

The Economic Impact of
Venture Capital in Ireland
2016-2018



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Foreword

The Irish Venture Capital Association is the representative organisation for venture capital and private equity firms in Ireland. Irish venture capital and private equity firms have invested €5bn in Irish SMEs since 2003 and, through syndication, have attracted in a further €3bn in funding from international firms.

For 15 years, the IVCA has collected data that provides information on the impact of venture capital on Ireland's job creation and economic growth. This seventh in depth study of The Economic Impact of Venture Capital in Ireland continues to reinforce the importance of the industry in building high growth indigenous companies.

The industry creates high calibre jobs and generates significant export sales growth. It plays a critical role in driving innovation by investing in research and development. As equity investors, IVCA members assume more risk and partner more closely with entrepreneurs than other investors to bring breakthrough ideas and technologies to the marketplace. The more recently established domestic private equity firms have broadened the funding options to Irish SMEs – particularly those undergoing generational changes in ownership or consolidating through acquisition. There are now many more options for owners seeking liquidity than just selling their business.

The skill set and domain expertise of Irish venture capitalists and these newer private equity funds have deepened considerably over the years, resulting in IVCA investor members adding significant value to portfolio companies. The technologies developed have changed the way we live and work in profound and countless ways.

Activity levels in global markets have recovered and IVCA member firms are raising new funds. In Ireland, activity levels peaked at close to €1bn in 2017 with scaling activities on the increase. Government recognises that domestic venture capital and private equity activity, by deploying capital efficiently to emerging technologies, results in the creation of thousands of high calibre direct jobs with significant downstream impact on indirect jobs and in billions of euros in revenues and exports. In recognition of this positive economic impact, Government has been pro-active and committed, through Enterprise Ireland, up to €175m as a cornerstone investor to venture capital funds under the Seed & Venture Capital Scheme 2019-2024. It is anticipated that the venture capital and private equity industry will leverage this commitment by a multiple of four to five times. The sector has been further underpinned by significant support from the Ireland Strategic Investment Fund. We are confident that the industry will thrive and grow and will continue to play its part in building companies, in driving entrepreneurialism and in supporting innovation.

This study, conducted by the DCU Business School, was carried out between January and October 2019 and covers the three years 2016, 2017 and 2018. It is unique in that it is a census of Venture Capital and Private Equity backed companies in Ireland and, as such, it provides very useful data for policymakers, investors and industry practitioners. It has become an authoritative source of information about our industry and its social and economic impact. Its value continues to deepen as the trend analysis expands from its start date in 2003.

We would like to take this opportunity to thank the venture capital and private equity companies for providing the necessary data and Dr Eric Clinton of the DCU Business School for conducting the study.

Neil McGowan | IVCA Chairman

Companies funded by IVCA members power the Irish SME sector and deliver on Public Policy aims. Over 15 years they have provided a substantial impetus to the development of a knowledge-based SME economy in Ireland.

Investment



In 2018 there were **227** funding rounds raising **€740m.**

Between 2016-2018
748 funding rounds
have raised **€2.6bn**

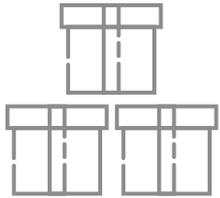
Employment



Since 2016 IVCA backed companies created **5,000** high calibre jobs.

Employment numbers have
increased by **27%** per annum
since 2016

Exports



Exports by IVCA backed companies grew by **16%** per annum since 2016.

In this period VC backed companies generated exports of **€1.8bn**

Research & Development



Expenditure on R&D by VC backed companies represents **35%** of all SMEs share of total spend on BERD*.

Expenditure on R&D by VC backed companies since 2016 was **€452m**.

In 2016 this represented 40% of all SMEs share of total spend on BERD*.

Irish Venture Capitalists



Invest in Future Growth Enterprises

Over **90%** of the funds were raised by SMEs in the High Technology sector.

Build/Scale Businesses

Over 50 companies in the portfolio have in excess of 90 employees. Since 2016 the number of companies raising **€25m+** has doubled.

Venture capital invests in the knowledge based economy

An in-depth analysis of portfolio companies shows that they are knowledge based and export led, particularly the younger companies.

