

GLOBAL ENTREPRENEURSHIP MONITOR

2000 Wales Executive Report



*Dylan Jones-Evans
David Brooksbank*

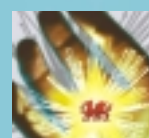




TABLE OF CONTENTS

References	2
List of tables & figures	2
Foreword	3
GEM 2000 Research teams and sponsors	4
Executive Summary	7
Introduction to GEM	9
GEM 2000 Global Study	9
Entrepreneurship in Wales: The Public Policy Context	11
UK Enterprise Policy	11
Where is Wales Now?	12
The GEM Model	16
- Sources of Data	18
- GEM in Wales	19
How entrepreneurial is Wales?	20
- Business Start-up activity	20
- Employment and Entrepreneurial Activity	23
- Education and Entrepreneurship	23
- Independent and firm sponsored Start-ups	23
- Entrepreneurship, Age and Gender	24
- Business Angel Investment	25
- Wales' Entrepreneurial Scorecard	26
Is Entrepreneurship linked to Economic Growth?	27
Entrepreneurial Framework Conditions in Wales	28
- Framework Condition No 1 - Financial Support	29
- Framework Condition No 2 - Government Policies	35
- Framework Condition No 3 - Government Programmes	36
- Framework Condition No 4 - Education and Training	39
- Framework Condition No 5 - Research and Development Transfer	41
- Framework Condition No 6 - Commercial and Professional Infrastructure	43
- Framework Condition No 7 - Barriers to Entry	44
- Framework Condition No 8 - Physical Infrastructure	45
- Framework Condition No 9 - Culture and Social Norms	46
Entrepreneurial Opportunity and Capacity	51
Summary and Recommendations	54
- Key Findings for Wales	54
- Key Positive and Negative Issues for Wales	55
- Policy Recommendations	57

REFERENCES

- Bank of England (2000) Finance in Small Firms, Seventh Report, Bank of England, London.
- British Venture Capital Association (1999) Report on Business Angel Investment Activity, BVCA, London.
- British Venture Capital Association (2000) Report on Investment Activity, BVCA, London.
- Brooksbank, D. (2000) The Welsh economy: A statistical profile, Contemporary Wales, University of Wales Press.
- Clifton, N.C., Brooksbank, D. and Jones-Evans, D. (1999) The future of the SME: Developing an enterprise culture at a regional level? International Council for Small Business 44th World Conference, Naples, Italy 20th-23rd June 1999.
- Department of Trade and Industry (1998) Our Competitive Future - Building the Knowledge Driven economy, HMSO, London
- Entrepreneurship Action Plan Steering Group (2000) Entrepreneurship Action Plan for Wales, the Sky is the limit - strategy document, WDA, Cardiff.
- Entrepreneurship Action Plan Steering Group (2000) Entrepreneurship Action Plan for Wales, Making it happen - Implementation Plan, WDA, Cardiff.
- Experian (2000) Corporate Health Check - 18th September, 2000, Nottingham, UK
- Federation of Small Businesses (2000) Barriers to Growth and Survival - Wales, FSB, London
- H.M.Treasury (2000) Prudent for a purpose - Working for a stronger and fairer Britain (2000 Budget), HMSO, London
- Jones-Evans, D. (2000) 2000 Wales Fast Growth Fifty supplement, Western Mail, Cardiff
- Jones-Evans, D. (2000) Growing our Entrepreneurial Businesses - Gregynnog Series, Institute for Welsh Affairs, Cardiff (forthcoming)
- National Assembly for Wales (2000) BetterWales.com - the Strategic Plan, NafW, Cardiff
- National Assembly for Wales (2000) Review of business support in Wales - preliminary report to the National Assembly for Wales, September 2000.
- Office for National Statistics (2000) Research and Development in UK Business 1999, HMSO, London
- Reynolds, P.D., Hay, M. and Camp, S.M., (1999), Global Entrepreneurship Monitor - 1999. Executive Report, edited by Babson College, London Business School and Kauffman Center for Entrepreneurial Leadership.
- Reynolds, P.D., Bygrave, W.D., Camp, S.M and Autio, E. (2000), Global Entrepreneurship Monitor - 1999. Executive Report, edited by Babson College, London Business School and Kauffman Center for Entrepreneurial Leadership
- Welsh Office (1998) Pathways to Prosperity - a New Economic Agenda for Wales, Welsh Office, Cardiff.

LIST OF TABLES & FIGURES

- Table 1 Educational attainment of working age population and level of start-up rate in Wales
- Table 2 Wales' Entrepreneurial Activity Scorecard.
- Table 3 Welsh Companies registered with the London Stock Exchange (by location of registered office).
- Table 4 Business support organisations in Wales
- Figure 1 Role of larger established firms and economic growth
- Figure 2 The entrepreneurial process and economic growth
- Figure 3 The GEM Conceptual Model (The Total process)
- Figure 4 Nascent Firm Prevalence Rate by Country
- Figure 5 New Firms Prevalence rates by Country
- Figure 6 Total Entrepreneurial Activity Prevalence Rate by Country
- Figure 7 Start-up Participant Demographics in Wales
- Figure 8 Total Entrepreneurial Activity by Country by Gender
- Figure 9 Total Entrepreneurial Activity participant demographics in Wales
- Figure 10 Business Angel Demographics in Wales
- Figure 11 Total Entrepreneurial Activity and Economic Growth - Alpha Group Countries
- Figure 12 Financial Support -National and International Comparisons of Expert Opinions
- Figure 13 Government Policy -National and International Comparisons of Expert Opinions
- Figure 14 Government Programmes - National and International Comparisons of Expert Opinions
- Figure 15 Education and Training - National and International Comparisons of Expert Opinions
- Figure 16 Research & Development transfer - National and International Comparisons of Expert Opinions
- Figure 17 Commercial and legal infrastructure - National and International Comparisons of Expert Opinions
- Figure 18 Barriers to entry (internal market openness) - National and International Comparisons of Expert Opinions
- Figure 19 Access to physical infrastructure - National and International Comparisons of Expert Opinions
- Figure 20 Cultural and social norms - National and International Comparisons of Expert Opinions
- Figure 21 Those who start new businesses are respected in my community
- Figure 22 Successful entrepreneurs are not envied in my community
- Figure 23 - Fear of failure would prevent me from starting a business
- Figure 24 - In my country, most people would prefer that everyone had the same standard of living
- Figure 25 - There are good start-up opportunities during the next six months
- Figure 26 - Entrepreneurial opportunities - National and International Comparisons of Expert Opinions
- Figure 27 - Entrepreneurial capacity (skill) - National and International Comparisons of Expert Opinions
- Figure 28 - Entrepreneurial motivation (skill) - National and International Comparisons of Expert Opinions



**FOREWORD BY THE CHAIRMAN OF
THE WELSH DEVELOPMENT AGENCY,
SIR DAVID ROWE-BEDDOE**

This Global Entrepreneurship Monitor survey of Wales is both a landmark and a challenge.

It is a landmark because this is the first time for such a world-wide enterprise study to assess Wales as a nation alongside the United States, Japan, Brazil and other countries. The survey emphasises the significance of globalisation for our country; it confirms the correlation between enterprise and growth of GDP, and assists us to benchmark Wales against a number of major economies.

It is a challenge because it underlines the magnitude of the task of developing a Welsh enterprise culture. The survey's findings help quantify and comprehend a number of key indicators - for example, the fact that around 1 in 70 of the population of Wales is involved in establishing a new venture, a proportion significantly lower than most other economies studied.

So the GEM survey is an important element in charting our nation's course towards 21st century prosperity. To understand our position is the first step - and future surveys will provide a 'longitudinal' measure of Wales' progress over time.

Already Wales is embarking on this voyage to entrepreneurship, with a number of significant developments already in hand.

Henceforth the National Assembly's economic strategy for Wales will be powered by two motors - the Welsh Development Agency promoting economic development, and the new Council for Education and Training taking up responsibility for human resources.

Implementation of the Entrepreneurship Action Plan will commence during the course of 2001, with the goal of creating an enterprise culture and ambitious targets for business start-ups.

Finance Wales will support new and growing businesses to gain access to the funding they require, with the ability to draw on appropriate business services available in the Agency.

In the final analysis, success depends upon people - it is business that delivers the goods and, as the GEM survey demonstrates, it is people who take the decisions to launch and grow the businesses that Wales needs.

I am confident that with awareness, unity and determination we will succeed.

GEM 2000 RESEARCH TEAMS & SPONSORS

Unit	Location	Members	Financial Sponsorship
GEM Project Directors	Babson College Kauffman Center for Entrepreneurial Leadership London Business School	William D. Bygrave S. Michael Camp Michael Hay	Kauffman Center for Entrepreneurial Leadership Ernst & Young
GEM Project Co-ordinator	Babson College London Business School	Paul D. Reynolds	The Laing Family Charitable Settlement
GEM Co-ordination Team	Babson College London Business School	William D. Bygrave Paul D. Reynolds Paul D. Reynolds Michael Hay Andreas Rauch Paloma Lopez-Garcia	
National Teams			
Argentina	Center for Entrepreneurship IAE Business School University Austral	Silvia Torres Carbonell Hector Rocha Florencia Rico Guillermo Atares	IAE Business School Telefonica de Argentina
Australia	Swinburne University of Technology	Kevin Hindle Susan Rushworth Debbie Kellie	Pacific Access Pty Ltd Department of Communication, Information Technology and Arts
Belgium	Vlerick Leuven Gent Management School	Sophie Manigart Bart Clarysse Hans Crijns Wouter De Maeseneire Nicolas Bearelle Ans Heirman Nathalie Moray	Vlaamse Gemeenschap Vlerick Leuven Gent Management School
Brazil	IBQP-PR Instituto Brasileiro da Qualidade e Produtividade no Paraná and PUC-PR Pontificia Universidade Católica do Paraná	Ramiro Wahrhaftigda Lúcio Renato de Frage Brusch Marcos Mueller Schlemm Simara M. S. Silveira Greco Mel Tavares Roderjan	Secretaria de Estado da Ciência e Tecnologia/ Paraná Tecnologia
Canada	York University and École des Haute Études Commerciales de Montréal	Rein Peterson Nathaly Riverin Alex Gavriline Carol Chan Yasmin Griffith Augustina Cochello	Anne & Max; Tanenbaum Chair in Family Enterprise Dean's Office Schulich School of Business York University École der Hautes Étude Commerciales de Montreal
Denmark	University of Southern Denmark	Mick Hancock Kim Klyver Torben Bager Jan Warhuus	Danish Agency for Trade and Industry
Finland	Helsinki University of Technology	Erkko Autio Pia Arenius	National Technology Agency Tekes Finnish Ministry of Trade and Industry Culminatum Oy
France	Centre des Entrepreneurs EM Lyon	Gilles Chopin Isabelle Servais	Caisse des Dépôts et Consignations Programme PME
Germany	University of Cologne	Rolf Sternberg Claus Otten Christine Tamásy	Federal Ministry of Education and Research and Deutsche Ausgleichsbank



