



Global  
Entrepreneurship  
Monitor

In partnership with



Ulster Bank

# Global Entrepreneurship Monitor

Northern Ireland Report 2022/23

**Authors** Hoang Minh Luong, Mark Hart, Karen Bonner,  
Neha Prashar, Anastasia Ri, and Nola Hewitt-Dundas



# Acknowledgements

We are pleased to have Ulster Bank sponsor the 2022 Global Entrepreneurship Monitor UK and Home Nation Reports. As a leading supporter of small businesses, Ulster Bank understands the important role that start-ups, scale-ups and high-growth businesses play in a strong and prosperous economy.

Participation in the GEM Global project in 2022 by the UK consortium was made possible by funding from the Department for Business and Trade (DBT), Business Innovation Directorate, Hunter Centre for Entrepreneurship at the University of Strathclyde, the Welsh Government, Department for the Economy (NI) and NatWest Group.

The vendor for the Adult Population Survey (APS) was BMG Research Ltd and we would like to thank Dawn Hands, Roger Sant and Julie Hollingsworth for their role in the timely execution of the survey and the creation of the UK dataset. In particular, we would like to thank Roger Sant for his invaluable contribution to the weighting that was undertaken this year due to the dual method used to obtain responses to the GEM survey – that is, CATI and CAWI.

## 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  
Enterprise Research Centre  
Aston Centre for Growth  
Aston Business School  
Aston University  
Aston Triangle  
Birmingham B4 7ET  
Email: [mark.hart@aston.ac.uk](mailto:mark.hart@aston.ac.uk)

# GEM Report 2022/23

## Foreword by James Holian, NatWest Managing Director of Business Banking

The latest Global Entrepreneurship Monitor provides an authoritative voice on the past year's entrepreneurial trends. With over 10,000 adults participating in the UK survey alone, the research continues to maintain its high standard. Equally, NatWest continues to be proud to sponsor this report, and, for the second year, additional reports for Northern Ireland, Scotland and Wales.

Despite a backdrop of geopolitical turmoil, a cost-of-living squeeze and rocketing inflation, 2022 was a robust year for UK entrepreneurs, with almost a third of respondents engaged in entrepreneurial activity or planning to start a business; a figure that is still up from 2020.

Research from the report shows that when looking to the future of their businesses, social impact is a bigger consideration for early-stage entrepreneurs than established businesses. And new ventures are more likely to consider the environmental consequences of their decisions than established businesses, although are no more likely to act.

SMEs have reported that one of the biggest obstacles to this lack of movement is accessing tools to measure and reduce their carbon output amid high energy and material costs. Government policies and regulations to help businesses reach the United Nations' Sustainable Development Goals through grants or tax cuts is an area that needs improvement.

However, on a positive note, findings reveal that the female-to-male early stage entrepreneurial activity ratio was at its highest in 2022, a testament to female resilience in a time of flux, when fear of failure is slightly higher among women. Meanwhile, youth entrepreneurship is still rising, with those under 35 years of age significantly more likely to start a business than their older counterparts.

The number of people of working age who perceive good start-up opportunities during the six months ahead has fallen, reflecting the challenges of last spring and summer and highlighting the need to keep our pre-pandemic recovery energised and on track.

At NatWest we see this as a call to unlock the potential of our businesses and their communities. For those entrepreneurs starting up and scaling up, we are determined to be there to ensure they thrive, while supporting climate, talent and growth during economic uncertainty.

# Main Findings

The Global Entrepreneurship Monitor (GEM) is an international project which seeks to provide information on the entrepreneurial landscape of 49 countries in 2022. This is essential as many studies have shown that entrepreneurship is an important driver of economic growth, competitiveness and job creation.

The results of the GEM data analysis are used as key entrepreneurial benchmarking indicators by regional and national authorities around the world. The sample size in Northern Ireland in 2022 was 1,004 adults over 18 years of age.

- Levels of entrepreneurial activity are a vital sign of any economy as it has been shown that the creation of new ventures is positively connected to the drivers of economic growth and productivity through increased innovation, competition and job creation.
- Northern Ireland has historically lagged behind the rest of the UK in terms of enterprise start-up activity and the GEM Global project tracks this through its unique annual survey which focuses on the measurement of new business formation at the level of the individual.
- The rate of total early-stage entrepreneurship (TEA) in Northern Ireland in 2022 is 8.7%, slightly decreased from 9.1% in 2021 (after a strong rebound from being hit hard by the pandemic to the level of only 5.4% in 2020). This figure is lower than a figure of 11% in the UK overall or 11.5% in England in 2022, even though the difference is statistically insignificant.
- Pooling the data over the most recent three years (2020-22), to remove annual fluctuations, gives a TEA rate of 7.7% for Northern Ireland. This rate, along with that in Scotland and Wales (8.5% and 8.1%, respectively) is significantly lower than the rate of 10.4% in England and 10% in the UK.
- The female TEA rate in Northern Ireland in 2022 is 7.3%, continuing its increasing trend (it was 7.2% in 2021, and 4.5% in 2020). The male rate, after a strong rebound from 6.2% in 2020 to 11% in 2021, has decreased to 10.2% in 2022. As a result, the gap between TEA rates for females and males in Northern Ireland has narrowed in 2022.
- TEA rates tend to vary by age with those aged over 30 generally more likely to be engaged in entrepreneurial activity. However, probably due to the Covid-19 pandemic, the most entrepreneurial group in Northern Ireland, Wales, and Scotland in 2020 was the 18-24 age group. In 2022, this trend seemed to reverse back in most of the nations, with the 35-44 age group in Northern Ireland and the 25-34 age group in both Scotland and England being the most entrepreneurial. However, the differences between these groups and others are statistically insignificant.
- Within Northern Ireland, over the 20 years of GEM data (2002-2022), the highest TEA rates are typically found in the Mid-Ulster Council area, while Derry City and Strabane remain the lowest.
- With regards to gender differences, on average female TEA rates over the 2020-22 period are around three fifths the male TEA rates although the ratios vary from 27.5% in Newry, Mourne and Down to over 100% in Belfast. In fact, Belfast is the only council with higher female TEA rate than that for males. On the other hand, Antrim and Newtownabbey and Mid and East Antrim, together with Newry, Mourne and Down, are the three councils in which the female TEA rate is considerably lower than the male rate.
- Nearly half of the non-entrepreneurial working age population perceive good start-up opportunities locally in both Northern Ireland and the UK in 2022.
- The proportion of non-entrepreneurial working age adults in Northern Ireland who expect to start a business within the next three years is 18.1% in 2022, a slight decrease from its peak at 20.1% in 2021. For the UK, this figure increased marginally from 18.2% in 2021 to 18.5% in 2022.
- 2022 also saw a slight increase in fear of failure with the proportion of non-entrepreneurial individuals of working age in Northern Ireland who agreed there were good start-up opportunities but also report they are afraid of starting a business in case it might fail, rising from 56.5% in 2021 to 60.6% in 2022.

- In 2022, less than one-fifth of Northern Ireland early-stage business owners expect to achieve high growth (17.1%), a considerable decline from 21.3% in 2021. The similar trend can be found for the UK, while this figure dropped from 18.6% in 2021 to 14.6% in 2022.
- Motivations to start a business can be varied and more multi-faceted than the previous opportunity and necessity measures reveal in the historic GEM reports (before 2019). As a result, since 2019 GEM also measures motivation to start a business across four main categories, they are: to make a difference in the world; to build great wealth or a very high income; to continue a family tradition; or to earn a living because jobs are scarce.
- In 2022, “to earn a living because jobs are scarce” was still the major motivation for entrepreneurs in Northern Ireland, even though it has decreased slightly from 64.1% in 2021 to 63.3% in 2022. The similar decreasing trend can also be found for the UK. Still, more than half of early-stage entrepreneurs in both Northern Ireland and the UK were motivated by making a difference, building wealth and to earn a living in 2022. Starting a business to continue a family tradition is the least motivating factor, and is significantly lower than all other reasons.

# 1. Background

The Global Entrepreneurship Monitor (GEM) research consortium is an international project which tracks rates of entrepreneurship. It is the world's most authoritative comparative study of entrepreneurial activity in the general adult population and 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.

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 the 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.

In 2022 the Department for the Economy and Invest NI sponsored the Northern Ireland component of the GEM UK research project. Stimulating entrepreneurship remains an important challenge for the region; Invest NI has committed significant resources over the years in ensuring that it is embedded within their core activities. Of the 371,900 respondents to GEM UK surveys for the period 2002-2022, around 44,500 respondents were from Northern Ireland. The region 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 females and young people, and enables comparisons to the other UK home nations.

## 2. 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 2022, GEM Global conducted surveys in 49 sovereign nations and represented the world's most authoritative comparative study of entrepreneurial activity in the general adult population. In previous years, a telephone survey of a random sample of the adult population was conducted each year between May and September (the only difference was GEM 2020 which was conducted in Q4 of 2020 due to the effect of the COVID-19 pandemic).

In addition, in a major departure in 2020 an online mode for respondents to complete was introduced, and this was provided alongside the traditional mode of CATI surveys. Using both approaches helped to ensure that the UK sample of approximately 10,000 respondents was maintained, providing data for the home nations as well as other important sub-groups of the population such as immigrants, ethnic minorities and women. The methodology, sample sizes and weighting systems used for the GEM UK 2022 adult population survey are explained in more detail in the GEM UK 2022 report.

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 2022 GEM Global study was based on an analysis of adult population survey (APS) results from 49 economies which together represent around 68% of global Gross Domestic Product (GDP) and about two-thirds of the global population in 2022<sup>1</sup>. It includes

China with a population of 1.3 billion, as well as India, which according to the United Nations is likely to be declared the world's most populous country in 2023. The core of the APS is identical in each country and asks respondents about their attitudes towards entrepreneurship; whether they are involved in some form of entrepreneurial activity, and if so, about their aspirations for their business. The global GEM Executive 2022/2023 Report was published in February 2023<sup>2</sup> and can be downloaded from GEM website.

From the APS 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.

