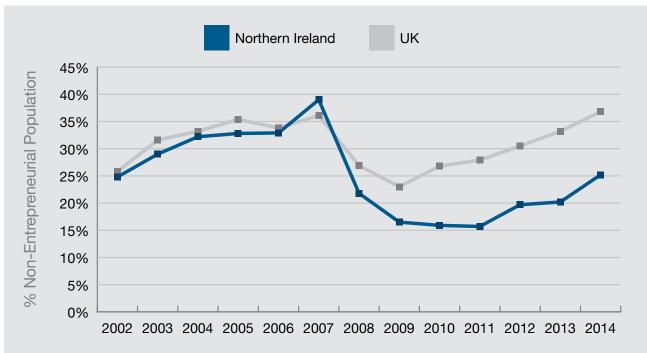
Restricting the analysis to only those who see good opportunities in their local area in the next 6 months reveals almost identical proportions reporting fear of failure, in Northern Ireland and the UK (Fig. 15). Figure 16 further shows that whilst Northern Ireland historically had higher proportions reporting fear of failure this has declined dramatically since 2012, with Northern Ireland reporting rates in 2014 that are in line with those in England and Scotland.





In the 2014 survey, only 25.2% of the non-entrepreneurial working age population in Northern Ireland agreed there were good opportunities for starting a business in their local area in the next six months, compared to 36.8% of the UK non-entrepreneurial working age population. The gap in perception between Northern Ireland and the UK opened up during the recession, with the UK having a significantly higher rate than Northern Ireland since around 2010. This trend in the last number of years is in contrast to that observed up to 2007 in which the perception of start-up opportunities between Northern Ireland and the UK was broadly similar (Figure 17).





Looking to the future, the proportion of non-entrepreneurial working age adults in Northern Ireland who expect to start a business within the next three years rose significantly from 3.4% in 2013 to 6.6% in 2014 (Figure 18). The UK also saw an equally significant rise from 5.4% to 8.5%. The rising trend in opportunity perception coupled with these significant increases in start-up intentions does suggest a more optimistic outlook with regards to the economy, with the dip in 2013 perhaps reflecting the recovery of the economy and the wider availability of jobs.

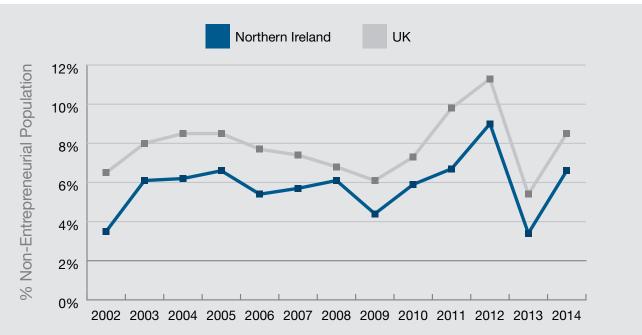
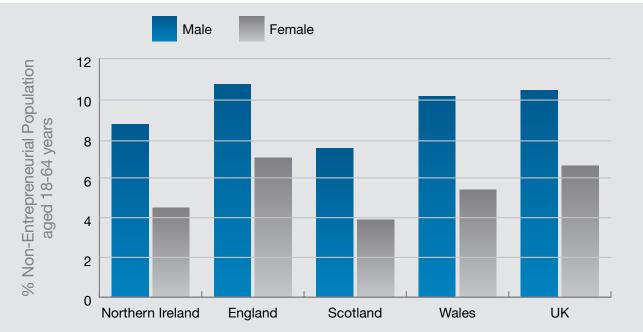


Figure 18: Future Start-up Expectations (within 3 years) in Northern Ireland and the UK, 2002-2014. (Source: GEM APS)

Males are more likely than females to report that they intend to start a business in the next three years in Northern Ireland (Figure 19). In 2014, 4.5% of females in Northern Ireland expected to start a business in the next 3 years compared to 8.7% of males. The ratio of female to male future start-up intentions in Northern Ireland was 52%, up from 42% in 2013 and higher than that observed for the TEA rate in 2014 (47%).

Start-up intentions rose for males and females in all home nations in 2014, the increases in male intentions were statistically significant for England, Wales and the UK. For females the only significant increases were for Northern Ireland and the UK; the female Northern Ireland rate rising from 1.1% in 2013 to 4.5% in 2014 and the female UK rate rising from 4.7% to 6.6%.



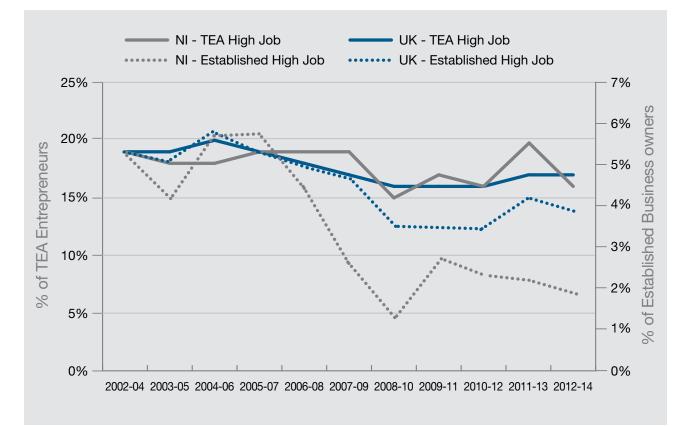


To identify individuals who expect to create a relatively high number of jobs, GEM created a variable which measures the percentage of all early-stage entrepreneurs (and separately established business owners) who have created more than ten jobs and who expect more than 50% growth in jobs in the next five years. Figure 20 displays the trend in these high growth expectation entrepreneurs for both Northern Ireland and the UK, using 3 year rolling averages. High growth expectation rates amongst TEA entrepreneurs (measured by the left hand axis) are generally around four times higher than those for established business owners (measured by the right hand axis).