Unit	Location	Members	Financial Sponsorship
India	Indian Institute of Management Bangalore	Seshadri DVR Mithileshwar Jha Srinivas Prakhya Mukesh Sud	N S Raghavan Centre for Entrepreneurial Learning IIM Bangalore
Ireland	University College, Dublin	Paula Fitzsimons Colm O'Gorman Frank Roche	Ryan Academy of Entrepreneurship
Israel	Tel-Aviv University	Miri Lerner Yoash Avrahami	The Ministry of Industry and Trade, Dept of Economics and Planning; Small Business Authority of Israel, R.A.; Manpower Planning Authority, The Ministry of Labor and Social Affairs; The Miriam and Georg Factor Entrepreneurial Center; Faculty of Management, Tel-Aviv University
Italy	Babson College	Maria Minniti Patrizia Venturelli Dario Tuorto	W. Clavin Center for Entrepreneurial Leadership at Babson College
Japan	Keio University	Tsuneo Yahagi Takehiko Isobe	
Norway	Bodø Graduate School of Business	Lars Kolvereid Lars Øystein Widding Erlend Bullvåg Svenn Are Jenssen Jan Oddvar Sørnes Bjørn Willy Åmo	Norwegian Industrial & Regional Development Fund (SND) Bodø Graduate School of Business
Scotland	University of Strathclyde	Jonathan Levie Laura Steele Hunter	Hunter Centre for Entrepreneurship
Singapore	National University of Singapore	Maw-Der Foo Poh-Kam Wong Ruey-Lin Hsiao Kink-Ting Lee Finna Wong Wendy Ng	National Science and Technology Board, Singapore
South Korea	Soongsil University	Yun-Jae Park Heon Deok Yoon Young-Soo Kim	Brain Korea 21 Project for Developing Teaching and Research Programs for Entrepreneurial Small Business
Spain	Instituto de Empresa	Joan Amat Manuel Bermejo Thibaut Durand Joseph Ganitsky Alvaro Sancho	NAJETI Chair of Entrepreneurship and Family Business
Sweden	ESBRI - Entrepreneurship and Small Business Research Institute	Magnus Aronsson Frédéric Delmar Helene Thorgrimsson	ESBRI Foundation
United Kingdom	London Business School	Michael Hay Kostas Tsorbatzoglou	UK Department of Trade and Industry
United States	Babson College	Andrew Zacharakis William D. Bygrave Dean Shepherd Carl Hedberg Jonathon Ablett	Kauffman Center for Entrepreneurial Leadership
Wales	University of Wales, Bangor University of Glamorgan	Dylan Jones-Evans David Brooksbank	Welsh Development Agency

EXECUTIVE SUMMARY

The Global Entrepreneurship Monitor (GEM) project was created in 1997 as a joint initiative between Babson College - the leading centre for entrepreneurship in the United States - and London Business School. The principal aim of GEM is to bring together the world's best entrepreneurship scholars to explore and understand entrepreneurship and its link to economic growth. Twenty-three national surveys took place as part of this global study, including those held in the USA, UK, Australia, Japan, Scotland and Wales. Data for the GEM 2000 Wales research study was gathered from three main sources: an adult population survey of 2010 individuals, in-depth interviews with 37 Welsh experts on entrepreneurship, and a selection of economic and labour market data.

Background to entrepreneurial activity in Wales

- **Wales is not performing well economically.** In terms of the main economic indicators, Wales does not perform well. With regard to GDP/head, economic activity, income and expenditure, employment, earnings, regional competitiveness, and new firm formation rate, Wales is well below the average for the UK as a whole.
- **Public policies are beginning to target entrepreneurship in Wales** - Various initiatives - such as the Entrepreneurship Action Plan for Wales, the Knowledge Exploitation Fund and Finance Wales - have been established by the National Assembly for Wales and the Welsh Development Agency to alleviate this problem. The review of business support in Wales, if fully implemented, will help to streamline the provision of advice, information and training to smaller firms.
- **Access to capital remains a major issue regarding the development of entrepreneurial businesses.** The development of Finance Wales will be keenly observed over the next year to see if a single provider of funds to small business can make the difference required to boost the sector, although the availability of finance from either business angels or venture capitalists has yet to be fully developed within Wales.
- **Enterprise education is becoming established within all parts of the education system.** There have been improvements to the provision of enterprise education and training during the last twelve months in Wales, through the increasing success of Young Enterprise within secondary schools in Wales, and various developments such as the Knowledge Exploitation Fund within the Further and Higher Education sectors.
- **Low levels of innovation in Wales.** The low level of R&D undertaken in Wales, coupled with the few scientists and technologists in the workforce, is seriously restricting the ability of Welsh organisations to develop a strong technology-based spin-off culture, similar to that found in Cambridge.

How entrepreneurial is Wales?

- **Wales is one of the least entrepreneurial of the GEM nations** - in terms of entrepreneurial activity, only 2.6 per cent of the Welsh working age population are involved in either emerging or new firms. This would place Wales 18th out of the 23 GEM 2000 nations.
- **Wales has one of highest entrepreneurial activity rates by females of any GEM nation** - the ratio of male to female participation in entrepreneurship activities is 1.3:1, with female participation being higher among the younger age ranges.
- **Wales has one of the lowest rates of individuals involved in starting a business** - only 1.4 per cent of the adult population in Wales was participating in start-ups in 2000. This ranks Wales 19th out of the 23 GEM nations, (with only Japan, Ireland, France and Belgium having a lower start-up rate). The UK rate of 3.1 per cent is nearly two and a half times the Welsh rate, which suggests that the data from VAT registrations - which indicates that the region is currently at least 30 per cent behind the average for the UK in the rate at which it creates new businesses - underestimates the degree to which Wales lags the UK in terms of entrepreneurial activity.
- **There seems to be very little start-up activity by the corporate sector in Wales** - out of the 22 reported start-ups, 21 were independent businesses. This contrasts with the UK situation, where 18% of new firms were being established by individuals trying to start a new business or a new venture with their employer.



- **The level of educational attainment in Wales seems to be positively correlated with the level of entrepreneurial activity** - the proportion of postgraduates and graduates starting a new firm was higher than for those with little or no qualifications. Therefore, the higher the educational qualification, the higher the proportion of start-up activity by the working age population in Wales attaining that qualification.
- **Wales has a low participation rate in new business management.** In 2000, 1.4 per cent of working age adults in Wales were actively involved in new businesses (up to 42 months old), ranking Wales 16th out of the 23 nations in the GEM study. This is less than 60 per cent of the UK participation rate in new business.
- **Wales has few growth businesses** - in the study, there were no new start-ups in Wales that could be classified as growth firms (i.e. they would aim to employ more than 50 people in five years time). Similarly, the job growth aspirations of new firms in Wales (those started in the previous 42 months) were low, with the intended number of jobs to be created per firm being two employees over a period of five years.
- **Wales has a high survival rate for new business** - in Wales, there is exactly the same proportion of adults involved in firms already established as there is trying to start a new venture. This contrasts with the majority of GEM countries, where the nascent prevalence rate exceeds the new firm prevalence rate by a factor of approximately 2:1.
- **Wales has the lowest rate of personal 'business angel' activity in the GEM study** - in Wales, only 0.5 per cent of the adult population had invested funds in new businesses started by other individuals during the last three years, and all of this investment was in businesses established by either family or friends.
- **The attitudes of the adult population in Wales towards entrepreneurship are amongst the least favourable of all the GEM nations** - entrepreneurs have a very low standing within Welsh society, with only half of the Welsh population believing those who start businesses are respected within their community - only Japan ranked lower than Wales internationally. Similarly, two-thirds of the Welsh adult population believe that successful entrepreneurs are not envied in their community.
- **There are few opportunities in Wales to start a business** - only 9.8 per cent of the Welsh adult population believe that there are good opportunities to start a business during the next six months. This is considerably less than the 36.9 per cent for the average GEM nation and will clearly restrict any growth in entrepreneurial activity in Wales in the near future.
- **Appreciation of wealth is not a problem in Wales** - the general ambivalence towards entrepreneurs is not driven by a general attitude towards wealth-creation, as 36.3 per cent of the population, less than any other GEM nation, expressed the viewpoint that most people would prefer that everyone had the same standard of living.
- **Potential entrepreneurs in Wales are not afraid of failure.** Only 29.3 per cent of the adult population in Wales consider fear of failure as a barrier to starting a business, with only Denmark, Canada, Norway and the USA having a population with a lower fear of failure than Wales.

Key policy recommendations

- **Adopt the Entrepreneurship Action Plan for Wales** - Clearly, the National Assembly will need to examine carefully how it can maximise its current policy ability to ensure that the rate of entrepreneurial activity is increased in Wales during the next decade. The adoption of the Entrepreneurship Action Plan Implementation Strategy, after taking into account the findings of this study, would be a first step in the right direction.
- **A specific business birth rate strategy for women may not be required in Wales** - In terms of entrepreneurial activity, women are not an under-represented group in Wales, with the proportion of female:male start-ups in Wales being amongst the highest of all participating GEM countries. This would suggest that we probably do not need a separate business birth rate strategy for women in Wales, although further research is required to support this finding, given its importance. However, specific initiatives should be developed to take into account the specific characteristics of female-based entrepreneurs as an important sector of the Welsh enterprise economy.

- **Target entrepreneurial activity amongst individuals younger than 25 and those aged over 55** - Currently, the EAP implementation strategy does not specifically target (as it does for women entrepreneurs) either of these groups, both of which show rates of entrepreneurial activity below the average. This needs to be rectified immediately, with specific targets set for enterprise stimulation activities aimed specifically at increasing entrepreneurial activity amongst the under 25s and the over 55s in Wales.
- **Increase resources towards developing entrepreneurship amongst the socially excluded** - Those with little or no qualifications in Wales demonstrate a below average rate of entrepreneurial activity, and yet represents a pool of talents as yet untapped in terms of developing enterprise. The various initiatives to stimulate entrepreneurial behaviour within local communities throughout Wales may be the first step in encouraging greater participation in enterprise from all parts of Welsh society, although there seems to be very little resource geared towards this as part of the EAP, a situation that clearly needs to change.
- **Increase the number of corporate spin-offs emerging from Welsh businesses** - the WDA needs to identify greater resources that will target a specific number of existing Welsh businesses where spin-offs could be encouraged and help support such a development. In the long term, the National Assembly needs to reconsider its inward investment attraction strategy, targeting specific key sectors of the knowledge-based economy where the potential to create corporate ventures by companies operating in such sectors is high.
- **Provide resources to help develop growth businesses in Wales** - Given that the development of the growth potential of Welsh businesses is crucial to increasing the wealth and prosperity of the nation, this key action of the EAP should be fully supported by the National Assembly for Wales.
- **Value the importance of developing an enterprise culture** - The findings of the GEM study support the intentions of the Entrepreneurship Action Plan's implementation strategy to help create an enterprise culture in Wales, mainly through a National Awareness Campaign. This campaign needs to concentrate its initial efforts on combating the negative attitudes that exist amongst the adult population in Wales towards entrepreneurs, as there is a widespread misunderstanding of what entrepreneurship is and who entrepreneurs are.
- **Finance for SMEs** - Two of the issues that the new body responsible for developing policies and initiatives for financing Welsh enterprises - Finance Wales - will have to address as one of its first tasks in supporting enterprising Welsh firms is the fact that there are no formal venture capital providers of any major size in Wales, and that the rate of investment in private firms by individuals is the lowest of all the participating nations.
- **Funding for enterprise education.** The amount of funding provided for enterprise education, at primary to secondary to tertiary levels, equates to 12.2% of the total proposed EAP funding in Wales over the next three years. This clearly demonstrates the importance of enterprise education in overcoming some of the barriers that restrict the development of an enterprise culture in Wales.
- **Learn from best practice in enterprise policy** - Whilst it has identified its implementation strategy for the EAP, the new Entrepreneurship Unit within the WDA must pursue a proactive strategy of identifying the best entrepreneurship initiatives and adapt these for Wales. The EAP has started this process, but far more work needs to be done to ensure that we have the best support structure for small businesses that we can possibly develop as a nation.
- **Make better use of existing expertise in entrepreneurship** - There is a wide body of expertise available for Welsh politicians and policy-makers to utilise in the area of entrepreneurship and small business management, and full advantage should be taken of this to develop the best policies and practices for Welsh enterprise.



INTRODUCTION TO GEM

The Global Entrepreneurship Monitor (GEM) project was created in 1997 as a joint initiative between Babson College - the leading centre for entrepreneurship in the United States - and London Business School. The principal aim of GEM is to bring together the world's best entrepreneurship scholars to explore and understand entrepreneurship and its link to economic growth. In this study, entrepreneurship is defined as:

'Any attempt to create a new business enterprise or to expand an existing business by an individual, team of individuals or an established business'.

Although essentially a national comparison of entrepreneurship, this year's study has two regions of the UK – Wales and Scotland – joining the initiative. At a time of devolved government in the UK, responsibility for economic development now rests with the elected representatives of each region. The 2000 GEM study therefore gives the National Assembly for Wales and the Scottish Parliament the opportunity to benchmark the development of enterprise not only against each other, but also against the UK and the other leading industrialised nations of the World.