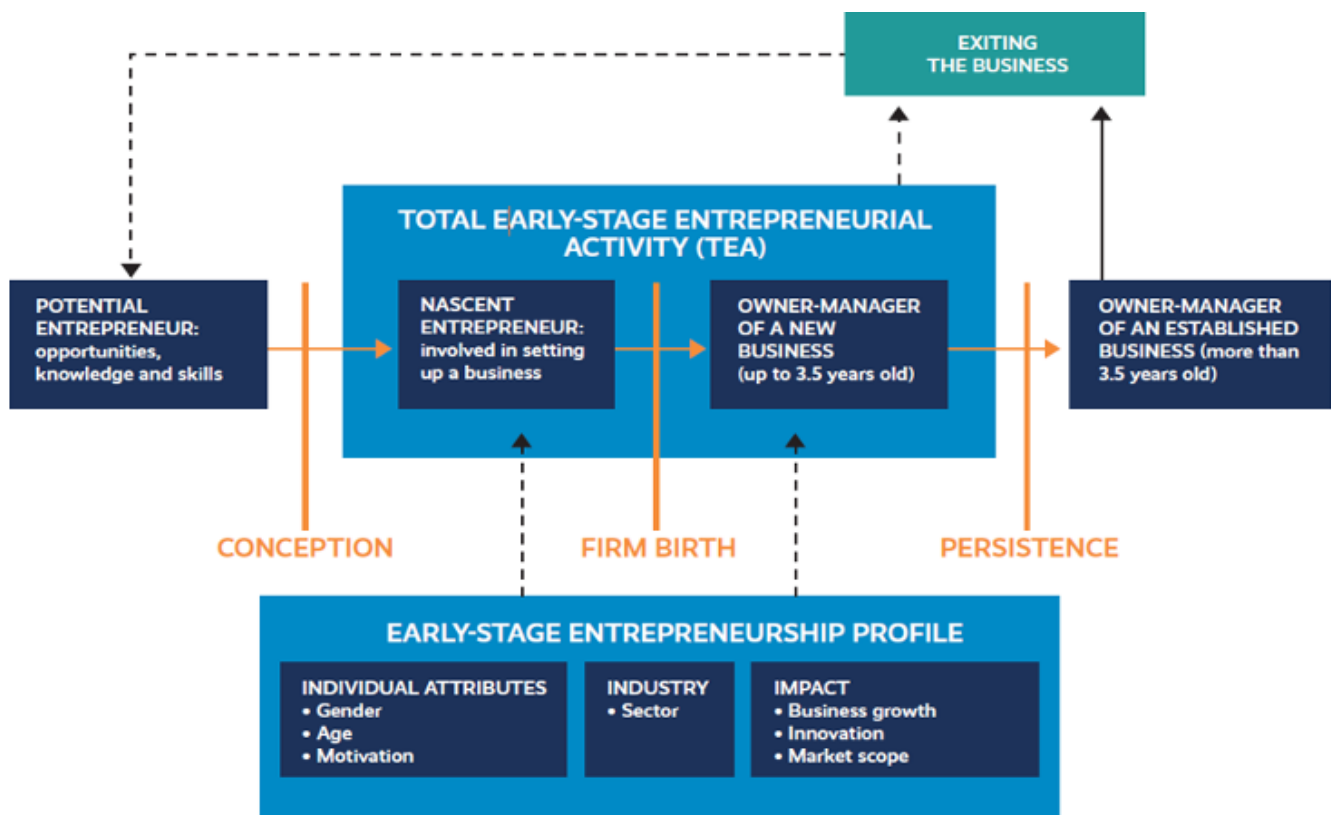
In addition, we measure general intention to start a business by asking individuals if they expect to start a business within the next three years. Finally, we ask individuals if they have sold, shut down, discontinued or quit a business in the past year. It is important to understand that the main subject 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>3</sup> and the new business owner-manager stage<sup>4</sup>,

<sup>1</sup> Estimates based on World Bank data for GDP and populations.

<sup>2</sup> Hill, S., Ionescu-Somers, A.; Coduras, A.; Guerrero, M.; Roomi, M.; Bosma, N., Sahasranamam, S. and Shay, J. (2023) Global Entrepreneurship Monitor 2022/23 Global Report. London: Global Entrepreneurship Research Association.

<sup>3</sup> 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.

<sup>4</sup> 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.



**Figure 2.1: The Entrepreneurial Process and GEM Operational Definitions**

(Source: Hill, S., Ionescu-Somers, A.; Coduras, A.; Guerrero, M.; Roomi, M; Bosma, N., Menipaz, E; Zbierowski, P; Schott, T; Sahasranamam, S. and Shay, J., 2023, pg.28)

are combined into one index of Total early-stage Entrepreneurial Activity, or TEA<sup>5</sup>, which is represented in Figure 2.1 above.

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. Another 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.

The proportion of mobile-only households in this survey was designed to match Ofcom estimates of the proportion of adults in mobile-only households in 2020 for the UK, to account for the higher mobile phone use (around 20%) of some hard to reach individuals, such as young men. Once again in 2022 there are no significant differences between landline only data and the full sample which includes mobile only households. Consequently, in this report, comparisons with other countries and time-based trends within the UK are made using the full sample (landline and mobile only households as well as the CATI/CAWI mixed method).

The following report presents a summary of the headline results, and key themes arising from the GEM survey in 2022 and the analysis of the 21 years of GEM data (2002-22).

<sup>5</sup> TEA is calculated in an identical way in each country. A telephone and/or face-to-face survey of a representative sample of the adult population in each country is conducted between May and September. Respondents are asked to respond to three questions that are the basis of the TEA index: 1) “are you, alone or with others, currently trying to start a new business independently of your work?”, 2) “are you, alone or with others, currently trying to start a new business as part of your work?”, and 3) “are you, alone or with others, currently the owner or manager of a business?” Those who respond positively to these questions are also asked filter questions to ensure they are actively engaged in business creation as owners and managers, how long they have been paying wages to employees, and other questions about cost and time to start up, sources of finance and numbers of jobs created. A distinction is made between two types of entrepreneurs: nascent entrepreneurs (those whose businesses have been paying wages for not more than three months) and new business owner-managers (those whose businesses have been paying salaries for more than three months but not more than 42 months). The TEA index is the proportion of nascent entrepreneurs and new business owner/managers (minus any double counting, i.e. those who respond positively to both are counted once) in the working age population.



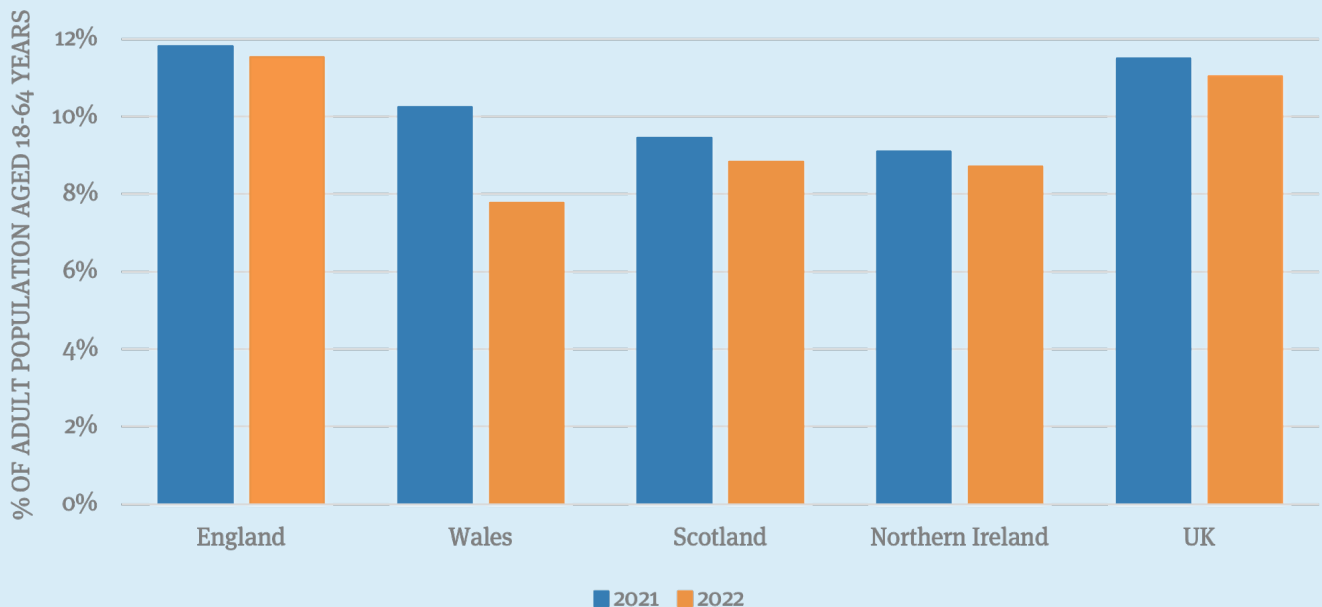
# 3. Total Early-Stage Entrepreneurial Activity

After a strong rebound from the COVID-19 pandemic, the TEA rate in all UK nations has been slightly lower in 2022 in comparison with 2021 (Figure 3.1). Specifically, the rate of early-stage entrepreneurship in Northern Ireland decreased from 9.1% in 2021 to 8.7% in 2022. The nation with the most marked decline in TEA rate is Wales, with its 2022 figure of 7.8% it is the lowest in the 4 nations. Similar to previous years, the TEA rates in England and the UK were considerably higher than that in Northern Ireland in 2022, even though the difference is statistically insignificant for this year.

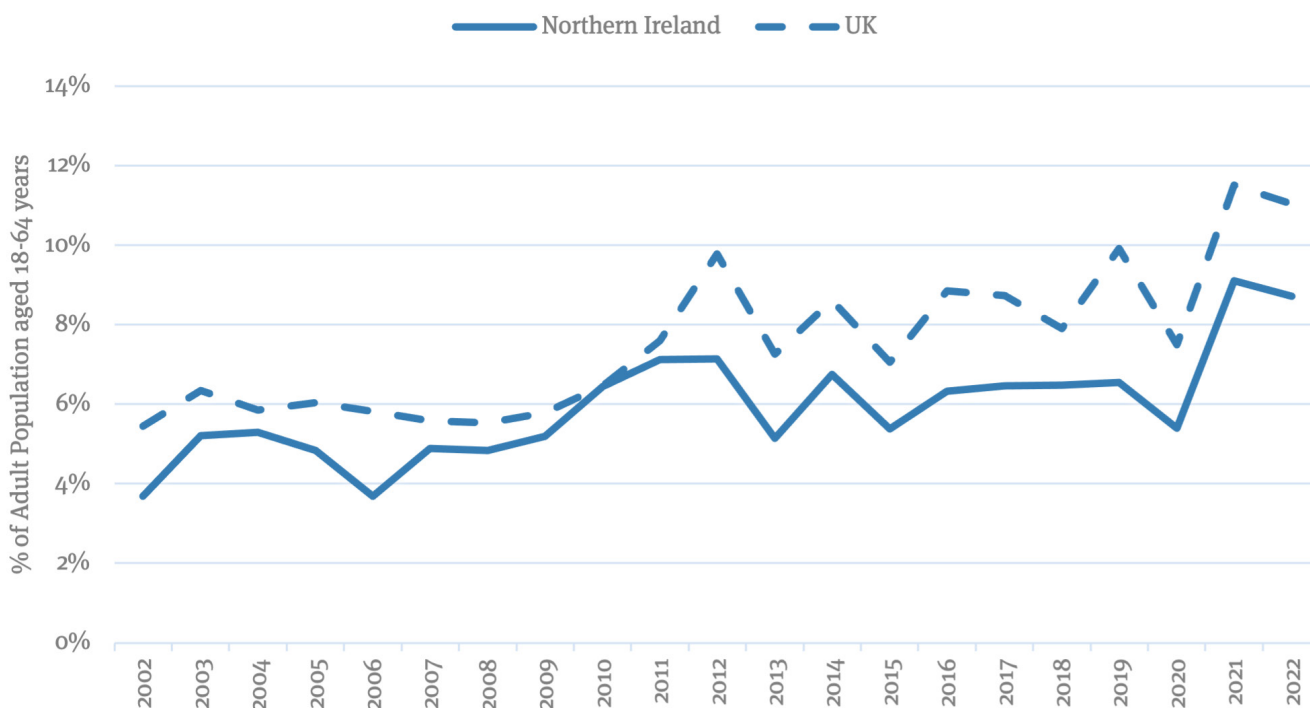
Pooling the data over the most recent three years (2020-22), to remove annual fluctuations, gives a TEA rate of 7.7% for Northern Ireland. This rate, along with that in Scotland and Wales (8.5% and 8.1%, respectively) is significantly lower than the rate of 10.4% in England and 10% in the UK.