Investment

In 2017 activity levels reached an all-time high with 291 funding rounds raising €994m. Since 2016, 748 funding rounds have raised €2.6bn. Compared to the previous study period (2012-2015), this is an increase of over 60% in the number of fundraising rounds and a 115% increase in the amount of capital raised by innovative SME's.

High Technology companies accounted for 90% of the funds raised. This is the highest technology weighting in Europe. Since 2016 10% of this capital was invested in start up and early stage companies. This figure compares with the European average of 22% (Invest Europe).

Employment

Since 2016 portfolio companies have created 5,000 high calibre jobs. Over the last fifteen years the IVCA Economic Impact research shows that portfolio companies have created 25,046 high calibre jobs, of which 7,098 are represented in the current portfolio and 17,948 were represented in the portfolio exits since 2003. Employment in companies that have exited the portfolio continues to grow but the study cannot track this growth.

It is estimated that these companies support up to three additional indirect downstream jobs meaning that equity funded companies support a further 75,000 jobs.

Portfolio companies have increased employment by 36% in 2017 and by an average of 27% per annum since 2016. This compares to an overall increase in employment in the economy of 3% per annum since 2016, (CSO).

Graduate Based Employment

In 2018 graduate employment in portfolio High Technology companies increased by 8% to 77% of the total workforce in these companies. Graduate intensity peaked at this level of 77% of the High Technology portfolio workforce in 2018. On average graduate intensity is 65% of the workforce across all sectors for the three years 2016-2018.

Revenues

Portfolio companies increased revenues by 30% in 2018. The average annual growth rate since 2016 was 28%. The IVCA data set shows that, in terms of productivity, revenues per employee are higher in the High Technology sector.

Exports

IVCA Portfolio companies increased exports by 35% in 2018 and by 16% per annum since 2016. This compares to an increase of 15% in total Irish exports in 2018 and to an annual average increase of 7% since 2016 (CSO).

In the High Technology sector, exports represented 86% of revenues, ranging from 77% in young companies (3-5 years) to 95% in older companies (10+ years).



Research and Development

Expenditure on R&D by IVCA portfolio companies represents 35% of all SMEs share of total spend on BERD (Business Expenditure on Research and Development) in the years 2016-2018.

R&D intensity in the High Technology younger companies i.e. less than three years old is at 71%. This intensity falls to 14% in companies over ten years old.

Expenditure on R&D by portfolio companies since 2016 was €452m. In 2016 this represented 40% of all SME's share of total spend on BERD (Business Expenditure on Research and Development).

Sales & Marketing

Expenditure on sales and marketing by portfolio companies increased by 19% in 2018 and by 17% per annum since 2016.

Accelerating Growth

Momentum in growth rates escalates as venture backed companies age. Companies in operation over 10 years have an average annual growth in sales of 28% over the 3 years of this study.



Portfolio Entrants & Exits

Entrants to Portfolio - New Investments

Irish venture capitalists continue to invest in early stage High Technology companies. Since 2016 there have been 102 new companies added to the portfolio, 88 or 90% of them into the High Technology area and the majority concentrated in the ICT and Lifesciences sectors.

These new entrants, in the main, continue to exhibit a high concentration on exports, R&D spend and graduate employment.

Exits from Portfolio

Since 2016 there were 84 exits (trade sale, IPO, restructuring, etc) from the portfolio, 73 (87%) were in the High Technology sector. Since 2016, companies exiting the portfolio, on average, were six times the size of new entrants. Statistics relating to exits are removed from the database. Consequently, realised investments, because they can be significantly larger than the average investment in the portfolio, tend to have a disproportionate effect on portfolio revenues and employment.

Venture Capital & Private Equity Investment – A fundamental component of the Irish Economy

It is clear from the results of this latest and earlier IVCA economic impact studies that the venture capital and private equity industry drives job creation and economic growth by helping entrepreneurs turn innovative ideas and scientific advances into products and services that change the way we live. Venture capital and private equity investors do this by providing the funding and guidance – and by sharing the risks with the entrepreneurs – necessary to build high-growth companies capable of bringing these innovations to the marketplace. Venture capital nourishes entire industries and because of their high growth characteristics venture capitalists continue to fund innovations within them. The exceptional performance of equity backed SME's over the 15-year dataset is clear.

In other countries or regions that have built thriving venture capital and private equity ecosystems, the industry's effects on job creation, revenue growth and the tax base are significant.