The global GEM study focuses on answering three fundamental questions:

- Does the level of entrepreneurial activity vary between countries (and regions within countries) and, if so, by how much?
- Does the level of entrepreneurial activity affect the national or regional rate of economic growth?
- What makes a country (or region) entrepreneurial?

Published in 1999, the first GEM report encompassed the G7 countries (Canada, France, Germany, Italy, Japan, the United Kingdom and the United States) as well as Denmark, Finland and Israel. Following the interest generated by the original report and its findings, GEM 2000 has been extended to include a further eleven countries, namely Argentina, Australia, Belgium, Brazil, India, Ireland, South Korea, Norway, Singapore, Spain and Sweden, bringing the total to 21 countries. In addition, two regions of the UK - Wales and Scotland - are also participating for the first time in the study. It is expected that within the next five years, more countries will take part in the GEM study, enabling a more detailed comparison of entrepreneurial activity to take place on a global scale.

Data for the GEM Wales research study was gathered from three main sources:

1. A survey of the adult population.
2. In-depth interviews with Welsh experts on entrepreneurship.
3. A selection of economic and labour market data from a variety of sources.

GEM 2000 GLOBAL STUDY

For GEM 2000, more than 42,000 individuals were surveyed and 800 experts interviewed around the world. In Wales, 2010 individuals were surveyed and 37 national experts were interviewed.

Summary results of the global study were published in November 2000 in the Global Entrepreneurship Monitor: 2000 Executive Report. At the global level, the findings for GEM 2000 may be summarised as follows:

- **The level of entrepreneurship is significantly different between countries.** In Brazil, 1 in every 8 adults is currently starting a business, compared to 1 in 10 in the USA, 1 in 12 in Australia, 1 in 32 in the UK and 1 in 100 in Ireland and Japan. In Wales, roughly 1 in 70 of the population is currently involved in establishing a new venture.
- **Entrepreneurship is strongly associated with economic growth.** Among nations with similar economic structures, there is a highly significant correlation of 0.7 between entrepreneurship and economic growth. All countries with high levels of entrepreneurial activity have above average economic growth. Only a few high growth countries have low levels of entrepreneurial activity. Whilst Wales was not formally part of the analysis undertaken by the GEM co-ordinating team to examine this issue, figures suggest that the low performance of the Welsh economy is strongly correlated with a lack of entrepreneurial activity.

- **The majority of businesses are started and operated by men, with peak entrepreneurial activity amongst those aged 25-34.** Overall, women are under-represented in entrepreneurial activity, being half as likely to be involved in entrepreneurial activity, although the ratio of male to female participation varies between countries. For example, female participation in France is twelve times lower than for males whilst in Spain, the number of women in entrepreneurship is nearly equal to the male rate. In Wales, a similar picture emerges to the Spanish situation, with only slightly less women being involved in entrepreneurial activities than men.
- **Financial support is associated with the level of entrepreneurial activity.** The availability of early stage finance is greater among countries that have higher levels of entrepreneurial activity. The results show that Venture Capital investment in 1999 varied amongst countries from 5.27 per cent of GDP in the US to 0.22 per cent in Japan. In Wales, the amount of venture capital as a proportion of GDP in 1999 was 0.85 per cent, which is largely down to one large deal. The average amount invested per company ranged from nearly £10 million in the US to less than £750,000 in many other countries. In Wales, the average amount per firm invested was over £5 million, although this again was due to the one single large investment.
- **Informal venture capital is becoming more important.** A significant finding of the study is the increasing importance of informal private investments in new businesses, which is significantly higher than formal venture capital. For example, GEM estimates that total private investment in entrepreneurial companies in the US for 1999 was £47 billion, substantially more than the £34 billion invested in start-ups and growing firms by professional venture capital firms. There seems to be a completely different picture emerging in Wales, with private investment in Welsh firms being the lowest of all the GEM nations, suggesting that the concept of informal venture capital has yet to be accepted.
- **Education plays a vital role in entrepreneurship.** GEM found that if post-secondary education was the only factor predicting entrepreneurial activity, it would account for 40 per cent of the differences in entrepreneurial activity between GEM countries. In Wales, the rate of nascent entrepreneurship is directly related to the degree of educational attainment – the higher the level of education in Wales, the higher the proportion of start-ups.
- **Policies geared towards boosting entrepreneurial activity should not be confined to the entrepreneurial sector per se.** GEM has demonstrated the importance of a favourable economic climate for developing new businesses. A key finding is that countries with higher levels of entrepreneurial activity have comparatively low levels of corporate and marginal personal income tax rates. However, the National Assembly for Wales can currently change neither of these issues at a regional level. In addition, the most entrepreneurial countries also demonstrate a greater ease of doing business with the government and more flexible labour markets.
- **The perceived social legitimacy of entrepreneurship makes a difference.** The GEM 2000 study used a variety of measures to determine the public's perception of entrepreneurs. These included: (a) the extent to which fear of failure acts as a deterrent to starting a new firm and (b) respect for those starting new firms. The research demonstrated that in countries having a high level of entrepreneurial activity, a fear of failure in starting a business was not a deterrent and that the public had a higher degree of respect for entrepreneurs involved in new venture creation. In Wales, a confused picture emerges – whilst the adult Welsh population were not afraid of failure when starting a business, they nevertheless had a low opinion of entrepreneurs.

This executive report focuses exclusively on Wales. Its aim is to present the GEM 2000 Wales findings, assess the position of Wales relative to Scotland, UK and other GEM countries, and develop a public policy agenda. More detailed analysis of the data, particularly in relation to the Celtic nations of Scotland and Ireland, will be carried out later this year. It is also envisaged that there will be a comparative analysis of the entrepreneurial activity within the smaller nations in the 2000 GEM study, which may have important lessons for Wales in the future.

This will be the first report in a series of GEM studies to be undertaken in Wales during the next few years, and the opportunity to undertake a longitudinal examination of entrepreneurship in Wales is therefore to be welcomed.



ENTREPRENEURSHIP IN WALES: THE PUBLIC POLICY CONTEXT

The public policy context for Wales is complicated. As a constituent nation of the United Kingdom, major national policy and law making powers remain, to a large extent, the prerogative of the Westminster Parliament. However, in 1999 a new National Assembly for Wales was elected to serve the people of Wales as part of the Labour government's commitment to devolution. The devolved Assembly of 60 members is responsible for matters such as health, education and training, economic development, environment, agriculture, industry, social services, leisure and tourism, transport and the Welsh language. Tax raising (and lowering) powers, together with foreign, defence and home office functions remain with the central government in London. This system means that policies and practices designed to meet the desire to create a more entrepreneurial environment in Wales may have to come from two sources. For example, embedding enterprise within the education system would fall within the remit of the devolved Assembly, whilst the need for fiscal policies – such as lower corporation tax - would still rest with the Chancellor of the Exchequer.

UK ENTERPRISE POLICY

On the UK national stage, enterprise has become the watchword of the Labour administration. In 1998, a major policy report – The Competitiveness White Paper, Our Competitive Future: Building the Knowledge Driven Economy - outlined a series of new initiatives designed to foster a more entrepreneurial society.

Some of these proposals have now become reality including:

- The launch of the Small Business Service Agency in England with the overall aim of supporting and strengthening the small business sector.
- The Enterprise Insight Campaign launched with the aim of raising awareness of enterprise among young people, celebrating entrepreneurial role models and demonstrating that entrepreneurship is an option open to all and not just a celebrated few.
- The £180 million Enterprise Fund to provide support for a Small Firm Loan Guarantee Scheme, the UK High Technology Fund for early-stage high-technology businesses and the new regional venture capital funds (which provide small scale equity to small firms with growth potential).

In the last budget (in April 2000), the Chancellor used the term 'the Enterprise and Investment Budget' to summarise his intentions.

The practical impact on businesses in Wales included:

- 100 per cent first year capital allowances against investment in computers, software and internet-enabled mobile telephones.
- Discounts for Internet filing of PAYE returns for 2000/2001.
- New capital gains tax (CGT) taper relief for business assets - a cut in the period before taper relief kicks in on capital gains from ten to four years - to encourage private investment in early stage companies.
- A new Corporate Venturing Scheme giving 20 per cent corporation tax relief on shares invested in unquoted companies, provided they are held for three years.
- 150 per cent tax relief on R&D expenditure over £25,000 a year. This reduces the effective cost by 30 per cent.

In addition, a number of UK government initiatives in 2000 were developed to improve the linkages between UK higher education and new businesses.

Announcements with potential to impact on Wales included:

- The development of better and more commercially orientated links between Small to Medium-Sized Enterprises (SMEs) and higher education through the establishment of a fund of £140m (over three years) which can be accessed through the Higher Education Funding Councils for England and Wales.
- The University Challenge Seed Fund for universities to offer up early stage venture capital.
- The Science Enterprise Challenge – initially creating Centres of Enterprise within twelve UK universities (although none in Wales to date).

WHERE IS WALES NOW?

So what about Wales? During the last twenty years, Wales has undergone a major industrial transformation. Initially, the solution to the decline in traditional industries such as coal and steel was the attraction of branch plant inward investment to replace employment lost in the primary industry sectors of the economy. However, the challenge now facing Wales, with increasing threats from globalisation, is its transformation into a higher value-added innovative and entrepreneurial region. This will not be an easy task, as Wales currently lags behind many other regions of the United Kingdom (and the European Union) in terms of prosperity.

It is not the role of GEM Wales 2000 to present detailed analysis of the Welsh economy, as a detailed picture can be found in a number of other documents. Nevertheless, the profound nature of the economic development challenges faced by Wales (and the potential of entrepreneurship to solve these) can be starkly illustrated through brief consideration of the main economic indicators, namely output, income and expenditure; employment; unemployment; earnings; and regional competitiveness.

Output, income and expenditure

Gross Domestic Product (GDP) is the most widely accepted means of comparing both national and regional performance and large tracts of Wales qualify for European structural fund relief by virtue of low GDP per head. The latest available figures for 1998 show Wales with GDP per head of only 79.4 per cent of the UK average, the third lowest region ahead of Northern Ireland and the North East of England. For the NUTS II region of West Wales and the Valleys, this figure falls below 75 per cent, meaning qualification for Objective I relief. In terms of disposable income per head, again in 1998 Wales had the second lowest level of any region in the UK (87.4 per cent) behind the North East of England.

Employment and unemployment

A particularly important aspect of any National Economic Development Strategy for Wales is the creation of new jobs and safeguarding of existing jobs. Wales had an employment level of 1.25 million in April 2000, up from 1.23 million a year earlier. This represents a rate of 69.5 per cent that is on a par with the UK average. Job creation rates in Wales are slightly higher than the national average and this growth is mainly accounted for by full-time employment. However, some commentators have expressed the view that many of the new full-time jobs created in Wales have been in areas where job security and pay rates are low (such as assembly line and call centre jobs).

Unlike many of its European neighbours, high unemployment has become less of a problem for the UK in recent years. Despite the welcome fall in unemployment in 1999 in Wales to 5.2 per cent, (5.6 per cent in 1998), the figure is still 0.9 per cent above that for the UK average, a rise in absolute terms of 0.1 percentage points over the year. This indicates, if anything, that the gap between Wales and the rest of the UK is actually continuing to widen from a position in 1994 when the rates were the same. The ILO rate of unemployment in Wales was 6.5 per cent for the February to April 2000 period, compared to 7.1 per cent a year earlier. In Wales in April 1997, the long-term unemployed figure stood at 33.6 per cent of the total stock of unemployed persons.



This fell to 24.6 per cent in April 1998 and then to 22 per cent in April 1999. A year later, in April 2000, the figure is little changed at 21.9 per cent. The stubborn rise in very long-term unemployment is a cause for concern, especially at a time when more effort has been concentrated in that area using schemes adapted under the UK Government's New Deal policy.