Overall, the TEA rate of 8.7% in Northern Ireland in 2022 equates to around one in every eleven adults aged 18-64, or approximately 99,210 individuals, engaged in early-stage entrepreneurial activity, around 68% of whom were in the very early stages of starting a business (nascent entrepreneurs: 5.9%) and the remainder those who had a new business which was between 3 and 42 months old (2.8%).

Figure 3.2 presents the entrepreneurial activity in both the UK and Northern Ireland over time. Even though the rate has slightly decreased for both, the figures are still higher than that of 2019 - before the Covid-19 pandemic started. However, the gap between the two persists, with Northern Ireland's rate falling below the TEA rate for the UK.



**Figure 3.1: Total early-stage Entrepreneurial Activity (TEA) in the UK Home Nations 2022**  
(Source: GEM APS)

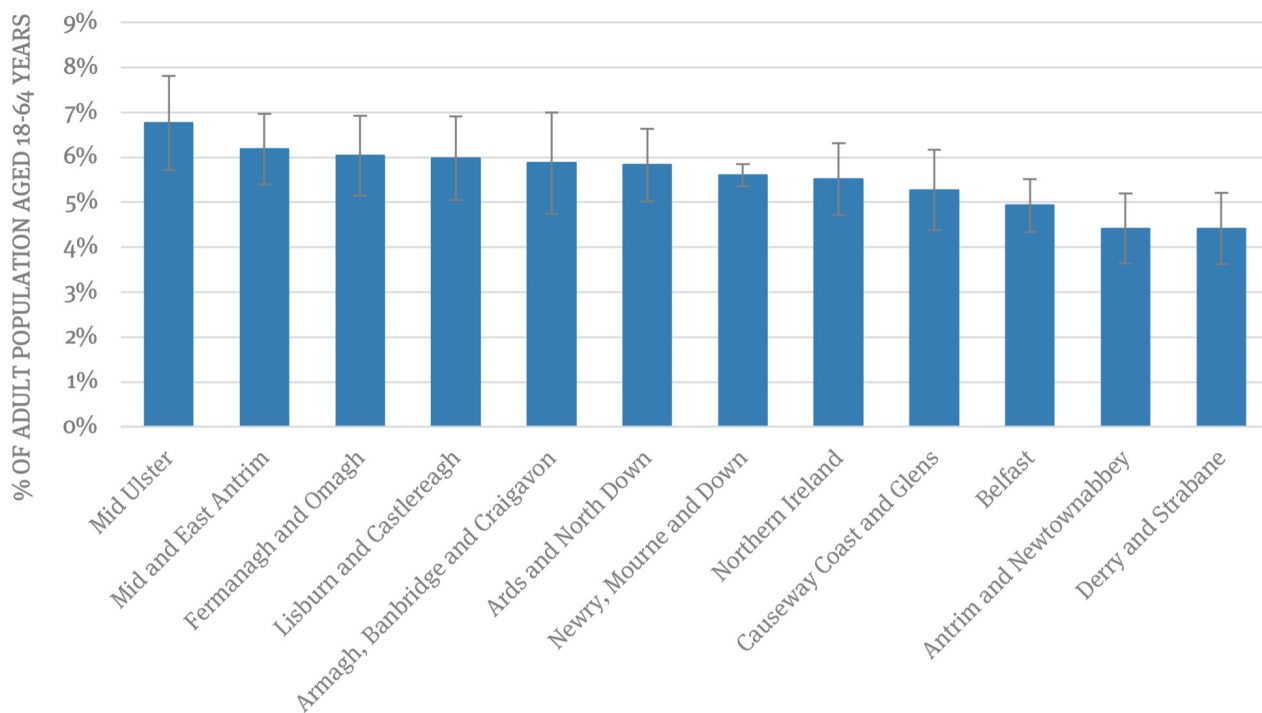


**Figure 3.2: Total early-stage Entrepreneurial Activity in Northern Ireland and the UK 2002-2022**  
(Source: GEM APS 2002-22)

Analysing annual TEA rates in Northern Ireland Council areas can be problematic due to small sample sizes in localised areas. Pooled analysis over periods of time helps remove this variability by averaging out random annual fluctuations. Figure 3.3 presents TEA rates over the entire 2003-2022 period. It indicates that the highest rate of entrepreneurial activity was in the Mid Ulster area with a TEA rate of 6.8% whilst the lowest was the two areas, Derry City and Strabane and Antrim and Newtownabbey, with a rate of just 4.4%; the difference is statistically significant. Belfast's rate of 4.9% lies below the Northern Ireland average (5.5%), but the difference is statistically insignificant. Mid Ulster is the only council with a significantly higher rate than that for Belfast in 2022.

Table 3.1 displays the trend by Council area using 3 year rolling averages, rather than combined data, from 2002-04 to 2020-22. There was little variation in entrepreneurial activity rates across Council areas in the decade to 2010, with rates for some areas diverging thereafter. Recently, Ards and North Down has had the largest increase and continues to outpace all other areas. The other two areas with higher rates than the Northern Ireland average rate of 7.7% were Mid and East Antrim (9.4%) and Belfast (9.3%). In contrast, the most remarkable decrease can be seen for Fermanagh and Omagh, from 9.8% for the 2019-21 period to 7.7% for the 2020-22 period. The lowest rate for the 2020-22 period was for Newry, Mourne and Down at 2.8%.

6 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.



**Figure 3.3: Total early-stage Entrepreneurial Activity in Northern Ireland in 2003-2022 by Council Area, with 95% confidence intervals<sup>6</sup> (Source: GEM APS 2003-22)**

	2002-04	2003-05	2004-06	2005-07	2006-08	2007-09	2008-10	2009-11	2010-12	2011-13	2012-14	2013-15	2014-16	2015-17	2016-18	2017-19	2018-20	2019-21	2020-22
Antrim and Newtownabbey	5.4%	3.9%	3.8%	3.2%	4.8%	5.1%	6.5%	6.1%	6.9%	5.4%	4.8%	4.2%	4.7%	5.3%	4.8%	6.3%	5.1%	5.7%	4.9%
Ards and North Down	4.5%	4.6%	4.6%	4.7%	4.6%	6.1%	7.3%	7.0%	6.6%	5.4%	7.0%	5.6%	6.7%	5.4%	6.0%	5.5%	5.8%	9.3%	12.4%
Armagh, Banbridge and Craigavon	4.4%	5.2%	4.2%	5.0%	4.6%	5.6%	6.6%	7.8%	11.0%	10.4%	9.4%	5.4%	4.5%	5.8%	7.7%	6.6%	5.3%	4.8%	6.1%
Belfast City	3.6%	4.4%	3.8%	3.9%	4.2%	4.3%	4.4%	4.6%	4.7%	4.6%	4.5%	4.7%	5.3%	5.7%	5.5%	4.4%	4.5%	6.5%	9.3%
Causeway Coast and Glens	3.7%	4.9%	3.9%	4.6%	3.9%	4.3%	3.9%	5.6%	6.4%	5.9%	5.9%	5.8%	6.4%	5.8%	5.1%	6.8%	8.0%	7.9%	6.7%
Derry City and Strabane	5.7%	4.8%	4.3%	4.0%	3.0%	3.5%	2.9%	3.5%	4.5%	5.1%	6.1%	3.7%	4.2%	3.3%	6.8%	5.1%	5.3%	4.2%	7.5%
Fermanagh and Omagh	4.5%	6.1%	5.7%	5.4%	4.9%	5.6%	4.9%	6.9%	4.5%	4.1%	2.4%	5.9%	7.6%	6.4%	4.0%	6.6%	8.0%	9.8%	7.7%
Lisburn and Castlereagh	4.1%	5.8%	4.8%	5.4%	6.1%	6.3%	6.0%	7.0%	6.6%	5.8%	4.2%	5.8%	6.4%	6.0%	6.0%	7.1%	6.2%	7.5%	7.1%
Mid Ulster	5.6%	6.6%	6.5%	4.5%	4.4%	4.6%	6.8%	7.8%	9.8%	9.1%	10.6%	9.6%	9.0%	9.3%	8.0%	8.2%	4.6%	8.7%	7.5%
Mid and East Antrim	6.3%	5.2%	4.3%	4.9%	4.4%	5.1%	4.5%	5.9%	5.8%	6.6%	6.2%	8.0%	8.7%	10.5%	10.2%	10.6%	10.1%	9.3%	9.4%
Newry, Mourne and Down	5.4%	5.4%	5.2%	4.4%	5.3%	4.9%	6.0%	6.7%	8.1%	7.3%	6.5%	7.1%	7.9%	6.7%	6.9%	6.5%	6.0%	3.9%	2.8%
<b>Northern Ireland</b>	<b>4.7%</b>	<b>5.1%</b>	<b>4.6%</b>	<b>4.5%</b>	<b>4.5%</b>	<b>5.0%</b>	<b>5.5%</b>	<b>6.3%</b>	<b>6.9%</b>	<b>6.5%</b>	<b>6.3%</b>	<b>5.8%</b>	<b>6.2%</b>	<b>6.1%</b>	<b>6.4%</b>	<b>6.5%</b>	<b>6.1%</b>	<b>7.0%</b>	<b>7.7%</b>

**Table 3.1: Total early-stage Entrepreneurial Activity in Northern Ireland by Council Area, rolling averages 2002-2004 to 2020-22 (Source: GEM APS)**

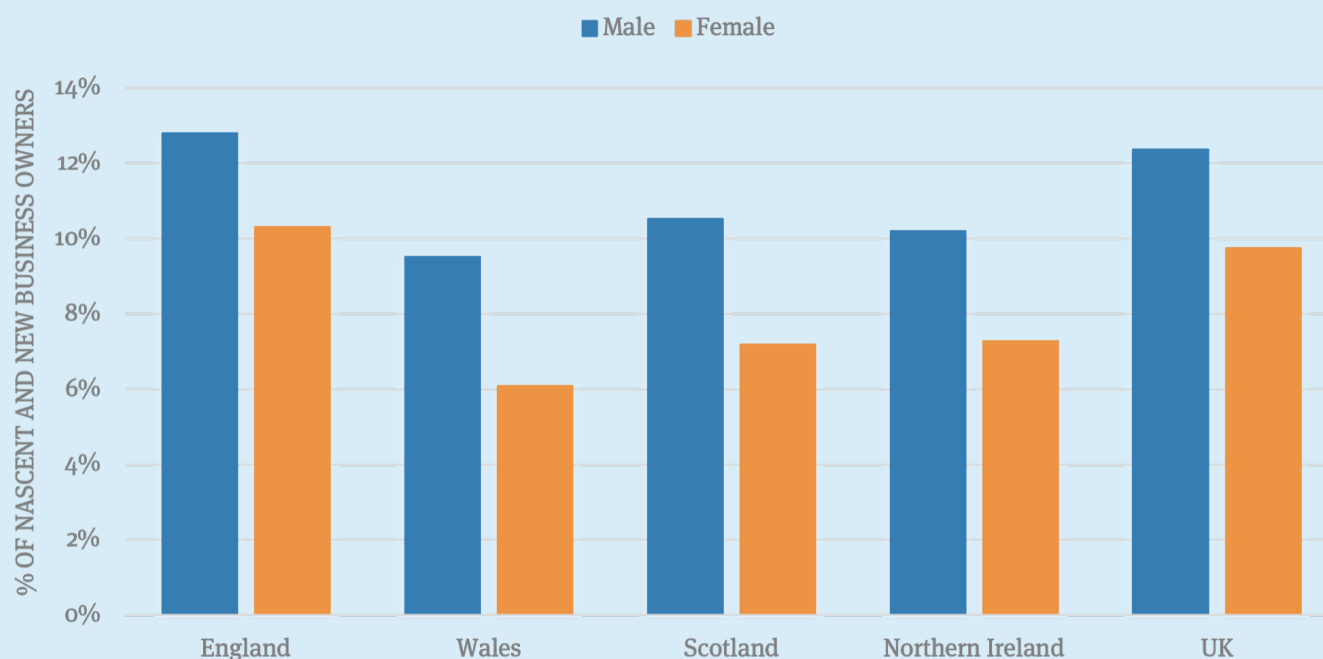


**Figure 3.4: Motivation for Early-stage Entrepreneurship in Northern Ireland and the UK 2022**  
 (Source: GEM APS, 2022)

Motivation to start a business can be varied and more multi-faceted than the previous opportunity and necessity measures presented in the historic GEM reports (before 2019). As a result, since 2019 a new and improved method of measuring motivation to start a business across four main categories was introduced. They are: (i) to make a difference in the world; (ii) to build great wealth or a very high income; (iii) to continue a family tradition; or (iv) to earn a living because jobs are scarce. The former two can be thought of as more opportunity driven, while the third is more complex as this could be both due to opportunity and necessity. The final option can be thought of as more necessity driven.