International studies indicate that the predominance of venture capital and private equity:

- Stimulates Growth – an increase of 0.1% in VC/GDP results in 0.3% real GDP growth.
- Stimulates Innovation – There is a positive statistical correlation between the amount of venture capital and the conversion of ideas into commercially successful innovations.
- Stimulates Research and Development – In the US a \$ of venture capital is three times more effective in stimulating patenting than a \$ of traditional R&D. In Ireland the spend on R&D by venture-backed innovative companies increased by 15% per annum in the period from 2003 to 2018, double the rate from non venture backed indigenous Irish SMEs. R&D spend by venture-backed companies now represents 35% of all SMEs share of total spend on BERD (Business Expenditure on Research and Development).
- Stimulates the Creation of New Businesses – The rate of new business creation increases and is three times more likely in industries that attract sizeable venture capital investment.
- Stimulates Entrepreneurialism – Venture capital investment in a firm stimulates the creation of between two and twelve additional spin-out firms. Irish technology companies have spun out a significant number of new companies and created a new generation of serial entrepreneurs who are now dominant in the early stage sectors. Parthus, Iona and SmartForce alone have spun out one hundred and forty six (146) companies.

Venture capitalists bring many intangible benefits to portfolio companies including syndication with international investors, introductions to potential business partners, customers and acquirers, corporate governance and an endorsement of the business and management team to the sector in which it operates.

Fig. 1 VC Investment in Ireland by Sector



Economic Impact Study – 15-Year Review & Recommendations

The Economic Impact Study database compiled by the DCU Business School includes information on venture-backed companies over the last fifteen years to 2018. The analysis shows that venture backed companies:

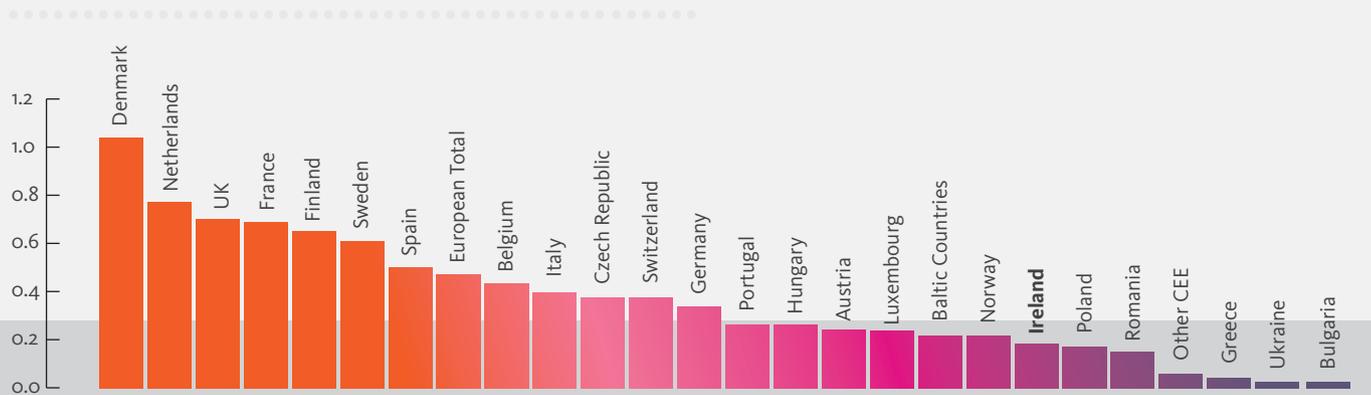
- Create more high calibre jobs
- Are export led in all age cohorts
- Grow faster
- Are knowledge based i.e. significant graduate employment and spend on R&D

These economic characteristics have encouraged and influenced policy makers to recognise the importance of venture capital activity and consequently innovation and venture capital are at the centre of Ireland's economic policy. This is evidenced by funding initiatives from Enterprise Ireland at the seed stage, scaling and in the growth capital space and by the establishment of a later stage expansion funds by ISIF (Ireland Strategic Investment Fund). In 2019, Government has committed, through Enterprise Ireland, up to €175m as a cornerstone investor to venture capital funds under the Seed & Venture Capital Scheme 2019-2024.