Earnings

The decline of Welsh earnings relative to the British average over the past twenty years has been well documented. Indeed, it is the low level of earnings that contributes directly to low GDP and hence the need for European Structural Fund help. According to the 1999 New Earnings Survey (NES99), Wales still lags behind every other region of Great Britain in terms of earnings (apart from the North East of England) and Welsh employees continue to earn less than 90 per cent of the British average. Again, here is evidence that economic development targets are actually moving away from Wales.

Regional Competitiveness

Indicators of competitiveness on both a national and regional scale have become a central focus of government attention in recent years, and are now published regularly by the Department of Trade and Industry. Gross Value Added per employee, the official competitiveness measure of labour productivity in manufacturing for each region, shows Wales (in 1998) was seventh of the twelve UK regions and this suggests that value-added remains a major problem when targets for economic regeneration are set.

The number of Income Support Claimants is a measure of social deprivation in a region. Since the introduction of the Job Seekers Allowance, the figures for the unemployed are no longer included in the Income Support Claimant figures. This has resulted in the rate being between 3-6 percentage points lower than those published earlier in the series. In August 1999, Wales had 9.8 per cent of the population claiming income support, compared to the UK average of 8.1 per cent. Anecdotal evidence obtained from the Employment Service suggests that a high proportion of the claimants in Wales are concentrated in areas of high social deprivation such as the hill top council estates in the South Wales Valleys. In addition, many seaside resorts have high seasonal unemployment, which is accompanied by increased income support claims.

Entrepreneurship indicators

Against this economic background, and despite the success in attracting inward investors, it is not surprising to find that recent statistics indicate that Wales is not as entrepreneurial as it could or should be:

- The region is currently at least 30 per cent behind the average for the UK in the rate at which it creates new businesses.
- For Wales to catch up with the average business start-up rate for the UK within the next six years there needs to be a 50 per cent increase in annual VAT registered start-ups.
- This equates to increasing the annual number of new businesses from 6,300 to 9,300.
- Wales is also losing businesses at a faster rate than the UK. The net loss in Wales between 1994 and 1998 was 4,700 businesses - the UK gained 51,100 businesses in the same time period.

There are therefore serious challenges for the Welsh economy in terms of developing wealth and prosperity, issues that the GEM report will examine in more detail. However, the new National Assembly for Wales can clearly play a major role in achieving a more competitive, enterprising and sustainable Welsh economy through the development of specific economic development and entrepreneurship policies which directly address some of the main underlying structural problems holding the nation from achieving its potential.

Entrepreneurship Policy in Wales

The new National Assembly for Wales has started to grasp the nettle presented by the challenges of creating a more entrepreneurial society in Wales. In 1999, a large part of Wales (West Wales and the Valleys) was given European Objective 1 status meaning that it now qualifies for the highest level of structural funding relief from Europe. The remainder of the country (East Wales) qualifies for some Objective 3 funding, with certain areas also eligible for Objective 2. In designing a set of Single Programming Documents (SPDs) to revive these more deprived areas, the development of entrepreneurship and help for indigenous SMEs have both emerged as prominent themes.

This builds on the previous policies pursued by the old Welsh Office. In 1998, the government published a policy paper entitled 'Pathways to Prosperity – a New Economic Agenda for Wales', which proposed the development of a regional enterprise strategy for the whole of Wales. This proposal, driven forward by the Welsh Development Agency (WDA) stated, 'It will be important to ensure that existing initiatives to support new businesses and related action to promote entrepreneurship are brought together under a clear, integrated programme of activity. We will therefore establish a new Entrepreneurship Action Plan for Wales (EAP).'

The Entrepreneurship Action Plan for Wales

The Action Plan was completed in 2000, together with an associated implementation package and is now before the economic development committee of the National Assembly for consideration.

The EAP is designed around three challenges:

- **Recognising the Opportunity** - creating a greater awareness of the opportunities and benefits of entrepreneurship in order to encourage more people to start a business or to grow the business they are in, and to develop a greater entrepreneurial culture within our institutions, communities and businesses.
- **Creating Enterprises** - Creating a greater number of sustainable start-up businesses in Wales with potential for further growth, particularly by under-represented groups of society such as women, the young, Welsh language speakers, ethnic minorities and retired workers.
- **Going for Growth** - Increasing the number of businesses in Wales that grow, thereby crating greater wealth, employment and opportunity.

The key measures of the success of the strategy will be a significant change in the attitudes of the people in Wales towards entrepreneurship and a public sector that increasingly and explicitly supports entrepreneurship across all its activities. Its success should also result in a substantial increase in new successful business start-ups and more high-growth businesses.

The EAP implementation plan presents fully costed projects that aim to overcome the three main challenges described above. It is remarkably ambitious and seeks a 77 per cent increase in the yearly total of Welsh business starts by 2007.

The plan has six key actions comprising briefly:

- Changing attitudes in Wales towards entrepreneurship - including a National Awareness Campaign and promotion of appropriate role models.
- Embedding entrepreneurship education throughout the whole educational process - within career development, primary, secondary, Further and Higher education.
- Widening horizons to new entrepreneurial opportunities - giving people a taste of different enterprising activities.
- Stimulating entrepreneurial behaviour within local communities throughout Wales, encouraging participation from all parts of society - entrepreneurship in the Social Economy.
- Ensuring a co-ordinated national programme of start-up support based on 'best practice' that reflects the actual types of support required by different types of businesses including a National Business Birth Rate Strategy for Wales.
- Launching specific initiatives in the areas of funding and advice that are tailored to the explicit needs of growth orientated businesses in Wales including the development of a National Business Growth Programme.



The total cost of implementing the EAP is estimated at £235 million over the next three years. If accepted by the National Assembly, a new Entrepreneurship Unit placed within the WDA and reporting to an Entrepreneurship Implementation Panel will administer the programme.

Other entrepreneurship initiatives

The National Assembly has also recognised the importance of the SME sector in other major policy documents. Their first major strategy - entitled *betterwales.com* - aims to create a situation where there is 'a greater awareness of wider opportunities, so that more of our young people will pursue self-employment and entrepreneurship. As many of our businesses as possible must transform themselves into knowledge-based companies (i.e. those which depend for their competitive advantage on the exploitation of know-how and creativity)'. In addition, the document states that 'it is essential that we foster and value an entrepreneurial culture and work with business to promote a higher birth rate of high-quality indigenous enterprises, whether in the private or social economy'.

An additional problem in Wales has been the duplication and confusion caused by a plethora of initiatives and service providers established to support individuals or companies wishing to access help. As a result, the National Assembly is currently conducting a complete, independent Business Services Review. The aim of this is to develop a more co-ordinated set of business services, cutting away existing duplication in provision. The final report is due in early 2001.

One development already underway is the organisation and rationalisation of national financial packages for businesses in Wales. This will be implemented through a new body called 'Finance Wales', which has been created as a subsidiary of the WDA to act as an umbrella for the various packages of financial support available. The new body, which will be managed and operated as a completely independent organisation, will provide funding and management support designed to assist the growth of more Welsh enterprises. Finance Wales will be discussed in more detail later in this report.

There has also been a noticeable increase in private sector initiatives centred on the general theme of entrepreneurship.

Some of these include:

- **The Ernst and Young Entrepreneur of the Year competition.** This is the premier award ceremony for UK entrepreneurs, and takes place in five 'regions' of the UK, followed by a national final. Wales is situated within the 'South' region of the UK. In 2000, a number of Welsh finalists were selected for the South region final including IQE, Peacock's and Admiral Insurance. Henry Engelhardt, the head of Admiral Insurance, was the winner of the category for the financial services entrepreneur of the year in the South region.
- **The Western Mail Fast Growth 50. This is a league table** - organised by the University of Wales Bangor - that is modelled on the Inc 500 initiative in the USA. Supported by BT, KPMG and the European Commission, this project sets out to identify Wales' fastest growing companies and has created a successful network of some of the most dynamic and influential Welsh businesses.
- **Press coverage.** Albeit from a slow start, the national media in Wales has begun to increase its coverage of Welsh entrepreneurial success stories. These include notable personalities such as Terry Matthews (Newbridge Networks, now part of Alcatel) and Sir Christopher Evans (Biotechnology) in business, as well as entertainment stars such as Catherine Zeta Jones, Tom Jones and Charlotte Church in show business. By emphasising their Welsh roots, it is hoped that they become role models to whom others can aspire.

Across the whole spectrum of these public policy measures and private sector initiatives, it appears that there is some hope that the required change in Wales to a more entrepreneurial culture is beginning to take hold. The sheer number of times that terms like enterprise, entrepreneurship, innovation and creativity are mentioned does tend to suggest more than mere lip service is being paid to the concepts. However, is entrepreneurship becoming an inherent part of Welsh culture or is it 'flavour of the month' for politicians and policy-makers? What is actually going on beneath the glossy veneer? Is Wales becoming a more entrepreneurial nation?

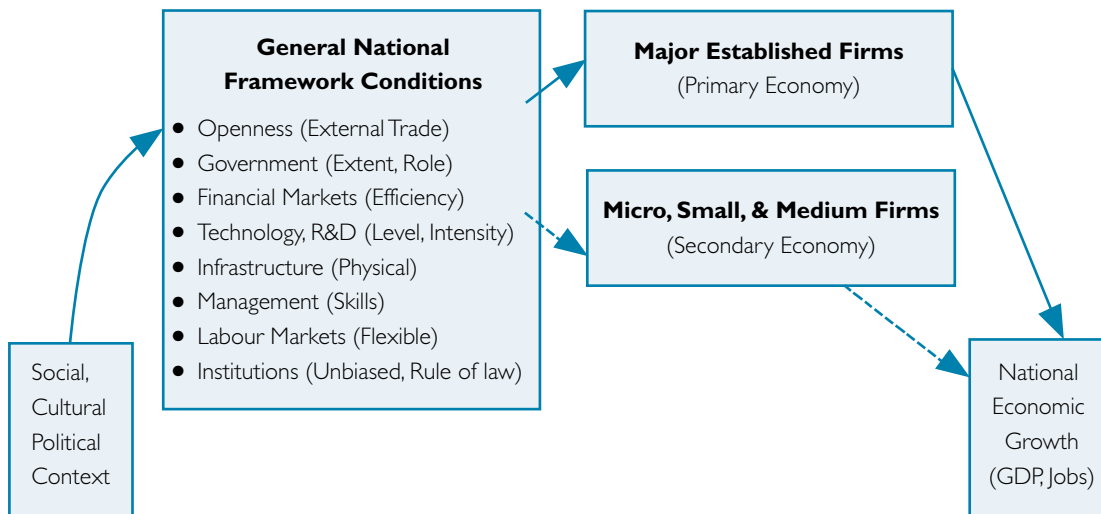
The aim of GEM is to dig deeper, to peel back the layers of Welsh society and to determine just how much entrepreneurial activity is really taking place and, if it is happening, who is actually doing it? Then, by talking to experts in the field, we unearth the key factors that make the difference in determining how much activity takes place.

THE GEM MODEL

At the heart of the GEM project is the development of an understanding of the relationship between entrepreneurship and economic growth. Previous approaches examining economic growth (including GDP and employment growth) have tended to focus on the contribution of large established firms rather than smaller firms, assuming that the former, rather than the latter, are the engines of prosperity in modern economies.

These conventional models - such as the Global Competitiveness Report - also tend to concentrate on examining the relationship between General National Framework Conditions (external trade; role of government; efficiency of financial markets; level and intensity of R&D; physical infrastructure; management skills; flexible labour markets and legal institutions) and the impact these will have on the performance of larger businesses. Figure 1 illustrates this conventional approach to the process leading to economic growth via larger businesses.

FIGURE 1
Role of larger established firms and economic growth



Such a model is conspicuous for its absence of entrepreneurship as a driver for economic growth. The role played by the small-to-medium sized firm sector is relegated to that of a supporting actor, involved in the supply of goods and services to larger established businesses. This is despite empirical evidence demonstrating that large firm activity can explain only a proportion of the variation in economic growth within a nation.