Figure 3.4 shows that “to earn a living because jobs are scarce” was still the major motivation for entrepreneurs in Northern Ireland in 2022, even though it has decreased slightly from 64.1% in 2021 to 63.3% in 2022. A similar decreasing trend can be found in the UK figure. Besides, and similar to previous years, more than half of early-stage entrepreneurs in both Northern Ireland and the UK were also motivated by making a difference, building wealth and to earn a living. Starting a business to continue a family tradition is the least motivating factor, and is significantly lower than all other reasons.

## 4. Who are the Entrepreneurs in Northern Ireland?



**Figure 4.1: Total early-stage Entrepreneurial Activity in the UK Home Nations in 2022** (Source: GEM APS)

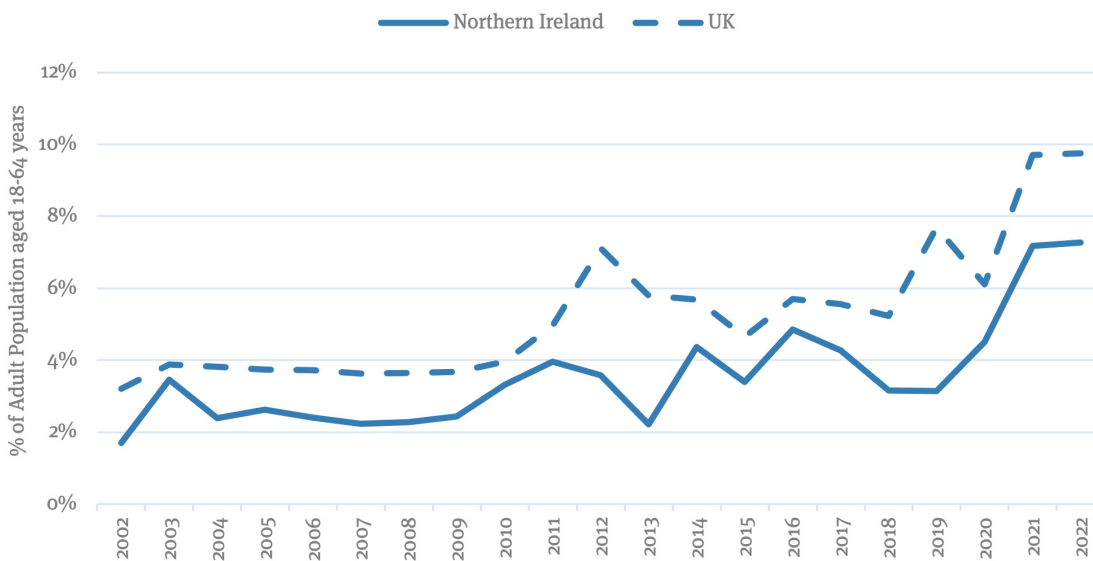
### 4.1 Gender

In 2022 males in the UK have a significantly higher TEA rate than females, at 12.4% compared to 9.7%, while this difference in rates between males and females is statistically insignificant to all nations (Figure 4.1). As the TEA rate for females in Northern Ireland has continued its increasing trend recently (from 4.5% in 2020 to 7.2% in 2021 to 7.3% in 2022), the gap in TEA rate between males and females has narrowed slightly in 2022, as the rate for males has decreased from 11% in 2021 to 10.2% in 2022. Notably, while a similar increasing trend in the female TEA rate can be seen for England (from 10% in 2021 to 10.3% in 2022), the female TEA rate has decreased considerably for Wales (from 9.8% in 2021 to 6.1% in 2022) and Scotland (from 7.7% in 2021 to 7.2% in 2022).

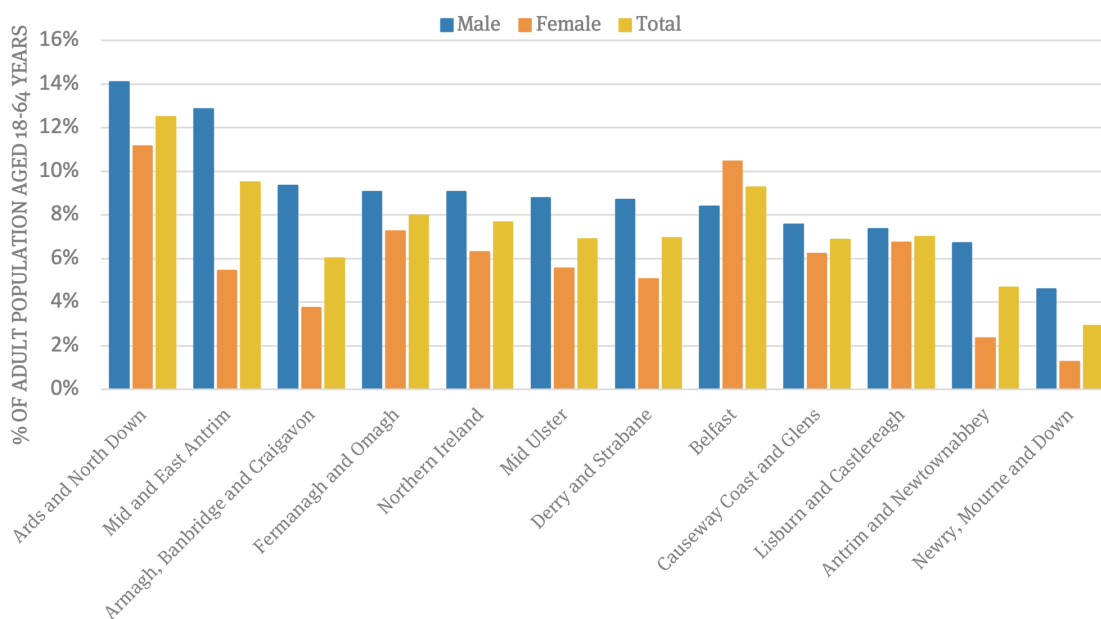
For the UK as a whole the TEA rate translates into a female to male early-stage entrepreneurship ratio of 79%, a further increase from 69% in 2020 and 73% in 2021. England is the nation with the highest ratio (81%), while the lowest ratio is for Wales at 64%, a marked decrease from its figure of 92% in 2021. This figure for Northern Ireland is 71%.

Annual ratios in female to male entrepreneurial activity can vary, for example, previous ratios for the UK have been around 50%, with twice as many male entrepreneurs as females. Using the long run average ratios from 2002-22, to get a longer perspective, suggests a ratio of 43% in Northern Ireland compared to 53% in England, 59% in Wales and 56% in Scotland. The significantly lower female to male ratio in Northern Ireland over the long term is due to historically lower female TEA rates compared to males. Northern Ireland's female TEA rate for the whole period 2002-22 has averaged around 3.5% compared to a male rate of 8.3%. In the UK the equivalents are 5.1% and 9.7% respectively.

Comparing the female TEA rate in Northern Ireland to the UK over the long term shows a long-standing gap (Figure 4.2). This narrowed somewhat during the recession but diverged strongly as the economy recovered during 2011-12. This trend appeared again recently, as after narrowing in 2020 due to both a decline in the UK rate and an increase in Northern Ireland, Figure 4.2 shows that the gap has slightly widened again in 2021 and 2022.



**Figure 4.2: Total Early-stage Female Entrepreneurial Activity in Northern Ireland and the UK, 2002-2022** (Source: GEM APS)



**Figure 4.3: Total Early-stage Male and Female Entrepreneurial Activity in Northern Ireland by Council Area, combined over 2020-22** (Source: GEM APS, 2020, 2021 and 2022)

Figure 4.3 shows TEA rates for males and females by Council area over the 2020-22 period combined. The male rates are plotted in descending order although there is no significant difference between them. There is also no correlation between the entrepreneurial activity rates of males and females, in that those areas with the highest male rates do not also have the highest female rates. This suggests differing opportunities for entrepreneurship by gender in each council area.

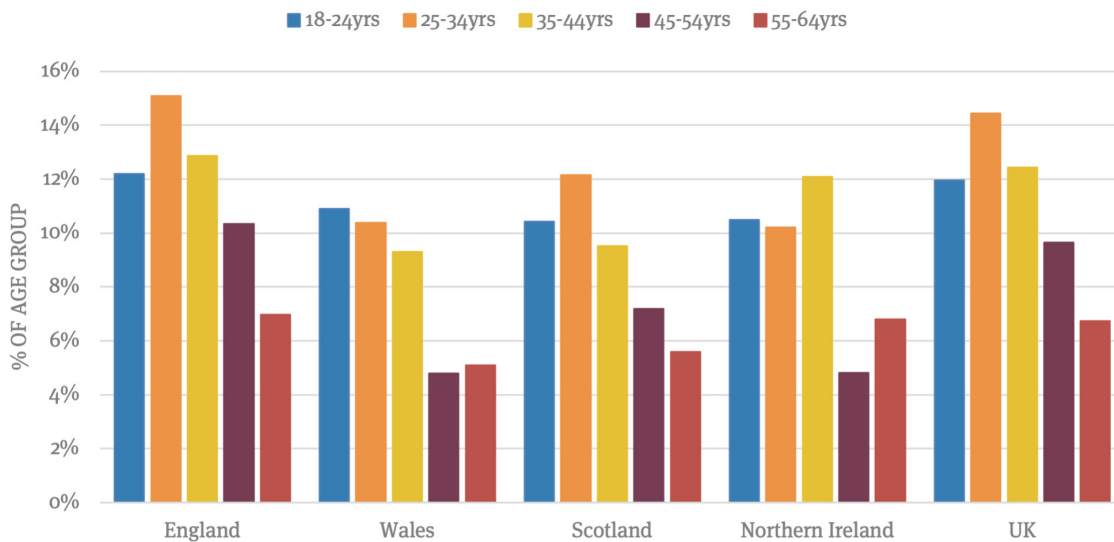
On average female TEA rates over the 2020-22 period are around three-fifths the male TEA rates although the ratios vary from 27.5% in Newry, Mourne and Down to over 100% in Belfast. In fact, Belfast is the only council with higher female TEA rate than that for males. On the other hand, Antrim and Newtownabbey and Mid and East Antrim, together with Newry, Mourne and Down, are the three councils in which the female TEA rate is considerably lower than the male rate, even though the difference is statistically insignificant.

