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## Study Methodology

This is the first in depth study of the economic impact of venture capital on the Irish economy. The study, conducted by the Department of Entrepreneurial Studies in UCD, comprised:

A census of each of the companies in the portfolios of IVCA members at the end of 2003 and at the end of 2004 where the following statistics were gathered:

- revenues.
- · employment,
- · capital raised,
- · spend on research and development,
- · graduate employment,
- · export performance,
- · spend on sales and marketing.

Interviews with non-IVCA venture capitalists active in Ireland at the end of 2003 and at the end of 2004 where the following statistics were gathered:

- revenues.
- · employment,
- · capital raised.

This study was enhanced by a qualitative survey of a sample of 40 Chief Executive Officers of high technology companies that raised funds from IVCA members. The sample represented 24% of IVCA member high technology companies.







## Foreword

The Irish Venture Capital Association, established in 1985, represents Irish based venture capital firms which account for 95% of the €1bn invested by Irish VCs in Ireland in the last ten years. The Association has twenty-one full members and 35 associate members.

The story of the Irish venture capital industry has been one of growth and success that has encouraged entrepreneurship and provided support and assistance to innovative companies. IVCA members help entrepreneurs to start up, expand and develop businesses mainly in the high technology sector of the economy.

This is the first in depth study of the economic impact of venture capital on the Irish economy. The study, conducted by the Department of Entrepreneurial Studies in UCD, was carried out between January and October 2005. The study is unique in that it is a census of VC backed companies in Ireland and, as such, it provides very useful data for policymakers, investors and industry practitioners.

The study shows that the VC industry is a major driving force in the development of a knowledge-based economy in Ireland. It also shows the relevance of the non-monetary contribution of venture capital backers in the creation of dynamic enterprises.

The results and conclusions are presented for the Republic of Ireland on pages 4-10 and for Northern Ireland on page 11. It is intended to update this study on an annual basis so that it will be an authoritative source of information about our industry and its social and economic impact.

We would like to take this opportunity to thank the venture capital companies for their significant contribution and to Professor Frank Roche of the Centre of Entrepreneurial Studies in UCD for conducting the study.

**Desmond Fahey** 

IVCA Chairman November 2005 Barry Fitzsimons

Vice-Chair InterTradeIreland

# Venture capital invests in the knowledge based economy

An in depth analysis of IVCA backed high technology companies shows that they are knowledge based and export led, particularly among younger companies.

## **Research and Development Intensity**

IVCA backed high technology companies invested €89m in R&D in 2004, an increase of 16.6% on 2003. This compares to an increase of 6.4% in BERD (Business Expenditure on Research and Development) by indigenous Irish businesses.

Expenditure on R&D by IVCA backed high technology companies now represents 28% of total Irish indigenous spend on BERD. R&D intensity is 17% of revenues in total but in the 0 to 5 year age bracket is at 67%.

## **Export Intensity**

IVCA backed high technology companies grew exports in 2004 by 9.8% to €414m compared to a growth rate of 9.4% from the total Irish indigenous sector. This represented export intensity of 78% of revenues compared to an intensity of 37% within the total Irish indigenous sector. This intensity increases to 85% for companies in the 10+ year age bracket.

## **Graduate Based Employment**

In 2004 graduate employment in IVCA backed high technology companies increased by 15.4%. Graduates represented 78% of the workforce. This graduate % ranges from 85% in companies aged from 0 to 5 years to 65% in companies aged 10+ years.

## **Sales and Marketing Intensity**

In 2004 IVCA-backed high technology companies invested €107m in sales and marketing, an increase of 8% on 2003. S&M intensity is at 20% of revenues in total but in companies in the age bracket of 6 to 10 years it rises sharply to 48%.



## Focus on venture capital in Northern Ireland

The study included eight IVCA-backed companies in Northern Ireland representing a subset of the larger VC industry in Northern Ireland.

## These companies are growing fast with revenues increased by 12% and employment by 16%.

- IVCA-backed companies increased revenues in 2004 by 12.2% to €166m. High technology companies, accounting for 25% of the total, increased revenues by 17.5%.
- IVCA-backed companies increased employment by 15.7% to 1,157. High technology companies, accounting for 46% of the total, increased employment by 20.9%.