As figure 2 demonstrates, entrepreneurship can have a direct impact on national economic growth. This model includes a large number of factors ignored in the conventional economic models. Firstly, it can be recognised that entrepreneurial activity is shaped by a distinct set of factors – the **Entrepreneurial Framework Conditions**.

These include:

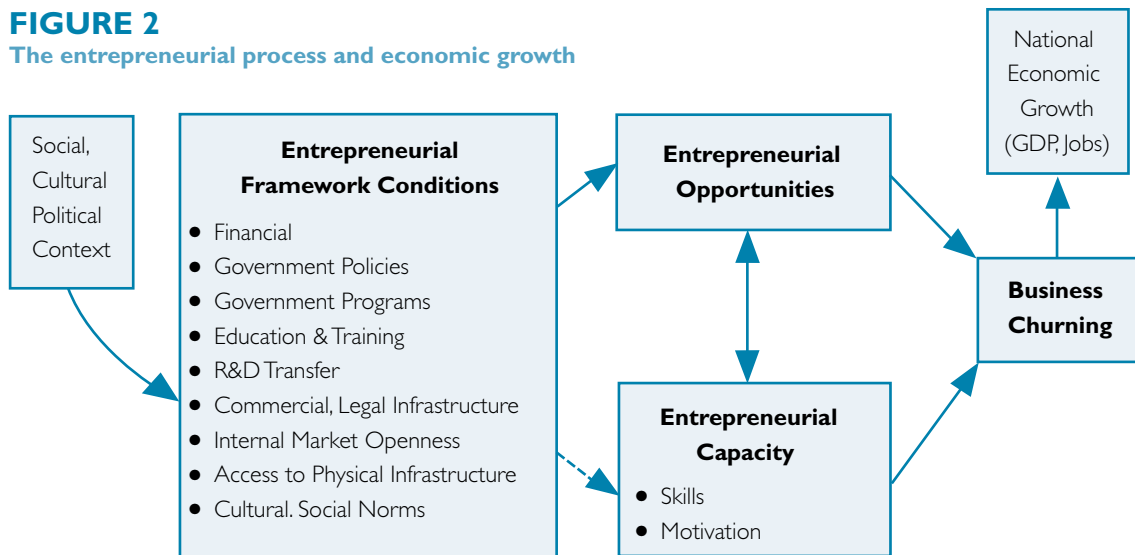
- The availability of financial resources for new and growing ventures.
- Government policies and programmes designed to support new and growing ventures.
- The level of entrepreneurship education and training for practising entrepreneurs.
- Technology transfer.
- Availability of commercial and professional services.
- Ease of access to new markets.
- Access to physical infrastructure.
- Cultural and social norms that affect initiative and self-sufficiency.



Secondly, the level of entrepreneurial activity is directly related to the ability of individuals to recognise that **entrepreneurial opportunities** are available and, more importantly, that those individuals have the **entrepreneurial capacity** - motivation and skills - to exploit them.

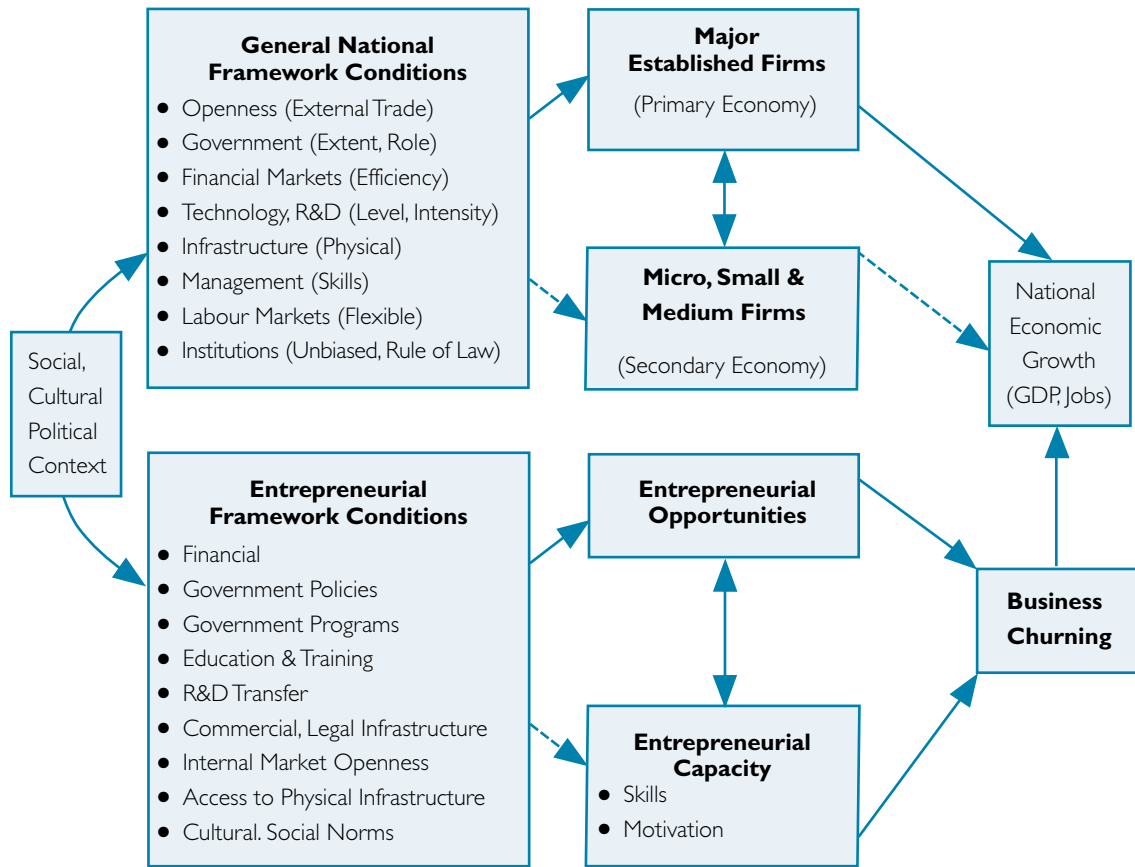
It is the interaction between entrepreneurial opportunity and capacity that leads directly to the creation of start-ups within an economy. However, as an economy creates new births and subsequent jobs, it is likely that there will also be a corresponding increase in firm deaths and job destruction. The intensity of this process, known as **business churning**, contributes to greater economic growth.

FIGURE 2
The entrepreneurial process and economic growth



Clearly, neither the conventional nor the entrepreneurial model gives a full understanding of national economic growth. However, by combining both approaches, we can determine the influence of both large firms and new entrepreneurial businesses on the development of economies, although the mix or contribution made by each model will inevitably vary by country. As figure 3 demonstrates, this new model also indicates that existing firms can be a significant source of start-ups. More importantly, the context in which an entrepreneurial sector can operate is made explicit. This model will help achieve the primary objective of the GEM model, namely an understanding of how the entrepreneurial process operates and the contribution it makes to economic growth.

FIGURE 3
The GEM Conceptual Model (The Total process)



SOURCES OF DATA

The GEM project uses three main sources of data, two of which are unique to the project:

Adult Population Survey - An extensive population survey measured the entrepreneurial behaviour and attitudes of the adult working-age population (18-64 years old). In GEM 2000, more than 46,000 individuals were surveyed across the World, with 2010 respondents in Wales. These surveys produce a unique measure of entrepreneurial activity - the **Total Entrepreneurial Activity Index (TEA)** - which is the only existing measure of entrepreneurial activity that provides a meaningful basis for international comparisons.

Key informant interviews - In the 21 GEM countries and the 2 GEM regions of Wales and Scotland, in depth-interviews of 860 key informants were carried out by members of the national and regional GEM teams. One-hour face-to-face interviews were conducted with 37 Welsh experts, covering each of the nine framework conditions. In addition, each expert completed a brief structured questionnaire involving standardised assessments of important aspects of the Welsh entrepreneurial sector. All open-ended discussions with the key informants were recorded and transcribed to allow for a qualitative content analysis, allowing the Welsh GEM team to capture issues and trends that fell outside the areas discussed in the structured questionnaires.



National economic data - For all national teams involved in the GEM study, extensive economic data was collected from sources such as the OECD, United Nations, as well as other international research initiatives such as the World Competitiveness Yearbook and the Global Competitiveness Report. In Wales, comparable data (where available) was collected from a variety of national and regional sources such as Labour Market Trends, Office for National Statistics and NOMIS (National On-line Manpower Information System).

As a result of this enormous data collection exercise, it has been possible to provide a detailed illustration of entrepreneurial activity in 23 nations. More importantly in Wales, it has given us the opportunity, for the first time, to benchmark ourselves against the most prosperous and entrepreneurial countries in the World.

GEM IN WALES

In Wales, the GEM research project is headed by Professor Dylan Jones-Evans, Director of the Centre for Enterprise and Regional Development at the University of Wales Bangor. His co-researcher on the project is Professor David Brooksbank, Head of the Welsh Enterprise Institute at the University of Glamorgan. Both individuals are actively involved in the development of entrepreneurship research within Wales, being responsible for undertaking detailed studies supporting initiatives such as the Entrepreneurship Action Plan for Wales, the Wales Fast Growth Fifty initiative and the Wales Spin-Out Programme. The Welsh GEM research has been supported financially by the Welsh Development Agency, and will help inform the future development of the Entrepreneurship Action Plan for Wales.

The GEM project is an annual research event that will, over time, build up a longitudinal international database to inform policy-makers, academics and practitioners of the relevance of entrepreneurial activity to economic development. The opportunity to benchmark Wales against the major economies of the World is to be welcomed, giving us the chance to improve our understanding of entrepreneurship in a Welsh context, and to participate in the leading global forum for policy debate on entrepreneurship.

HOW ENTREPRENEURIAL IS WALES?

Measures of entrepreneurial activity

One of the primary aims of the GEM study is the production of a reliable measure or index figure for the entrepreneurial activity prevalent within a country. To construct such an index requires statistically reliable information about the types of activity actually being carried out which could reasonably be construed as 'entrepreneurship in action'.

GEM collects this information using a telephone survey of a representative sample of the adult population of a nation. In Wales, Beaufort Research conducted this in June and September 2000 using their existing omnibus survey of Welsh adults. In total, across both phases, information was gathered from 2010 respondents in Wales.

Clearly, the form of the activity to be defined as 'entrepreneurship' is crucial and in 2000, all GEM nations used the following measures:

- Participation in new business start-ups (paying wages no longer than 3 months) categorised as nascent entrepreneurs. This gives a measure of the 'nascent' entrepreneurship prevalence rate for each country;
- Participation (as part or full owner) in new firms (less than 42 months old at time of survey, i.e. established in 1997 or later). This gives a measure of the new business prevalence rate for each country; and
- Participation in business angel investment (otherwise known as informal venture capital).

The final actual measure used for comparison – known as the Total Entrepreneurial Activity (TEA) index - is derived by combining the first two - the nascent and new business prevalence rates). The TEA will not correspond directly to the sum of the start-up and new firm participation rates because individuals involved in both activities are counted only once.

BUSINESS START-UP ACTIVITY

As this is the first time that Wales has taken part in the GEM study, we believe it to be important to clearly state the derivation of the key measures with which we are able to compare entrepreneurial activity across nations.

The first measure is that for start-up or nascent entrepreneurship, where the survey asked the following direct questions:

1. You are, alone or with others, currently trying to start a new business, including any type of self-employment; and
2. You are, alone or with others, trying to start a new business or a new venture with your employer—an effort that is part of your normal work.

If the respondent give an answer of 'Yes' to either of the above this triggered three supplementary questions to determine whether the activity or 'business venture' could be classified as a genuine start-up.

The supplementary questions were:

- a) Over the past twelve months, have you done anything to help start this new business, such as looking for equipment or a location, organising a start-up team, working on a business plan, beginning to save money, or any other activity that would help launch a business?
- b) Will you personally own all, part, or none of this business?
- c) Has the new business paid any full-time salaries or wages, including your own, for more than three months?