## 4.2 Age

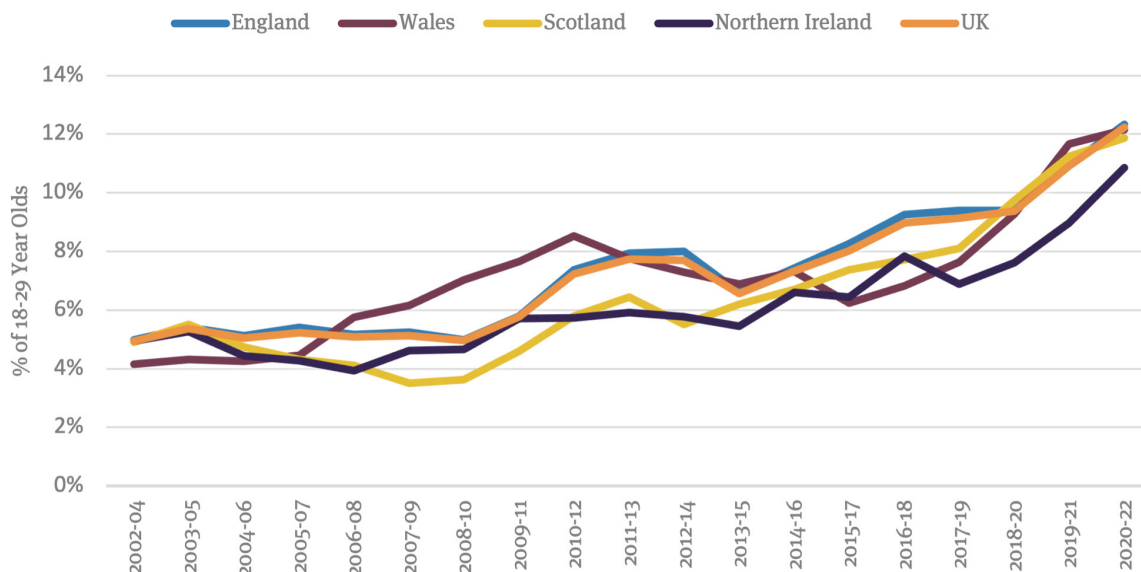
Figure 4.4 shows TEA rates by age in 2022. In the UK individuals aged between 25 and 34 typically have higher rates of early-stage entrepreneurial activity than other groups. In 2022, two nations that diverge from this pattern are Wales (where the 18 to 24 age group has the highest rate) and Northern Ireland (where the 35 to 44 age group has the highest rate). In Northern Ireland, there is also a slight increase in the TEA rate for the younger group (aged between 18 and 24) from 10% in 2021 to 10.5% in 2022. However, the differences between these groups and others are statistically insignificant.

An alternative analysis by age is to assess how the TEA rate has changed in the 18 to 29 age group over time compared to the 30 to 64 age group. Figures 4.5 and 4.6 show that for both age groups, rates in England are driving the UK trends and it is diverging from the other home nations, particularly in the 30-64 age group.

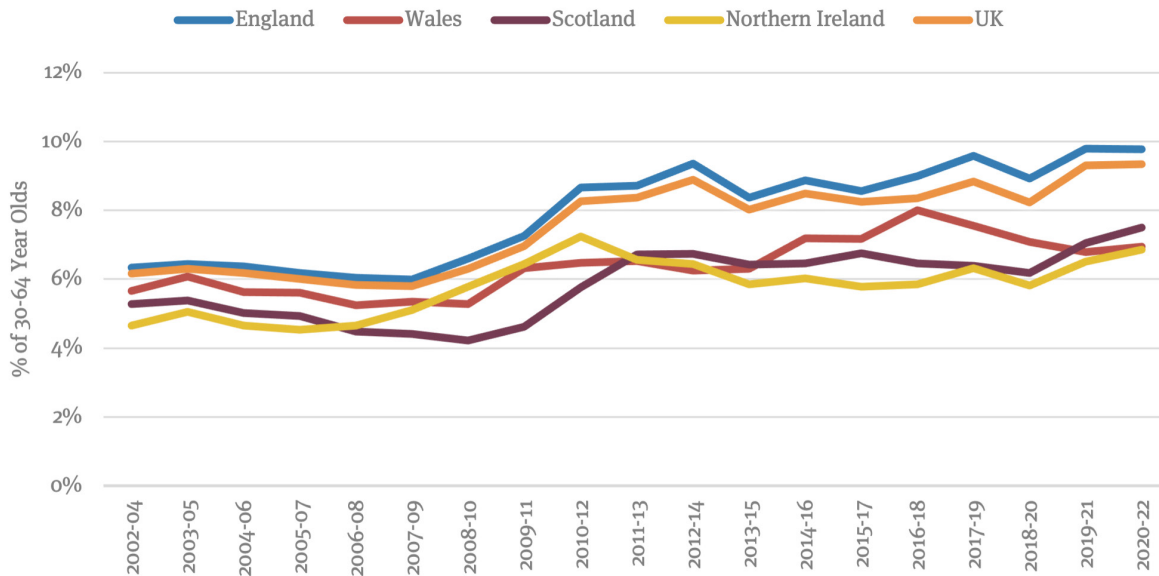
In Northern Ireland, despite the fact that TEA rates for both groups have increased over time, it is still considerably lower than that of other nations, especially for the 18 to 29 age group.



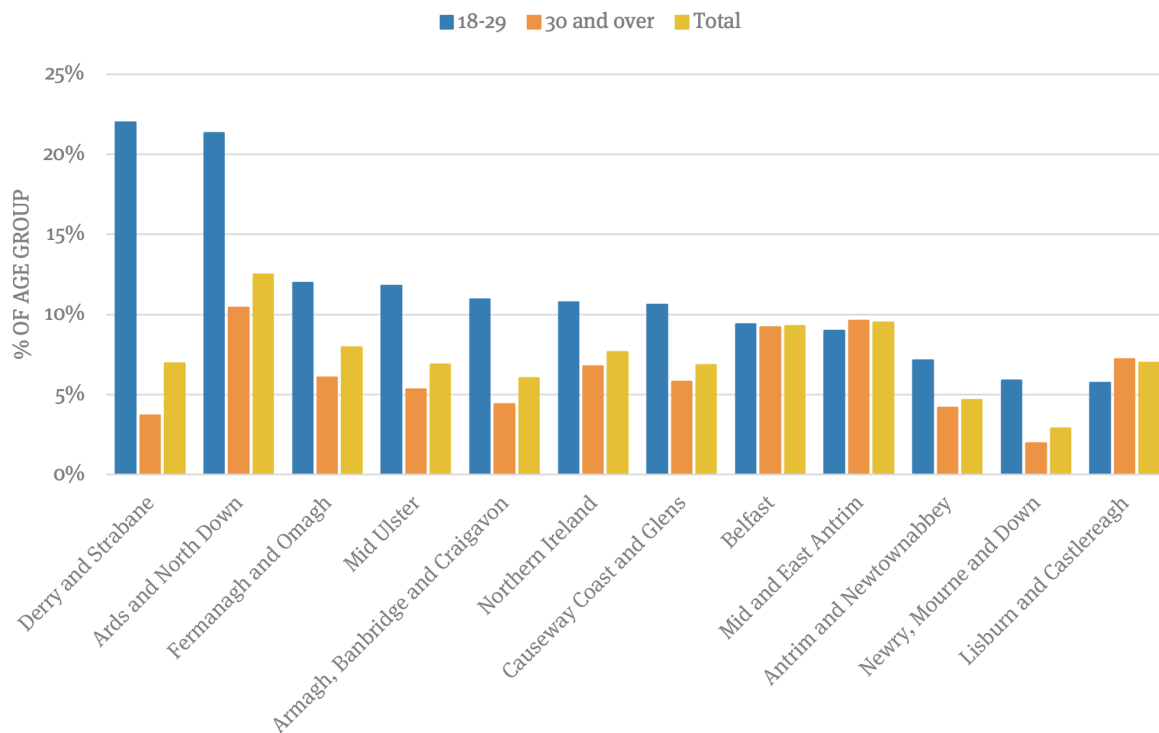
**Figure 4.4: Total early-stage Entrepreneurial Activity in the UK Home Nations 2022** (Source: GEM APS, 2022)



**Figure 4.5: Trend in Total early-stage Entrepreneurial Activity in the UK Home Nations for 18-29 year olds, rolling averages 2002-04 to 2020-22** (Source: GEM APS, 2020, 2021 and 2022)



**Figure 4.6: Trend in Total early-stage Entrepreneurial Activity in the UK Home Nations for 30-64 year olds, rolling averages 2002-04 to 2020-22** (Source: GEM APS, 2020, 2021 and 2022)

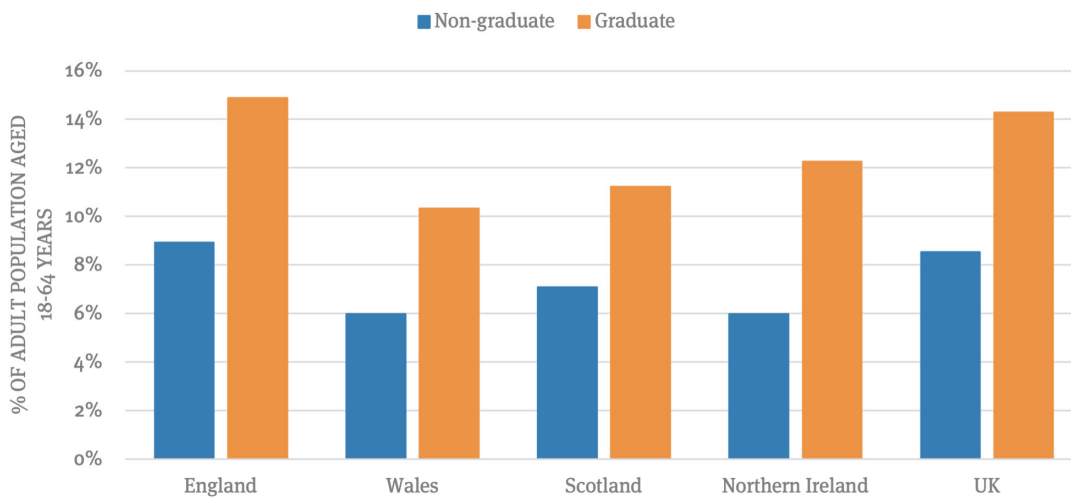


**Figure 4.7: Total early-stage Entrepreneurial Activity in Northern Ireland by Age and Council Area, combined over 2020-22** (Source: GEM APS, 2020, 2021 and 2022)

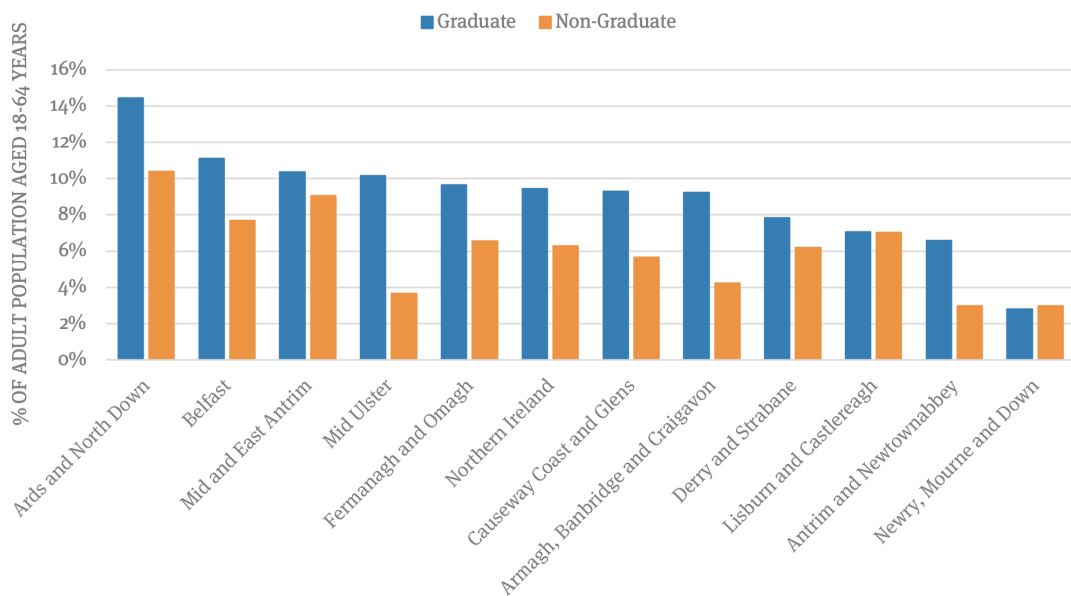
Total early-stage entrepreneurial activity by these broader age groups is plotted in Figure 4.7 for the Council areas, combined over 2020-22. For Northern Ireland as a whole, the TEA rate for the older group (aged 30 and over), at 6.8%, is around three fifths the rate for 18-29 year olds, at 10.8%. Figure 4.7 plots the

series in descending order for 18-29 year olds, where the highest rates of more than 20% can be seen for 2 councils: Derry and Strabane and Ards and North Down. However, despite the wide variation in the rates, most of the differences are not significant. Likewise for the 30 years old and over group across council areas.