Between 2002-14 high expectation rates have been broadly similar for Northern Ireland and UK TEA entrepreneurs, with around 20% reporting high job expectation in the early part of the period, dropping to around 17% towards the end; the Northern Ireland series is slightly more volatile than that for the UK.

The rates of high growth expectation for established business owners are less consistent between the two areas. Around 5-6% of established business owners reported high job expectation in both Northern Ireland and the UK until 2006-08, however a gap has opened since then. In fact the rate of high job expectation in Northern Ireland has been declining since 2009, and by 2012-14, at 2%, is half that of the UK rate.

Figure 20: Relative Frequency of High Job Expectation early-stage Entrepreneurs and Established Business Owners in NI and the UK, three year rolling averages, 2002-2004 to 2011-2014. (Source: GEM APS, 2002-2014)



#### Training, Awareness and Entrepreneurial Activity

In 2014 all respondents were asked whether they had taken part in any activities at school, college or university that made them think about starting a business or being their own boss. Fewer than one in ten in the UK (8.6%) reported that they had, however the share in Northern Ireland was significantly higher than the UK and other home nations at 14.2%. The difference remained when focusing on 18-30 year olds only, 16.2% in the UK reported they had taken part in such activities but the share in Northern Ireland was almost double this at 29.9%.

In 2014, very similar proportions of people in the home nations had heard of Global Entrepreneurship Week: 10.9% in Wales, 9.3% in Northern Ireland, 8.6% in England and 8.3% in Scotland. In the UK of those that participated in Global Entrepreneurship week just over one third, on average, said that it made them more entrepreneurial in their behaviour whilst just over one quarter, on average, said that it influenced their decision to start a business.

In the UK in 2014, 39.0% of those aged 50-64 and engaged in start-up activity had heard of the Prince's Initiative for Mature Enterprise (PRIME) which is a national organisation that provides support for self-employment to those over 50. In NI 36.0% of entrepreneurial 50-64 year olds had heard of PRIME, which was higher than that reported in Wales at 21.0% and Scotland at 20.1%.

#### **Concluding Observations**

Compared to 2013, entrepreneurial activity and intention in Northern Ireland has improved in 2014 whilst attitudes among the non-entrepreneurially active population also show signs of increased optimism. Despite the dip in 2013 the TEA rate in Northern Ireland in 2014 is moving back towards its peak level and the perception of start-up opportunities in the local area is also on an upward trend. Notably fear of failure, which has historically been particularly high in Northern Ireland, is now on a par with that reported in the UK for those who agree there are good start up opportunities.

Of particular interest in Northern Ireland is the notable improvement in female entrepreneurial activity. The female TEA rate of 4.4% in 2014 is the highest rate on record whilst female start-up intentions rose significantly from 1.1% to 4.5% over the year.

> The ratio of female to male future start-up intentions at 52% was also up ten percentage points on 2013, and higher than the TEA female to male ratio. This general uplift in female activity is encouraging, particularly as the improved economic conditions and labour market suggest that it is not due to necessity.

Notwithstanding these improvements differences remain between Northern Ireland and the UK. Indeed, despite the improvement in the perception of start-up opportunities in Northern Ireland the proportion perceiving opportunities is around 10 percentage points lower than the UK, a gap which has remained constant since 2010. Likewise there has been a consistent gap between the two with regards to future start-up intentions. Given that young people in Northern Ireland were more likely than their UK counterparts to participate in activities at school, college or university that made them consider starting a business, then perhaps these gaps will narrow in the future, particularly as fear of failure now appears to be less of a hindering factor in Northern Ireland than it was previously.

#### Disclaimer

This report is based on data collected by the GEM consortium and the GEM UK team; responsibility for analysis and interpretation of the data is the sole responsibility of the authors.

#### For further information on the GEM UK project, contact:

#### **Professor Mark Hart**

Economics & Strategy Group Aston Business School, Aston University Aston Triangle, Birmingham, B4 7ET Email: <u>mark.hart@aston.ac.uk</u>



Karen Bonner Economics & Strategy Group Aston Business School, Aston University Aston Triangle, Birmingham, B4 7ET Email: <u>k.bonner1@aston.ac.uk</u>



Dr Jonathan Levie Hunter Centre for Entrepreneurship, University of Strathclyde, Livingstone Tower, 26 Richmond Street, Glasgow, G1 1XH Email: j.levie@strath.ac.uk







**Global Entrepreneurship Monitor** 

If you require this document in an alternative format (including Braille, audio disk, large print or in minority languages to meet the needs of those whose first language is not English) please contact:

Invest NI Equality Tel: 028 9069 8273 Email: equality@investni.com Text Relay Number: 18001 028 9069 8273

Corporate Information Team 028 9069 8288 cit@investni.com