In order for the respondent's claims to be classified as a genuine start-up venture, 'Yes' responses to both a) and b) and a 'No' response to c) were required. In other words, the 'activity' had to be tangible in some way and the respondent needed to expect to at least part own the eventual company.

If the respondent answered 'Yes' to a), b) and c) this could indicate a potential new firm participant. In such cases, respondents were asked when the firm first paid wages. If they did so in 1997 or later, the respondent was classified as a new firm participant.

The potentially different background and circumstances behind the creation of the new business activity led to respondents answering 'Yes' to question 1 being classified as independent start-up participants. Those who answered 'Yes' to question 2 were classified as firm-sponsored start-up participants. For the sake of completeness, if anyone responded 'Yes' to both they were randomly assigned to one group or the other in the ratio of unambiguous 'independent' to 'firm-sponsored start-ups'. These rules were applied consistently by all 23 nations contributing to GEM 2000.

The picture that emerges for Wales in terms of participation in start-up activity is not particularly encouraging. Figure 4 shows the index of nascent firm prevalence rates where **Wales has only 1.4 per cent of the adult population participating in start-ups at time of survey**. This is almost half the Scottish nascent entrepreneurship rate (2.7 per cent) and well below the UK rate (3.1 per cent). More importantly, when this is compared internationally, Wales ranks 19th out of the 23 GEM nations (with only Japan, Ireland, France and Belgium having a lower start-up rate). The countries with the highest rate of nascent entrepreneurship are Brazil (12.3 per cent), USA (9.8 per cent) and Australia (8.1 per cent), all having at least six times the start-up activity to be found in Wales.

FIGURE 4
Nascent Firm Prevalence Rate by Country

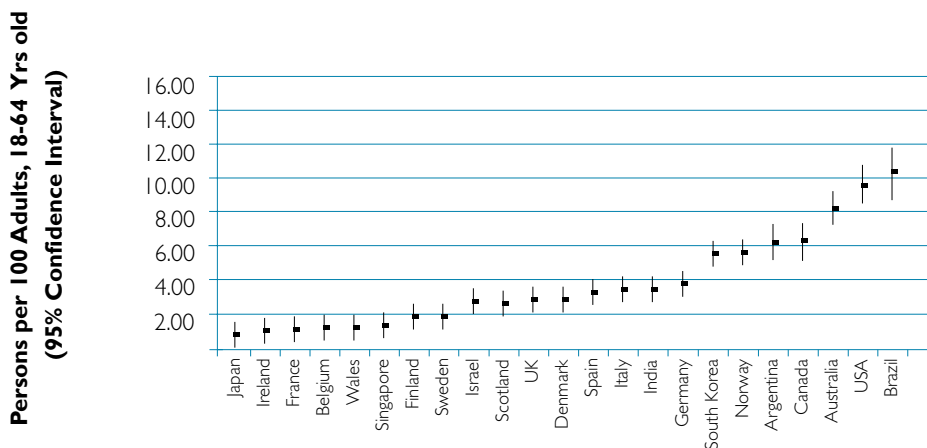
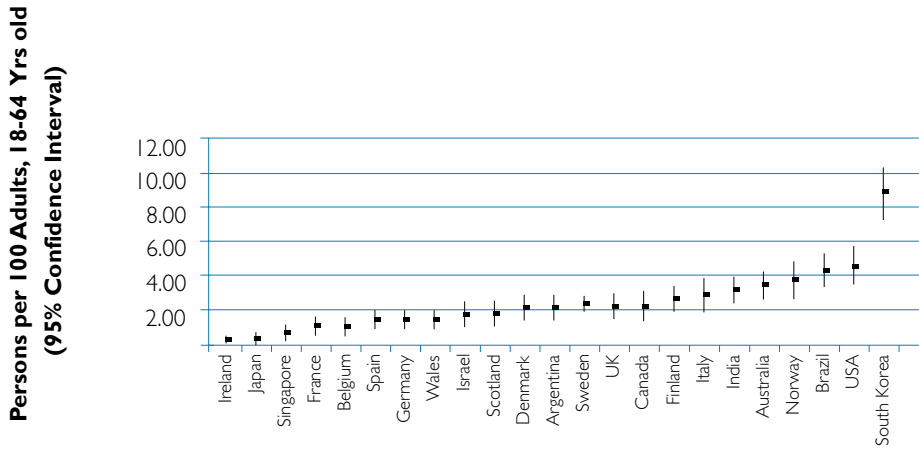


Figure 5 shows the participation by individuals in new firms (where all firms started in 1997 or later qualified as being new firms). The major finding here is that despite having one of the most dynamic economies in the World, the new business prevalence rate in Ireland is 0.3 per cent, the worst of all the GEM nations in the study. This is clearly an unexpected result.

Wales ranks 16th out of the 23 GEM nations with a **participation rate by individuals in new firms of 1.4 per cent**, the same as Germany and Spain. In contrast, 1.8 per cent of the Scottish population and 2.2 per cent of the UK population were involved in running new businesses. The highest level of participation in new business was to be found in South Korea, where 9 per cent of the working population were managing a new business, although this is out of the ordinary, with the next highest rate (the USA) being 4.7 per cent.

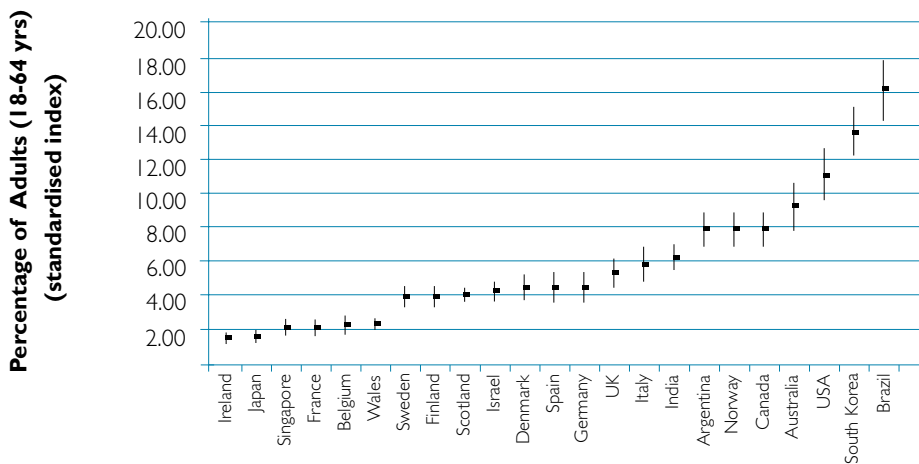
FIGURE 5
New Firms Prevalence Rates by Country



As a comparison of figures 4 and 5 shows, Wales has the same rate of new business prevalence as it does for nascent entrepreneurial activity. For most countries in the GEM 2000 study, the nascent prevalence rate exceeds the new firm prevalence rate by a factor of approximately 2:1. At first glance, this would suggest that Wales has a high survival rate for business, although it could also suggest, as the later data shows, that many businesses in Wales do not grow and therefore do not risk failure.

Figure 6 presents the main indicator of entrepreneurial activity within the GEM study, namely the Total Entrepreneurial Activity (TEA). As explained earlier, the TEA is the sum of the level of nascent entrepreneurship (figure 4) and the new business prevalence rate (figure 5). Those individuals who were starting a new business at the same time as running an existing new venture were counted only once.

FIGURE 6
Total Entrepreneurial Activity Prevalence Rate by Country



Four nations from the GEM study – Brazil, South Korea, USA and Australia – can be clearly grouped together, with a TEA score of over 10 per cent of the working age population. In contrast, Wales has a TEA score of 2.6 per cent and finds itself classified – along with Ireland, Japan, Singapore, France and Belgium – as the least entrepreneurial nations in the study. However, what is of interest is that three of these countries – Ireland, Singapore and Belgium – have extensive imports and exports, which may account for their (relatively) low level of entrepreneurship. Clearly, this cannot be used as an explanation for Wales' low performance in entrepreneurial activity and we will examine the reasons in more detail during the analysis of the key informant interviews that follow this section.



EMPLOYMENT AND ENTREPRENEURIAL ACTIVITY

Many of the countries participating in GEM 2000 found very high potential employment generation as a result of the plans disclosed by respondents involved in genuine start-ups. New business start-ups were categorised according to the number of employees expected in five years time, with 50+ being considered a high growth start-up. In Wales, no start-ups fell into this category. This is not unique, with countries such as Belgium, France, India, Italy, Japan and Singapore also predicting no high growth start-ups.

For comparative purposes, the highest growth projections came from the Scandinavian countries - Sweden (17 per cent), Finland (12 per cent) and Denmark (8 per cent) - with Ireland (7 per cent) being slightly behind. In Wales, only 6 of the 22 respondents classified as nascent entrepreneurs felt able to give employment estimates, which in total amounted to only 46 jobs. By contrast, in Australia, for example, the 95 respondents who were prepared to disclose their estimates of the number of staff they would employ in five years' time, showed they would (if accurate) account for a total of 2,163 jobs. However, these figures are only projections based on telephone interviews and should be seen as such. What is striking though is that whilst new firm formation may be the 'mother of employment' in many areas of the world, this would not appear to be the case in Wales. We return to this important finding later when we discuss public policy prescriptions that arise from such observations of the Welsh labour force.

It could be argued that the predicted jobs' growth from new firms is a better indicator of the potential contribution of the entrepreneurial sector. In Wales, 21 adult respondents were classified as part or full owners of firms established within the last 42 months. Of these, only 9 were prepared to disclose how many employees they had now, and expected to have, in five years' time. The job growth aspirations of these companies were generally very low. The average per firm was only 2 jobs, with a total number of new jobs of only 15. This compares poorly with many of the GEM 2000 nations, where the companies in countries such as Ireland, Scotland and Australia reported considerably higher growth projections.

EDUCATION AND ENTREPRENEURSHIP

As in a number of other countries, education seems to be a key influence on entrepreneurial activity in Wales. As table 1 indicates, the level of educational attainment seems to be positively correlated with the level of entrepreneurial activity – the higher the educational qualification, the higher the proportion of start-up activity by the working age population attaining that qualification. This is in contrast to the 'myths' that individuals without little or no qualifications will gravitate towards entrepreneurship as a 'last resort' to paid employment and that graduates do not consider entrepreneurship as a real career option. Indeed, in Wales, the reverse is true. Despite this, it is clear that there are real challenges in ensuring that the concept of entrepreneurship is disseminated to individuals at all levels of educational attainment in Wales.

Table 1. Educational attainment of working age population and level of start-up rate in Wales

Educational attainment	% involved in new firm start-ups
None completed	0.4%
Up to Secondary School	0.9%
Vocational education	2.1%
Academic first degree	3.1%
Postgraduate degree	4.0%

INDEPENDENT AND FIRM-SPONSORED START-UPS

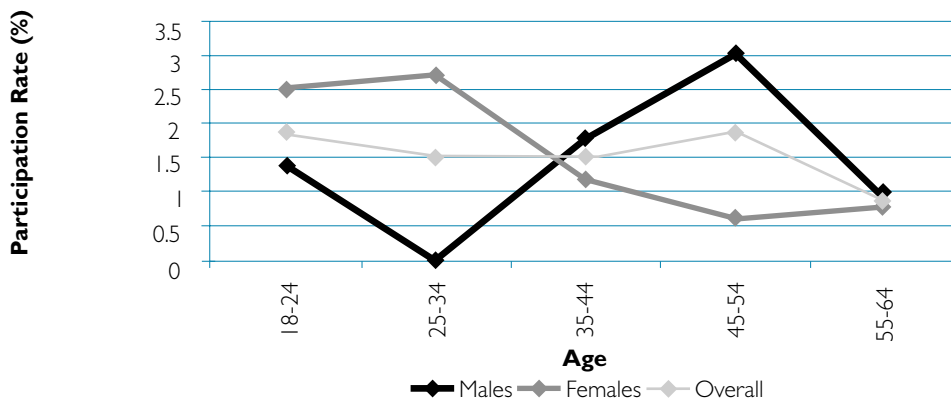
An important aspect of the GEM survey is the distinction made between independent or 'autonomous' start-ups and start-ups undertaken as part of normal employment i.e. 'firm-sponsored' start-ups. A respondent would only be classified as a firm-sponsored start-up if they still expect to own a portion of the company, thus removing from the sample corporate spin-offs, which remain wholly owned by the parent company.