**Figure 4.8: Total early-stage Entrepreneurial Activity in the UK Home Nations by Graduate Status, 2022**  
(Source: GEM APS, 2022)

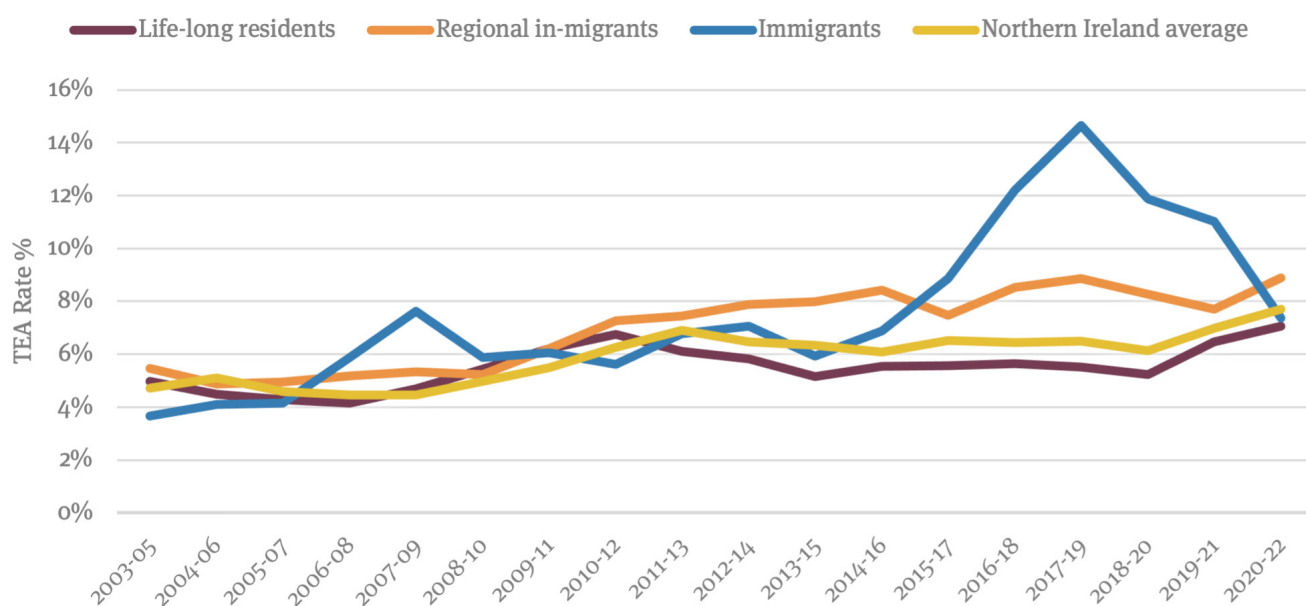


**Figure 4.9: Total early-stage Entrepreneurial Activity in Northern Ireland by Graduate Status and Council Area, combined over 2020-22** (Source: GEM APS, 2020, 2021 and 2022)

### 4.3 Education

The rate of total early-stage entrepreneurial activity for graduates in the UK in 2022 is 14.3% (Figure 4.8), significantly higher than for non-graduates (8.5%). Graduate TEA rates are also significantly higher than non-graduates for England and Northern Ireland, while it is statistically insignificant for Wales and Scotland. More specifically, the comparable rate for graduates currently residing in Northern Ireland is 12.3% and for non-graduates is 6%. In fact, while the rate for graduates has increased considerably from the figures of 10.3% in 2021, the rate for non-graduates has fallen from 8.1% in 2021.

The graduate and non-graduate TEA rates by Council area, for the combined 2020-22 period, are shown in Figure 4.9, where the series are presented in descending order for the graduate TEA rate. The highest rate for graduates can be seen for Ards and North Down at 14.4%, while the lowest one is for Newry, Mourne and Down at 2.8%. Lisburn and Castlereagh is the only council with similar TEA rates for non-graduates and graduates (7% and 7.1%, respectively). However, there were no significant differences in TEA rates between graduates and non-graduates in all district councils.



**Figure 4.10: Total early-stage Entrepreneurial Activity in Northern Ireland by Migrant Status, rolling averages 2003-2005 to 2020-2022** (Source: GEM APS, 2003-2022)

#### 4.4 Migrant Status

Figure 4.10 presents TEA rates for regional in-migrants<sup>7</sup>, immigrants and life-long residents in Northern Ireland, using 3 year rolling averages. As life-long residents comprise the majority of the population, the Northern Ireland average typically mirrors their trend. Overall, entrepreneurial activity in Northern Ireland peaked around 7% over 2010-12, and even though being relatively stable at just under 6% over several years, it has reached 7% again in the 2019-21 period and continued this increasing trend to 7.7% in the 2020-22 period.

The TEA rate for in-migrants continued to rise post-2008 with the rate in 2017-19 peaking at almost 9%. After decreasing slightly, it has risen again in the 2020-22 period to 8.9%.

The TEA rate for immigrants has seen the largest increase over the entire period, with a particularly rapid rise from 2013-15 onwards. But probably due to the effect of the Covid-19 pandemic, this group has also reported a continuing decrease in its rate for the 2020-22 period, down from 11% in 2019-21 to only 7.4% in 2020-22 period, which makes it now lower than the rate for in-migrants and the average Northern Ireland rate of 7.7%. In the UK immigrants have typically been found to be more entrepreneurial than the resident population, driven by opportunity rather than necessity motivations. This difference is due to the nature of the immigrant population in GB with fewer Asians moving into Northern Ireland.

The sample sizes for the ethnic population in NI are too small to produce reliable estimates for entrepreneurial activity rates by ethnicity. However, combining the entire 2002-2022 results gives an average TEA rate of 5.4% for the white population and 8.6% for the non-white population. The difference between the two is statistically significant.

<sup>7</sup> Regional in-migrants are defined as those born in the UK but currently residing in a different Government Office Region to which they were born.

# 5. Entrepreneurial Attitudes and Intentions



**Figure 5.1: Entrepreneurial Attitudes and Perceptions in Northern Ireland and the UK 2022** (Source: GEM APS, 2022)

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<sup>8</sup>, 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.

Individuals who are entrepreneurs may feel compelled to provide positive answers in the Adult Population Survey (APS). Hence, as in the last number of years, we report attitudinal data **only for that portion of the population who are not already entrepreneurs.**

After increasing considerably from 28.3% in 2020 to 46.7% in 2021, the perception of start-up opportunities has fallen back to 29.4% in 2022 for Northern Ireland. A similar pattern can be found in the UK (from 32% in 2020 to 47.7% in 2021 to 37% in 2022). In addition to that, the share of individuals in Northern Ireland who recognised opportunities for start-up but also stated their fear of failure would prevent them from doing so

has also increased again from 56.5% in 2021 to 60.6% in 2022, the figure that is very close to its 61.4% value in 2020. This figure of 60.6% for Northern Ireland is not significantly different from the rate for the UK in 2022 (58%).

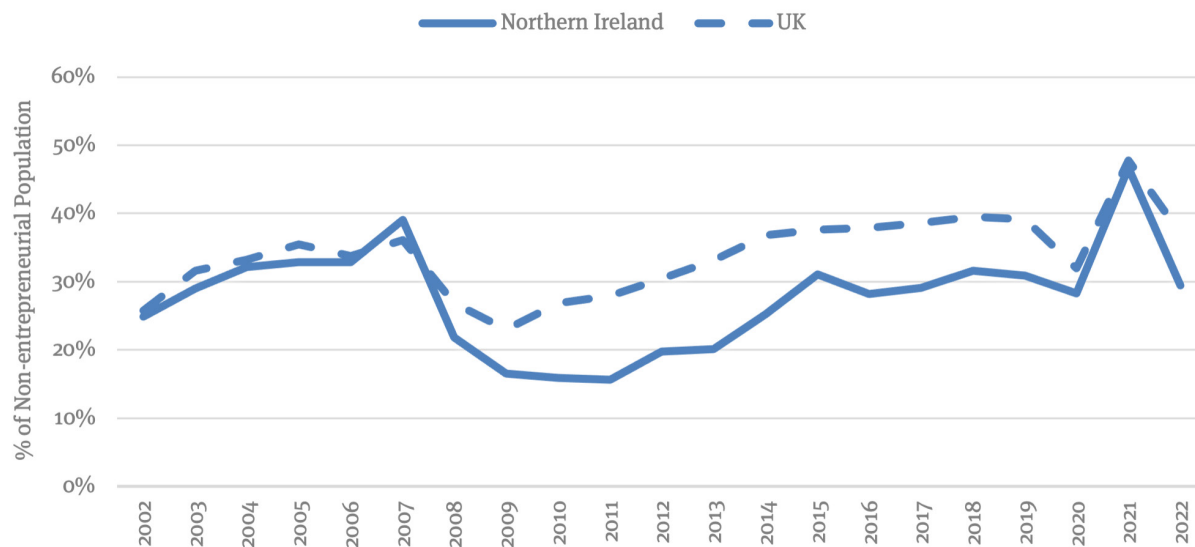
Besides, nearly half (48.5%) of individuals in Northern Ireland stated that they know an entrepreneur (Figure 5.1), while this figure is only 43.7% for the UK in 2022. Finally, around two fifths of the non-entrepreneurial population in both Northern Ireland and the UK felt they have the skills, knowledge and experience to start a business.

Figure 5.2 shows that all these characteristics of entrepreneurial potential are very much the same for younger individuals aged between 18 and 24 in both Northern Ireland and the UK, except that nearly a half of individuals from this younger group in the UK states their perception of start-up opportunities (49.9%), considerably higher than that for Northern Ireland (33.6%).

<sup>8</sup> Regional in-migrants are defined as those born in the UK but currently residing in a different Government Office Region to which they were born.