## IVCA-backed high technology companies in Northern Ireland are knowledge based and export led.

IVCA-backed high technology companies in 2004:

- Increased graduate employment by 18.7% to 445. Graduates represented 83% of the workforce;
- Invested €8m in sales and marketing, an increase of 20.5% on 2003. S&M intensity is at 19% of revenues;
- Increased exports by 20.9% to €38m. This represented export intensity of 91% of revenues;
- Invested €8m in research and development, an increase of 3.7% on 2003. R&D intensity is at 18% of revenues.

## **Cross Border Activity**

Cross border transactions by IVCA member companies in 2004 are summarised below:

	Hi-Tech	Non-Tech
Exports		
Companies in the Republic, exporting to Northern Ireland	€0.9m	€84.4m
Companies in Northern Ireland, exporting to the Republic	€6.7m	€40.4m
Employment		
Southern Companies, employees in Northern Ireland	132	643
Northern Companies, employees in the Republic	127	22

## Venture Capital in Ireland: Its role in building a knowledge-based economy

## Growth Factors in the Irish Economy

Ireland's economic success over the past decade was driven largely by the performance of the internationally traded goods and services sectors, and in particular by the growth of foreign direct investment. More recently growth has been driven by the construction and consumption sectors.

The Enterprise Strategy Group in its report *Ahead of the Curve* highlights the need for the continuous development of the indigenous service and manufacturing sectors to provide the engine for growth for future decades. The broader EU Lisbon Agenda also reinforces the need for Ireland to create and nurture its indigenous high technology base.

Indigenous high technology companies will play a role in ensuring sustainable growth. These companies are already exhibiting high levels of growth in employment, revenues, exports and spending on research and development. In Ireland the principal support for this sector comes from the venture capital industry.

## Venture Capital

Venture capital is the equity financing of unquoted companies, typically SMEs, from seed to expansion stages of investment.

The bulk of European SMEs access capital in the form of bank debt, which can be difficult to source and inappropriate for their development, particularly by those with new innovative ideas or with high growth potential. Where bank debt is not available the VC industry is the main provider of capital to SMEs, through the investment of equity finance into such companies. Efficient sustainable risk capital markets are essential for the creation and support of new high growth businesses that can generate new jobs and growth.

Over €1bn has been invested by the Irish VC industry in the last ten years.

In 2004 86% of all VC investment was in high technology companies and 46% of the total was into start up and early stage companies. Within the high technology sector 31% of IVCA member investment was into healthcare.

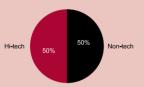
Venture capital investment measured in terms of its percentage of GDP shows that in 2004 the US percentage was 0.2%, the European average was 0.1% and in Ireland the percentage was 0.042%. Ireland's position is significantly behind that prevailing in Europe and in the United States. The challenge in Europe is to double the percentage to meet that prevailing in the US. Ireland has made a start but needs to quadruple its investment to match the demands within the European context. The amount needs to be even higher if Ireland is to move ahead of the European average.



# Venture capital boosts the Irish economy

## **Employment**

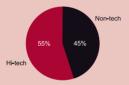
Venture backed companies increased employment in 2004 by 14.6% to 14,500. This compares to an overall increase in employment of 3.1% and to an increase of 4.4% in the Financial and Business Sector. The level of employment at 14,500 may be considered low in terms of overall employment in the economy. However it is growing fast and now represents 6.1% of employment levels in the Financial and Business Sector having increased from a level of 5.6% in 2003.



Employment in high technology companies at 50% of the total is growing even faster, showing an increase of 17.7% and within this sector IVCA backed companies in the 0 to 5 year age bracket grew employment by 34% between 2003 and 2004.

#### **Revenues**

Venture-backed companies increased revenues in 2004 by 13.7% to €1.63bn. This compares well with growth of 12.1% from venture backed companies in the US.



Revenues in high technology companies at 55% of the total are growing even faster, showing an increase of 16.9% and within this sector IVCA backed companies in the 0 to 5 year age bracket grew revenues by 92% between 2003 an 2004.

#### **Investment**

Venture-backed companies raised €242m in 2004, an increase of 39% on 2003.



High technology companies accounted for 86% of all VC investment in 2004. This is the highest technology weighting in Europe, where the average is 17% with only four countries investing greater than 50% in high technology companies. Forty-six percent (46%) of this capital was invested into start up and early stage companies compared to a European average of 23%.