In Wales, 21 out of the 22 reported start-ups were autonomous. This contrasts with the UK, where 9 out of the 50 were firm-sponsored start-ups. As with the job creation data above, it is worth issuing a similar warning about the appropriate interpretation of these numbers. Suffice it to say, that in a general comparison of Wales against other similar nations, the proportion of firm-sponsored start-ups is almost always lower.

ENTREPRENEURSHIP, AGE AND GENDER

Turning to examine the demographics of the data for Wales, Figure 7 illustrates the breakdown of participation in nascent entrepreneurship by age and gender.

FIGURE 7
Start-up Participant Demographics in Wales



This shows clearly that, unlike almost all other GEM 2000 nations, the pattern of participation in start-up activity in Wales is not clearly biased towards males, with female participation in entrepreneurship being amongst the highest of the GEM nations. Indeed, in the younger age ranges, females have higher rates than males, a position that is reversed in the older ranges.

Figure 8 shows the balance of Total Entrepreneurial Activity by country and by gender. Here **56 per cent of those involved in entrepreneurial activity in Wales are male, compared to 44 per cent female**. In figure 9, this total is broken down to reveal the age profile by gender. Again the same pattern is revealed, with female participation higher in the younger age ranges. Whilst the low numbers in each category make extrapolation of these figures difficult, they do perhaps illustrate that gender differentials are less prevalent amongst the young. Interestingly, whilst there is some slowdown of entrepreneurial activity at the older age range, Wales does not show the degree of decline often present in other GEM 2000 countries.

FIGURE 8
Total Entrepreneurial Activity by Gender

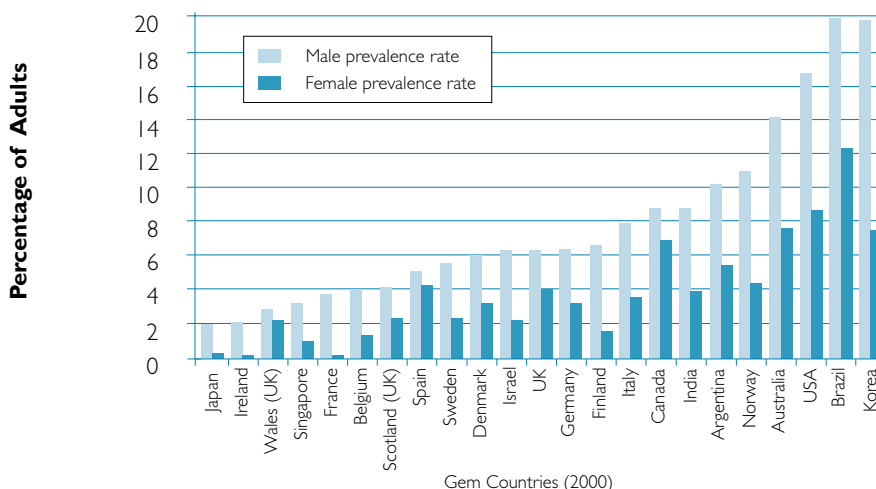
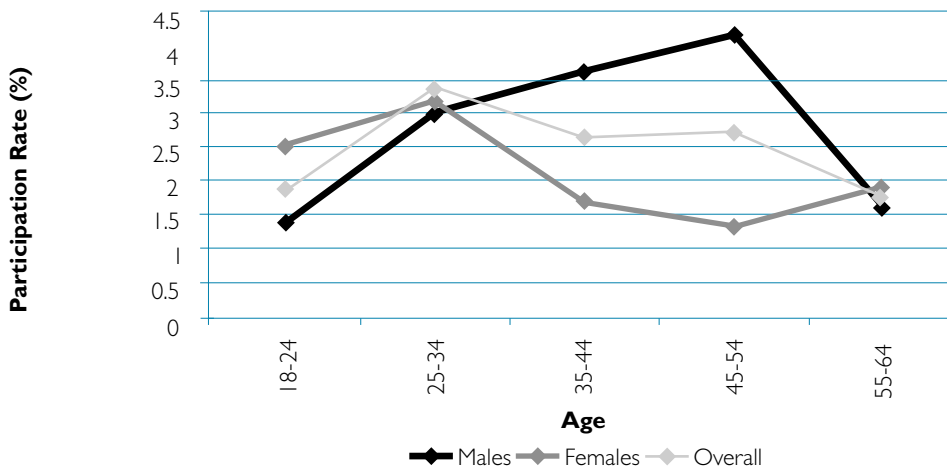




FIGURE 9
Total Entrepreneurial Activity Participant Demographics in Wales



As suggested in the global GEM report, the greatest potential for a long-term impact on enterprise in Wales is the development of specific policies geared towards the two extremes of the age spectrum. In Wales' case, this would be those individuals younger than 25 and those aged over 55, both of which show rates of entrepreneurial activity below the average. However, there are currently no specific initiatives geared at the older age group in Wales - the so-called potential 'third-age' entrepreneurs. For those younger than 25, there are organisations such as the Prince's Youth Business Trust (PYBT), although they have limited resources in increasing the entrepreneurial activity of young Welsh people.

BUSINESS ANGEL INVESTMENT

It has become increasingly recognised that informal venture capital (or business angel) activity is an important source of risk finance for new business ventures. In Wales, we have seen the development of the Xénos business angel network run by the WDA (which we will discuss in more detail later) achieve a degree of national recognition for their products. However, it is difficult to compare their activities (success or failure) against that achieved by similar organisations elsewhere in the world because of differing regulations and financial infrastructure. GEM 2000 obtains some basic information about business angels from 23 different nations that is directly comparable, something that has never before been achieved.

Again for the sake of clarity, we set out what exactly was asked of respondents and how we translate that into meaningful information. Participants in the adult survey were asked whether they had, in the past three years, personally provided funds for a new business start-up that was not their own (this excluded buying shares in a publicly traded stock or mutual fund).

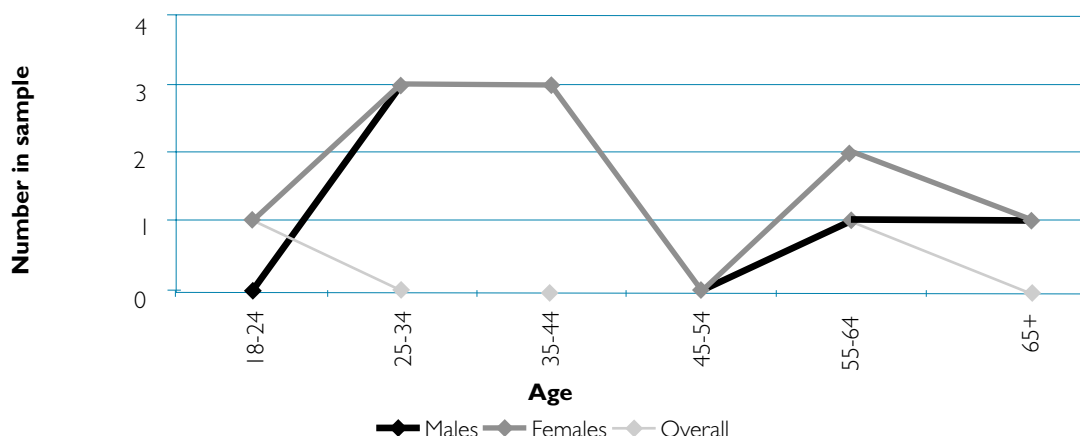
If so, they were asked:

- How much money they had provided?
- What sort of business it was?
- What their relationship to the investee was?

In Wales, the **business angel participation rate was just 0.5 per cent**, giving us the lowest ranking (equal with Scotland) of all 23 GEM 2000 nations. This compares to USA (7.0 per cent), South Korea (5.5 per cent) and Norway (5.1 per cent). India, with a rate of 0.9 per cent, was the next country to Wales and Scotland in the list.

Figure 10 illustrates the demographics of the Welsh sub-sample of business angels. Women, it appears, are far less likely to become involved with business start-ups as providers of risk capital. Of the 11 respondents identified, 9 were male and only 2 female. Of the 9 who identified the destination for the funds, the most frequent recipients were those in a close family relationship (6 out of the 11 instances), with a friend/neighbour being the next most common area of funding. None of the business angels in Wales had provided funding to persons or ventures where no prior relationship existed.

FIGURE 10
Business Angel Demographics in Wales



5 of the 11 Welsh respondents who identified themselves as business angels declined to disclose how much they had invested. Of the remaining 6, 1 invested £600, 2 invested £1,000, 1 invested £8,000, 1 invested £30,000 (with a close friend) and the final angel invested £40,000 (with close family). These figures are all very low when compared to many of the GEM 2000 and in the UK, the prevalence rate is 3.0 per cent, with an average investment of approximately £15,000.

WALES' ENTREPRENEURIAL SCORECARD

Table 2 provides a summary of the main indices for Entrepreneurial Activity for Wales and illustrates how the nation has performed against the other countries in the GEM study.

Table 2 - Wales' Entrepreneurial Activity Scorecard

Entrepreneurial Activity Indicators	Rank	Wales		All GEM Countries	
		Score	Median	High (Score)	Low (Score)
Start-ups overall	19th	1.4%	2.6%	12.3% (BR)	0.9% (JP)
Independent start ups	18th	1.4%	3.2%	11.1% (BR)	0.9% (JP)
Company-sponsored start-ups	19th	0.1%	0.5%	1.9% (US)	0% (JP+)
High-growth (50+ staff, % of start-ups)	=22nd	0%	4%	17% (SE)	0% (JP+)
Medium-growth (15+ staff, % of start-ups)	18th	0.1%	11%	37% (FI)	0% (JP+)
New businesses (< 42 months old)	16th	1.4%	2.2%	9% (KR)	0.3% (IE)
Infant businesses (< 18 months old)	13th	1%	1%	4.9% (KR)	0.0% (JP)
Total Entrepreneurial Activity	18th	2.6%	4.7%	16.0% (BR)	1.3% (IE)
Female to male participation in start-ups	1st	110%	41%	110% (WA)	15% (FI)
Female to male participation in new firms	=12th	50%	47%	160% (ES)	0% (IE+)
Participation of population as business angels in last 3 years	=22nd	0.5%	2.5%	7% (US)	0.5% (WA+)

Notes: + indicates more than one country with this score

Country codes: BR – Brazil, ES – Spain, FI – Finland, IE – Ireland, JP – Japan, KR – South Korea, SE – Sweden, US – United States, WA - Wales



IS ENTREPRENEURSHIP LINKED TO ECONOMIC GROWTH?

One of the primary aims of the international GEM project is to examine the relationship between entrepreneurship and economic growth. As explained earlier, the GEM Model suggests that entrepreneurship should be a key determinant of economic growth, although very little is actually known about this relationship, particularly in different national settings. However, the importance of entrepreneurship in a national economy could be hidden by other factors, thus distorting the nature of entrepreneurship when all other countries were combined.