**Figure 5.2: Entrepreneurial Attitudes and Perceptions among 18-24 year olds in Northern Ireland and the UK 2022** (Source: GEM APS, 2022)



**Figure 5.3: Extent to which good start-up opportunities in the local area, over the next 6 months, are perceived in Northern Ireland and the UK, 2002-2022** (Source: GEM APS, 2002-2022)

As identified above, 29.4% of the non-entrepreneurial working age population in Northern Ireland agreed that there were good opportunities for starting a business in their local area in the next six months compared to 37% in the UK (Figure 5.1). Prior to the financial recession 2007-2009, opportunity perception in Northern Ireland and the UK were similar however a significant difference has since opened-up between the two and continued to prevail until 2019. Even though the gap diminished in 2021, it now has slightly widened again in 2022 (Figure 5.3).

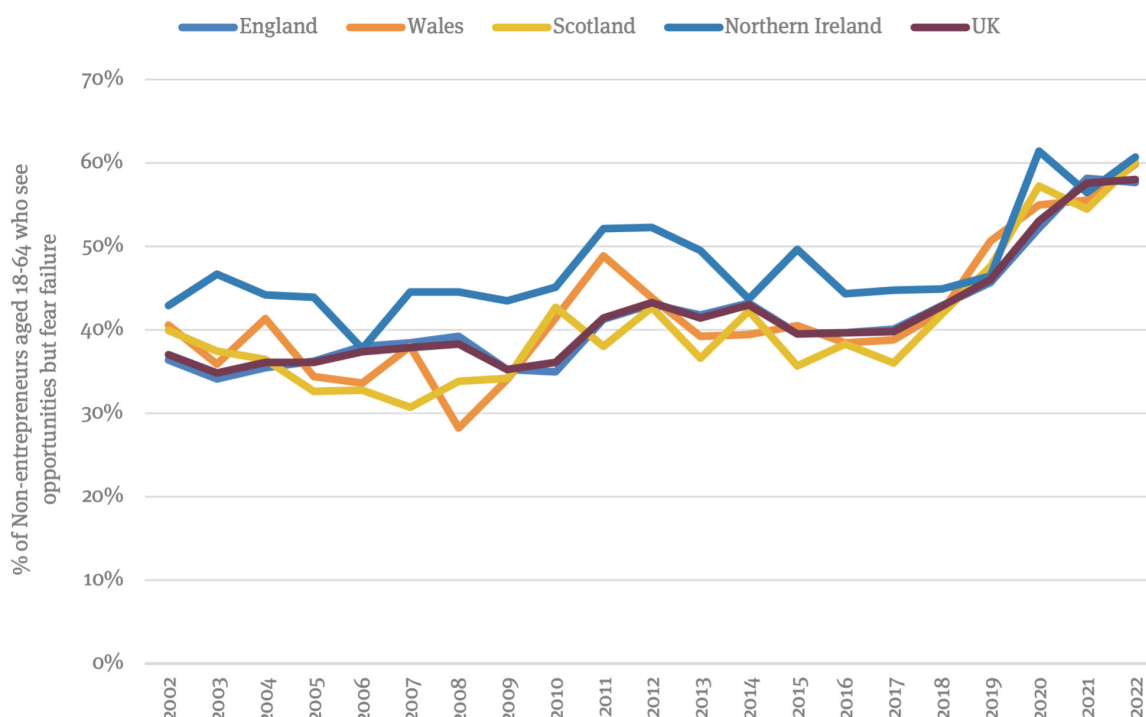
Besides, 2022 saw that around three-fifths of those who see good opportunities in their local area in the next 6 months in Northern Ireland state that fear of failure would prevent them from starting a business (60.6%). Figure 5.4 shows that this is not significantly different from that for all other nations in the UK.

Looking to the future, the proportion of non-entrepreneurial working age adults in Northern Ireland in 2022 who expect to start a business within the next three years is 18.1% (Figure 5.5).

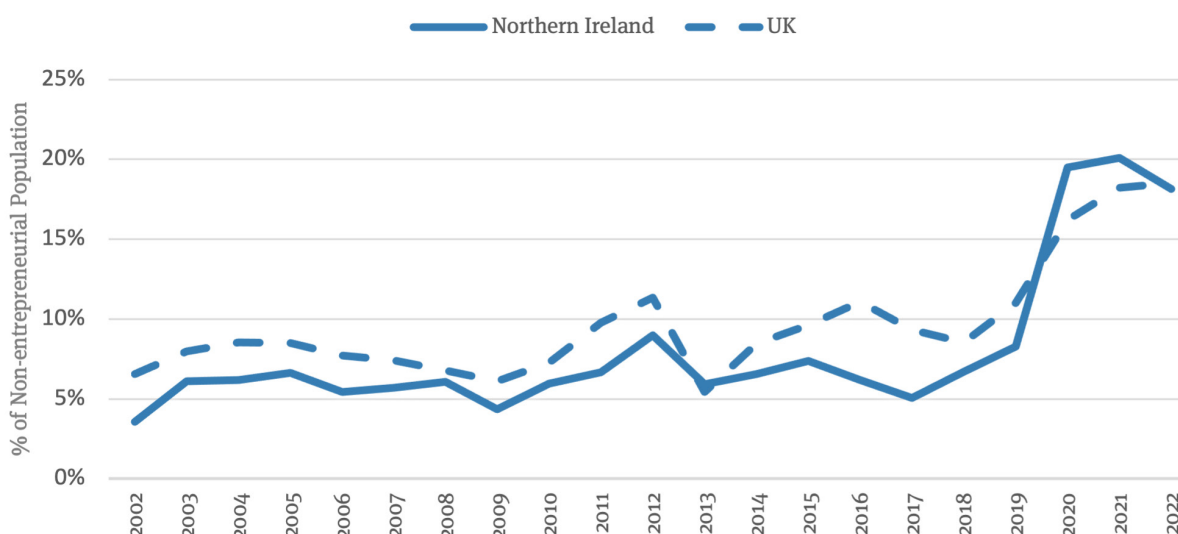
Even though this is a promising figure, it has stopped an impressive increasing trend documented in recent years, and has slightly declined from 20.1% in 2021. We believe this can be attributable to the fact that start-up intention rates tends to increase during a recession but decline subsequently as the economy recovers (the trend which can also be detected in Figure 5.5).

In 2022 males in the UK, England, Scotland and Northern Ireland are significantly more likely than females to report

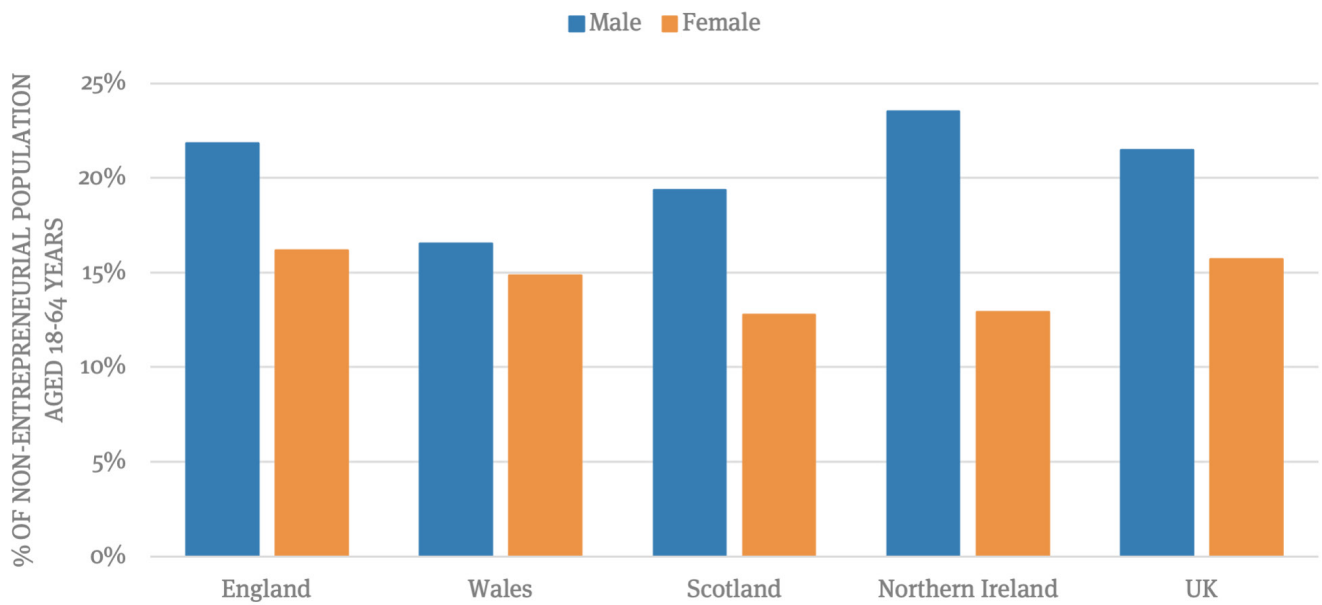
that they intend to start a business in the next three years. In particular, the difference in the intention rates between males and females is strongest for Northern Ireland (Figure 5.6), where the rate is 23.5% for males and 12.9% for females. Translated into a female to male ratio, the figure for Northern Ireland equates to 55% compared to a UK average of 73%. In addition, Northern Ireland's 23.5% is also the highest rate for males, followed by England at 21.8%.



**Figure 5.4: Fear of Failure among those who see Opportunities in the UK Home Nations, 2002-2022**  
(Source: GEM APS, 2002-2022)



**Figure 5.5: Future Start-up Expectations (within 3 years) in Northern Ireland and the UK, 2002-2022**  
(Source: GEM APS, 2002-2022)



**Figure 5.6: Future Start-up Expectations (within 3 years) in the UK Home Nations by Gender, 2022**  
 (Source: GEM APS, 2022)

# 6. High Growth

Recent research has suggested that a relatively small number of firms can create a disproportionate number of jobs<sup>9</sup>. If an entrepreneur expects to create a large number of jobs then his or her potential contribution to growth and regeneration through entrepreneurship may be greater.

To identify such individuals GEM generates a variable which measures the percentage of all early-stage entrepreneurs (and separately established business owners) who expect to create more than ten jobs with a growth in employment of more than 50% in the next five years. Figure 6.1 displays the trend in these high growth expectation entrepreneurs for both Northern Ireland and the UK, using 3 year rolling averages. Previously, high growth expectation rates amongst TEA entrepreneurs in the UK were typically around three to four times higher than those for established business owners. However, recently, with a considerable increase in the rate for established business owners (from 7.5% for 2018-2020 period to 9.2% for 2020-22 period) and a marked decrease in the rate for TEA entrepreneurs (from 18.6% for 2019-2021 period to 14.6% for 2020-22 period), this ratio has decreased to less than two times higher.

It can be seen from Figure 6.1 that in Northern Ireland, just one in six early-stage business owners expect to achieve high growth. Even though there was a considerable decrease from 21.3% for the 2019-2021 period to 17.1% for the 2020-22 period, this rate was still higher in Northern Ireland than in the UK (14.6%). Overall, high expectation rates in the UK have been broadly more consistent over time than for Northern Ireland, with rates dropping for Northern Ireland between 2015-18, albeit rebounding consistently over recent years.