Entrepreneurs need significant operational support to get their ideas off the ground. That's why a healthy network of lawyers, accountants and other business professionals who understand the challenges of the start-up community remains essential to building a thriving venture capital eco system. These networks develop over time and provide start-ups and VCs with specialized services such as intellectual property protection, IPO registration, auditing and workforce development. Ireland is currently ranked 2nd best place in Europe for venture capital supports as reported in Invest Europe's: Benchmarking European Tax and Legal Environment.

Support from state and local government in the form of favorable tax policies, common-sense regulatory structures and encouragement of basic research provide a key essential component. Ireland's tax regime, through R&D tax credits and a low rate of CGT on carried interest, recognizes the importance of capital formation and rewards long-term investment in innovation. However, there is a note of caution here in that the incentives offered to entrepreneurs in other European countries are overtaking those offered in Ireland. The table below illustrates that as Irish GDP rises, investments as a % of GDP are falling. New tax incentives should be considered to encourage private capital away from passive assets to fund the future of Irish industry and the productive assets that will power the Irish economy over the next fifteen years.

Fig. 2 European Investments as a % of GDP



Funding Sources Ireland

The relatively recent nature of Ireland's prosperity and its roots in a foreign direct investment orientated open economy have resulted in a lack of depth in the type of institutional and corporate investors often seen in other European countries. There is a lack of domestic multinationals, which in other countries, typically deploy some assets in domestic venture capital and private equity funds or direct investment in start-ups. In 2018, corporate venture capital activity in the United States represented 52% of total venture capital investment. Additionally, Ireland has significantly less well-developed family office and endowment fund structures than other European countries, and the small size or property focus of most domestic pension funds has limited investment by in domestic private capital.

We believe an incentive mechanism needs to be found to unlock far greater asset allocation from domestic pension funds into Irish private capital funds. Based on the returns of these asset classes, it makes commercial sense but it will also ensure that existing state investment in the sector goes significantly further, and that the significant contribution of venture and private equity backed Irish SME's to the Irish economy can continue and increase.

The database was adjusted to reflect exits and new entrants during these years.

“The IVCA/DCU economic impact study positions Ireland as a thought leader globally on the true economic contribution of venture capital backed firms to an economy. Where many international studies take a cross sectional or ‘snap shot’ view of economic activity, the longitudinal nature of the research design of this study allows us to track the evolutionary development of venture capital backed firms. Since its establishment in 2003, this study has tracked all IVCA backed firms from their inception, growth and exit across an array of economic measures including turnover, national and international sales and marketing, employment and salary contributions, workforce educational profiles, research & development expenditure, tax contributions, regional investment, and export orientation.”

Quote from Dr Eric Clinton, Associate Professor in Entrepreneurship and Director of the DCU National Centre for Family Business.

Study Methodology

This is the seventh in depth study of the economic impact of venture capital on the Irish economy. The study, conducted by DCU Business School, collected and analysed the following statistics:

- For every company in the portfolios of IVCA members' funds at the end of 2016, 2017 and at the end of 2018;
 - revenues,
 - employment,
 - capital raised,
 - spend on research and development,
 - graduate employment,
 - export performance,
 - spend on sales and marketing.
- For every company supported by non-IVCA venture capital companies active in Ireland at the end of 2016, 2017 and at the end of 2018;
 - revenues,
 - employment,
 - capital raised.

Act Venture Capital	www.actventure.capital
Atlantic Bridge	www.abven.com
Causeway Capital Partners	www.causewaycapital.eu
Delta Partners	www.deltapartners.com
Development Capital	www.developmentcapital.ie
Draper Esprit	www.draperesprit.com
Dublin BIC	www.dublinbic.ie
Enterprise Equity	www.enterpriseequity.ie
Fountain Healthcare	www.fh-partners.com
Frontline Ventures	www.frontline.vc
Investec Ventures	www.investec.ie
Kernel Capital	www.kernel-capital.com
Lightstone Ventures	www.lightstonevc.com
MML	www.mmlcapital.ie
NDRC	www.ndrc.ie
Seroba Life Sciences	www.seroba-lifesciences.com
Silicon Valley Bank	www.svb.com
SOSV	www.sosv.com
The Yield Lab Europe	www.yieldlab.ie
Western Investment Fund	www.wdc.ie

IVCA members, using equity funds & expertise,
partner with entrepreneurs to build great
businesses that can scale in global markets.



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