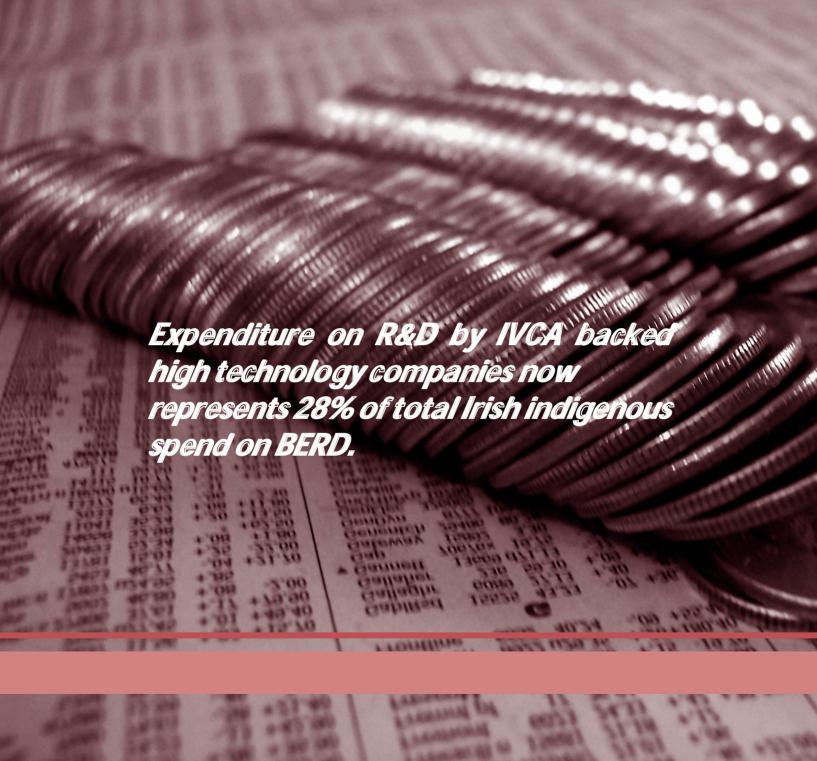
## Lisbon Agenda

The Lisbon Strategy, established by the EU, recognises that entrepreneurial activity and innovation are the crucial drivers of achieving its objective of making the EU "the most competitive and dynamic knowledge based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion".

One of the key Lisbon objectives is to create an additional 20m jobs in the ten-year period to 2010. Ireland is playing its part in meeting this objective. In particular, Irish VC backed companies grew employment by 15% in 2004.

A second key objective is to increase GERD (gross expenditure on research and development) to 3% of GDP by 2010, with the private sector providing two thirds of the investment to create this increase. In 2004 the US spend on GERD was 2.7% of GDP, the corresponding European average was 1.95% and in Ireland the spend was 1.21% of GDP.

Within this context, the Irish Government's objective in the same period is to increase BERD (business expenditure on research and development, a subset of GERD) to 1.7% of GDP from its current level of 0.8%. Spending on BERD in Ireland needs to double by 2010 if this target is to be met. IVCA-backed high technology companies increased their research and development expenditure in 2004 by 17%. If this annual rate of increase is maintained up to 2010 it will represent a doubling of the R&D spend, indicating that this sector will play a major role in meeting the Irish Government's objective.





## Executive Summary

Venture capital backed companies provide a substantial impetus to the ongoing development of a knowledge-based economy in Ireland and to the achievement of public policy objectives in this regard. This is the key finding of this study of the economic impact of venture capital backed companies.

Expenditure on R&D by IVCA backed high technology companies now represents 28% of total Irish indigenous spend on BERD.

In 2004 IVCA backed high technology companies spent €89m on research and development, an increase of 17% on 2003. This compares with an increase in BERD from indigenous companies of 6%.

## Graduates represent 78% of the workforce.

In 2004 IVCA backed high technology companies employed 3,107 graduates, an increase of 15% on 2003.

In 2004 IVCA backed high technology companies generated exports of €414m, an increase of 10% on 2003. This represented export intensity of 78% of revenues compared to an intensity of 37% within the total Irish indigenous sector.

Ninety percent (90%) of IVCA-backed companies believe that without venture capital the business would not have existed at all or would have developed less rapidly. Ninety-three percent (93%) of the companies felt that their VC provider had made a major contribution other than the provision of money.

Non-Monetary contributions cited included:

- improved corporate governance;
- increased focus on shareholder value;
- enhanced credibility for the company;
- · improved access to business networks.