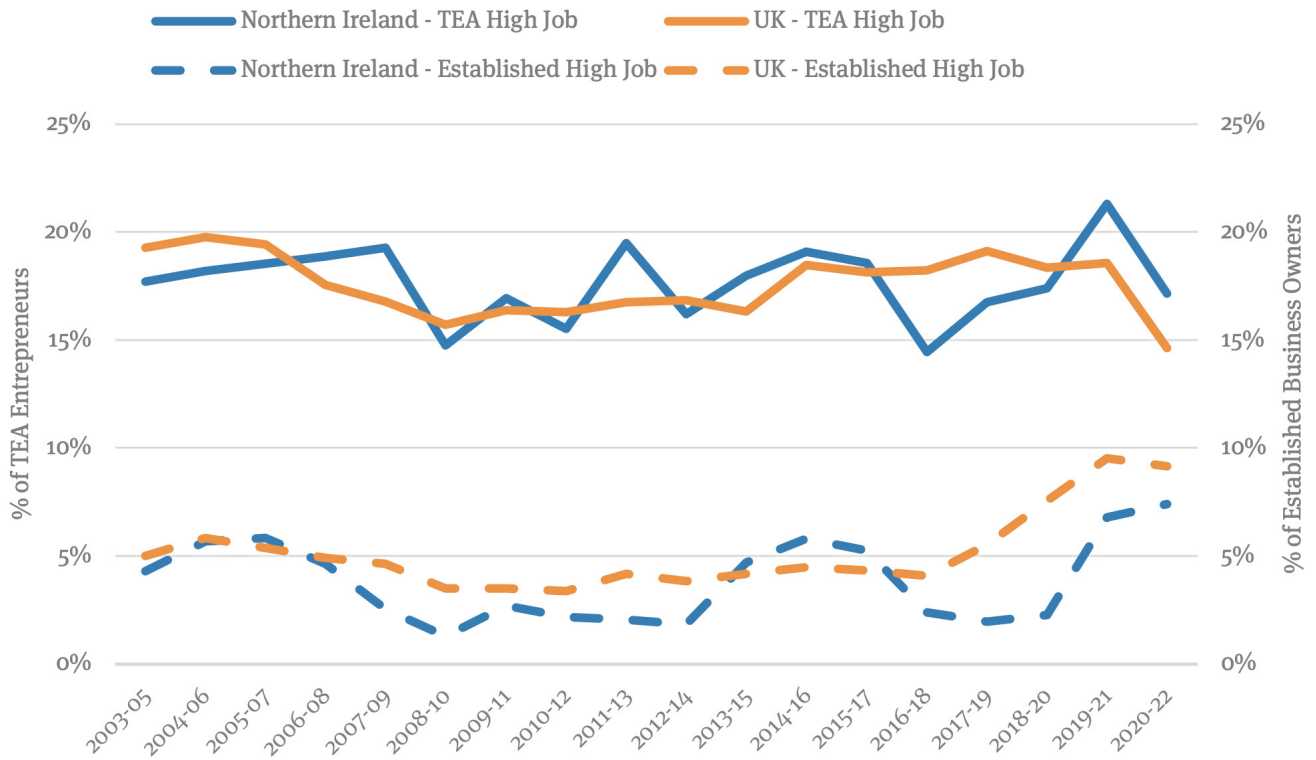
The trend in high growth expectation for established business owners has also been less variable over time for the UK. Until 2006-08 the share reporting high job expectation averaged around 5% in both Northern Ireland and the UK. This subsequently dropped to around 2% in Northern Ireland, but has shown a considerable increase in the recent years to its new peak of 7.4% for the 2020-22 period.

Along with high growth, GEM now also measures potential impact of businesses in the national and world markets. Table 6.1 shows that 1.7% of Northern Ireland early-stage entrepreneurs have a business with potential national impact, a slight increase from 1.5% in 2021. This figure for the UK is 1.6% compared to its value of 1.8% in 2021. However, the percentage of established business owner-managers whose businesses have potential national impact is considerably lower in Northern Ireland at 0.4% compared to 0.9% for the whole UK. In terms of international impact, the shares are even smaller, although consistent between Northern Ireland and the UK, in that, early-stage business have marginally more international scope than established businesses.

	Early-Stage Businesses		Established Businesses	
	NI	UK	NI	UK
At least <b>national scope</b> for market and at least national scope for new product or new process	1.7%	1.6%	0.4%	0.9%
At least <b>international scope</b> for market and at least international scope for new product or new process	0.7%	0.4%	0.1%	0.1%

**Table 6.1: Measures of entrepreneurial potential impact rates in Northern Ireland and the UK, 2022**  
(Source: GEM UK APS 2022)

<sup>9</sup> Hart, M. and Anyadike-Danes, M. (2014) "Moving on from the vital 6%"; Enterprise Research Centre Insight Report, February.



**Figure 6.1: Relative Frequency of High Job Expectation Early-stage Entrepreneurs and Established Business Owners in NI and the UK, three year rolling averages, 2003-2005 to 2020-2022**  
 Source: GEM APS, 2003-2022)



## 7. Funding

Obtaining funding is a key issue for many start-up businesses. Combining data for 5 years from 2018 to 2022, Table 7.1 shows that in Northern Ireland just over half of all nascent entrepreneurs expected to self-fund (55.3%), slightly higher than the UK figure of 47.5%. Compared to the UK, around a third the share in Northern Ireland, 2.8%, expect that they will not need any funding, and even less than that expect that they personally will fund none of the start-up costs.

Of those expecting funding from elsewhere, banks and government programmes are most favoured in Northern Ireland followed by funding from close family members or friends and neighbours. In the UK funding by close family ranks highest followed by bank funding. Even though raising funds from online crowdfunding has become more prevalent in recent years, it accounts for only 9.6% in 2018-2022 period in Northern Ireland, and even less in the UK.

Around a quarter of nascent entrepreneurs in Northern Ireland and the UK expect to source funding primarily from family. This coincides with increasing trends in informal investment, or investment by individuals in other people's new businesses, as shown in Table 7.2. The informal investment rate over the combined 2018-2022 period stood at 5.4% in Northern Ireland, just under the UK rate of 5.7%. Investment into companies owned by close family was the most common investment choice in Northern Ireland and, at 44.5%, was considerably higher than the UK share. Consequently, Northern Ireland had lower shares investing in friends, neighbours or strangers' businesses.

Type of Funding Expected	Northern Ireland (%)	UK (%)
No funding needed	2.8	7.3
All funded by entrepreneur	55.3	47.5
None funded by entrepreneur	1.6	1.3
Sources of Funding		
Close family member (spouse, parent, sibling)	24	25
Other relatives, kin or blood relations	9.7	8.2
Employer or work colleagues	6.4	7.6
Private investor or venture capital	8.8	12
Friends or neighbours	23.1	6.9
Banks or other financial institutions	33.8	20.6
Government programmes, donations or grants	7.7	15.8
Online crowdfunding	9.6	8.1
Any other source	NA	7.4

**Table 7.1: Percentage of nascent entrepreneurs expecting funding from different sources 2018-22**  
(Source: GEM UK APS 2018-22)

<b>Informal investment rate</b>	<b>Northern Ireland %</b>	<b>UK %</b>
<b>% aged 18-64 who have invested in someone else's new business in the last 3 years</b>	5.4	5.7
<b>Relationship of latest investee (% of latest investments)</b>		
<b>Close family member (spouse, parent, sibling)</b>	44.5	37.6
<b>Other relative, kin or blood relations</b>	14.7	12.9
<b>Work colleague</b>	12.6	10.2
<b>Friend or neighbour</b>	17.5	23.7
<b>A stranger with a good business idea</b>	9.6	13.7
<b>Other</b>	1.0	1.8

**Table 7.2: Percentage of individuals aged 18-64 who have invested in someone else's new business in the last 5 years, and the distribution of relationships to the latest investee, 2018-2022** (Source: GEM APS 2018-22)

## 8. Concluding Observations

Levels of entrepreneurial activity are a vital metric in any economy as the creation of new ventures is positively connected to the drivers of economic growth and productivity through increased innovation, competition and job creation. While recent years have seen record levels of start-up in the UK in an international context there still remains an ‘entrepreneurial deficit’ in Northern Ireland, as measured by business start-up activity. However, recent years saw a considerable increase in the overall entrepreneurial activity rate of Northern Ireland, even though it has slightly decreased in 2022. Overall, the combined Northern Ireland rate for 2020-22 remained lower than the UK.

Northern Ireland has historically lagged behind the rest of the UK in terms of some of the attitudinal measures of entrepreneurship, particularly in the perception of start-up opportunities in the local area, even though self-perception of skills to start a business in Northern Ireland has indicated a stronger increasing trend in comparison with the UK. Besides, the share perceiving good opportunities for start-up in Northern Ireland, after recording a marked increase from 28.3% in 2020 to 46.7% in 2021, has decreased to 29.4% in 2022. In addition, fear of failure in Northern Ireland has remained quite high at 60.6% in 2022.

Nearly half of individuals in Northern Ireland (48.5%) stated that they know someone that started a business recently. This figure is considerably higher than the 43.7% share in the UK in 2022, even though the difference here is statistically insignificant. This may reflect the increased presence of entrepreneurs in society and/or may be a sign of increased networking.

Entrepreneurs who expect to create a large number of jobs potentially make a greater contribution to growth and regeneration. Recently, the rate of high job expectation in Northern Ireland has continued to show an increasing trend. However, it is important to notice that 2022 saw a considerable decrease in this rate for TEA entrepreneurs, for both Northern Ireland and the UK.

Stimulating start-ups will continue to be important but providing a support framework from both the private and public sector to help them survive and grow is now also a crucial element of any developing policy framework. The recent “10X Economy Vision for a Decade of Innovation” from the Department for the Economy of Northern Ireland has stressed that: “Our ambition is to become an economy known for its enterprising culture and we want to drive up the rate of new business starts ups and create an environment that actively fosters and supports entrepreneurs to turn their ideas into reality”<sup>10</sup>.

Invest NI, alongside the Department for the Economy, is leading Northern Ireland participation in MIT’s Regional Entrepreneurship Acceleration Programme (REAP)<sup>11</sup>, with participation from the risk capital, corporate, university / further education, local government and entrepreneur sectors. The MIT REAP program emphasizes the distinct, yet interdependent, roles of innovative capacity and entrepreneurial capacity as it relates to an ‘innovation ecosystem’. The program does so by enabling regional team members<sup>12</sup> to learn from MIT experts, catalyze regional action, and leverage global best practice through cross-regional collaboration. This hybrid educational and economic development programme ultimately enables regional stakeholders to further social progress and accelerate economic growth at its core”. This process, aligning as it does with DFE’s increasing focus on increasing the number of new Innovation Driven Enterprises as part of the 10x Innovation work stream, represents an opportunity to impact on the Entrepreneurial Framework Conditions.

<sup>10</sup> DfE - 10X Economy: Northern Ireland’s Decade of Innovation

<sup>11</sup> The MIT Regional Entrepreneurship Acceleration Program (REAP) is a global initiative, which helps regions accelerate economic growth and promote social progress through innovation-driven entrepreneurship (IDE). Partner regions form multi-disciplinary teams and commit to a two-year learning engagement during which teams work with MIT faculty and the broader MIT REAP community to build and implement a custom regional strategy for enhancing their IDE.

<sup>12</sup> MIT REAP participants are comprised of a team of 5–8 leaders drawn from 5 key stakeholder groups (government, risk capital, universities, entrepreneurs and corporates). These stakeholders work collectively with others from their region and with MIT thought leaders to build out their action-based strategy for change. The team does so by deploying MIT framework to assess the region’s capacities and comparative advantages and how they influence the entrepreneurial ecosystem. The information derived from this assessment serves as a foundation for the team’s strategy and the implementation of that strategy.

**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,  
visit: <http://www.gemconsortium.org>**