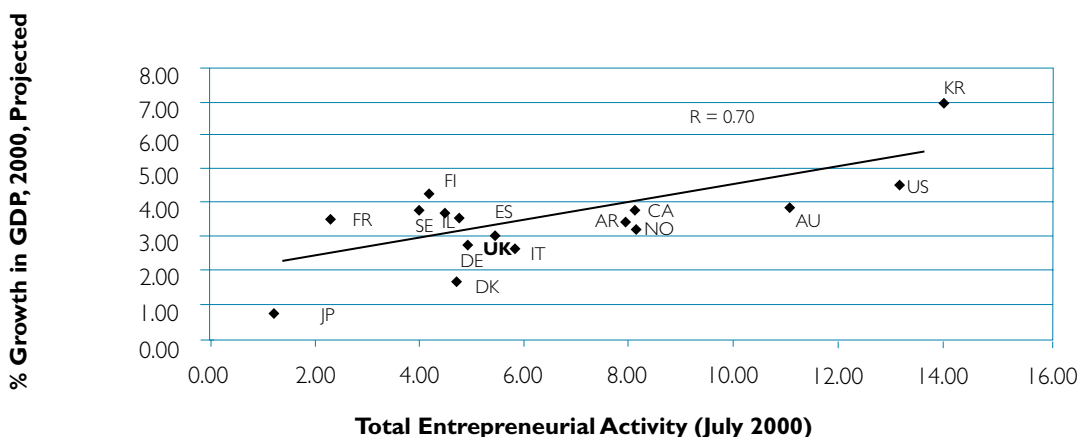
In the GEM 2000 study, two groups of countries were excluded from the examination of the relationship between economic development and entrepreneurship. The first were those countries where imports and exports dominated the national economy. This was measured by examining if the value of imports/exports was greater than a country's GDP. If this was the case, then a country was deemed to be too dependent on international trade to be included in the analysis. Three countries were identified in this group, namely Singapore (211 per cent), Belgium (142 per cent) and Ireland (126 per cent), and were removed from any further analysis because of their high dependence on external trade.

The other group of countries excluded was that dominated by agricultural economies (assessed by the proportion of the adult male population employed in the agricultural sector). This is because such economies are complex and multifaceted, with economic activity tending to be concentrated in certain regions of the country. Two countries – India and Brazil – stood out from the others in terms of the agricultural sector - 58 per cent of males in India and 29 per cent of the males in Brazil were working in the agricultural sector. Given this fact, it seemed relevant to exclude both countries from this examination.

In addition, it is worth noting that the two regions taking part in the GEM project – Wales and Scotland – did not take part in the exercise this year as the aim of this part of the project was to measure the differences between national economic growth and entrepreneurial activity.

FIGURE 11

Total Entrepreneurial Activity & Economic Growth Alpha Group Countries



The remaining 16 nations were therefore deemed to be 'entrepreneurially receptive' and labelled the 'alpha group'. As Figure 11 demonstrates, after controlling for economies dominated by exporting or agricultural activities, a statistically very significant relationship can be observed between the Total Entrepreneurial Activity (TEA) rate and projected GDP growth for year 2000, being as high as 0.69. However, we are talking only about 16 cases here, and an increase in the number of countries in the GEM research, as expected next year, could increase the significance (and confidence) of the relationship between economic development and entrepreneurial activity. A more detailed explanation of this relationship is to be found in the GEM 2000 Executive Report (www.entreworld.org/GEM2000).

ENTREPRENEURIAL FRAMEWORK CONDITIONS IN WALES

As discussed earlier, the theoretical model developed by the GEM team identifies nine different dimensions that are considered to have an impact on a nation's entrepreneurial activity by directly influencing the conditions that lead to new venture start-ups and business growth.

These nine entrepreneurial framework conditions are:

- **Financial support** - the availability of financial resources, equity and debt for new and growing firms including grants and subsidies.
- **Government policies** - the extent to which government policies, reflected in taxes or regulations (or the application of either), are either size-neutral or encourage new and growing firms.
- **Government programmes** - the presence of direct programs to assist new and growing firms at all levels of government (national, regional, and local).
- **Education and training** - the extent to which training in creating or managing small, new, or growing business is incorporated within the educational and training systems at all levels.
- **Research and development transfer** - the extent to which national research and development will lead to new commercial opportunities and whether or not these are available for new, small, and growing firms.
- **Commercial and professional infrastructure** - the presence of commercial, accounting, and other legal services and institutions that allow or promote the emergence of new, small, or growing businesses.
- **Barriers to entry** - the extent to which commercial arrangements are prevented from undergoing constant change and re-deployment, preventing new and growing firms from competing and replacing existing suppliers, subcontractors, and consultants.
- **Access To Physical Infrastructure** - the ease of access to available physical resources (communication, utilities, transportation, land or space) at a price that does not discriminate against new, small, or growing firms.
- **Cultural and Social Norms** - the extent to which existing social and cultural norms encourage, or do not discourage, individual actions that may lead to new ways of conducting business or economic activities and, in turn, lead to greater dispersion in wealth and income.

The influence of each of the entrepreneurial framework conditions is examined by means of in-depth interviews with selected experts.

CHOOSING THE EXPERTS

Each expert was chosen on the basis of his or her knowledge of a specific framework and who could articulate the issues for the entrepreneurial sector within that entrepreneurial framework condition (e.g. a business angel was chosen to comment on the financial support framework condition). If an individual had a broader knowledge of the issues for entrepreneurship in Wales, then so much the better. However, key informants were chosen primarily for their specialist expertise, although many of the experts will have interest and expertise in more than one entrepreneurial framework condition, and their views on entrepreneurial framework conditions other than the one they were expected to represent were encouraged during the interview.

We interviewed at least two experts per entrepreneurial framework condition who were directly involved in delivering a major aspect of that framework condition but who were known to possess a wider than normal 'vision' of the entrepreneurial phenomenon. The third expert to be interviewed in an entrepreneurial framework was an observer; i.e. someone who is not directly engaged in delivering an entrepreneurial framework condition, but who has a deep knowledge and broad overview.



Such experts were normally either academics or consultants. Where a fourth key informant was chosen for a particular entrepreneurial framework condition, that person should be a deliverer rather than an observer. We also ensured that at least 25 per cent of the key informants are or were entrepreneurs, and we also considered ethnic, minority and gender balance when choosing experts. In Wales, a total of 37 'key informants' were interviewed made up of representatives from the private, public and voluntary sectors. The GEM research team would like to thank the senior businesspeople, politicians, educationalists, policy-makers, financiers and entrepreneurs who gave up their valuable time to act as key informants for this study.

This section will discuss, in detail, each of the entrepreneurial framework conditions affecting new and growing firms in Wales.

It will draw on various findings from the interviews with the key informants, including:

- Qualitative data from the in-depth interviews, including the key informants' choice of the three most important critical issues for the future of entrepreneurship in Wales.
- Quantitative data from the detailed responses, which can then be compared to the responses from the other GEM nations participating in this study.

Respondents were asked to rate their responses to the statements put before them on a scale of 1 (completely false) to 5 (completely true). For the purposes of comparing Wales to the other gem nations graphically, the results have been converted to a scale of +2 to -2 so that 3 (neither true nor false) is represented as 0. We have done this for ease of visual analysis, as the negative and positive answers can be distinguished more easily.

As this is the first year for Wales to participate in the study, we felt it would be interesting to graphically compare our key informant interview results with those of the other region, namely Scotland. We are also comparing Wales to the UK as a whole, as well as the average for the 21 GEM countries participating in the study. Separate reports are available for Scotland, UK and GEM 21 countries.

FRAMEWORK CONDITION NO1 - FINANCIAL SUPPORT

Ever since the release of the Macmillan Enquiry in 1931, the state of finance in the small firm sector in the UK has attracted considerable attention from politicians, academics and policy-makers. Despite three further reports in the last thirty years - from Bolton, Wilson and Cruickshank - which have examined this issue in further detail, we are still no nearer to closing the gap in finance which is still perceived to exist between supply and delivery of funds to smaller firms in the UK.

Indeed, as the Governor of the Bank of England recently stated, 'There is no doubt that the importance of the SME sector to the supply side of the economy is much more widely appreciated now than it used to be; it has moved up the policy agenda, and there are a whole host of initiatives in train to provide more encouragement to the sector; including initiatives to improve the provision of SME finance. But Rome was not built in a day. The problems facing the sector; including the problems of access to finance, are as varied and diverse as the sector itself'.

Whilst finance does not emerge as the most important item to encourage entrepreneurship in any of the GEM countries studied, it ranks second in nine countries. Given this, it is of no surprise that access to capital is rated as one of the three most important factors in Wales, behind the development of an enterprise culture and government policy towards enterprise. The perceptions of 37 Welsh experts towards finance are presented in figure 12, together with that of Scottish and UK experts, as well as the average from the 21 GEM countries' experts.

FIGURE 12
Financial Support - National & International Comparisons of Expert Opinions



These findings are of significant interest to policy-makers in Wales. Whilst access to capital has been identified as one of the major factors that can positively influence entrepreneurship in Wales, it is clear that a general perception exists that there is not enough equity or debt funding for new and growing Welsh firms, at least in comparison to the UK and Scotland, which are largely neutral on the issue.

Some of the reasons given by our key informants for this lack of equity and debt funding are quite startling. For example, one leading financial expert suggested that many businesses in Wales are risk averse, and that there is a confidence issue with little vision beyond one immediate market or geographical location. This results in Welsh companies not performing to their full potential, and thus having little recourse to access finance for growth.

Others perceived that the existing traditional suppliers of finance - the High Street banks - are risk-averse, interested in short-term goals and tend to 'play it safe' when investing in businesses. As a result, there is little finance available for businesses wishing to grow and develop, particularly when seeking substantial amounts of finance for expansion. This has led to an over-reliance in Wales on debt finance as opposed to equity or loan finance (which is more efficient and effective at encouraging responsible expansion by businesses). One expert stated that 'to create an entrepreneurial environment in Wales, financial providers need to be more entrepreneurial'.

There is also the issue of the finance offered to different types of firms. For example, a high number of key informants suggested that, perversely, banks in Wales were more willing to consider the provision of finance to new firms with no track record, and tended to have little interest in existing firms. Whilst banks are flexible at the beginning of firms' lifecycle, this tends to change once the business is established and needs to grow further. In particular, it was felt that banks needed to have greater flexibility for dealing with the demand for capital that can occur when businesses experience short spurts of rapid growth.

The key informants questioned also believed that there are a limited number of specialists within Wales that can provide advisory services for growing and established businesses. On the other hand, the level of financial competence demonstrated by new entrepreneurs is also a major issue, and needs to be improved substantially.



Indeed, it was felt that most Welsh entrepreneurs have little expertise in raising capital and, as such, will fail to put together quality bids requesting additional funding to finance providers.

Whilst there is not enough private sector funding within Wales for the creation of new business and the expansion of existing firms, over two-thirds of Welsh experts are of the opinion that public subsidies have an impact on promoting firm creation and growth. This in itself is surprising, in view of the fact that Government directives prevented the Welsh Development Agency from assisting new and growing firms in Wales - with this role largely handed over the delivery at regional level by the enterprise function of the TECs and by local authorities. This backing for public support differs from the opinions of key informants in Scotland and the average GEM 21 country's experts (who are ambivalent on this matter). It is also completely opposite to the beliefs of the UK's experts, who clearly consider public subsidy of new and growing firms to be unimportant, at least relative to private sector funding.

Table 3. Welsh Companies registered with the London Stock Exchange (by location of registered office), December 2000

Anglesey Mining	Dee Valley Group	The Peacock Group
ASW Holdings	Easier	Provalis
Bailey (C.H.)	Gyrus Group	Redrow
Biotrace International	Hawtin	St David's Investment Trust
Cardiff Property	Hyder	Stilo International
Chepstow Racecourse	Iceland Group	Surface Technology Systems
Consolidated Coal	IQE	World Travel Holdings
Culver Holdings	Maelor	

The issue of private sector support for business is reflected in the fact that Welsh experts do not believe that business angels, venture capital, or Initial Public Offerings (IPOs) have an important role to play in financing new businesses. This is considerably less than for the majority of other countries in the GEM study and in complete contrast to the UK, which performs better in those three items than the average of the GEM 21 countries.

The opinion regarding IPOs is not unexpected, given that there are only twenty-three Welsh companies currently listed on the London Stock Exchange (with four of these being on the Alternative Investment Market). As Table 3 below shows, they include businesses such as Iceland, Redrow, IQE, Peacocks, Gyrus and the most recent, Surface Technology Systems from Newport.

However, the low opinion on both business angels and venture capitalists needs to be examined in more detail, given that they are the principal sources of private equity in most other GEM countries. We will also examine the development of Finance Wales – which was briefly discussed earlier in this report - as a national provider of funding for Welsh SMEs.

Business Angels

One of the major concerns of the key informants regarding business angels was the fact that whilst the concept of 'business angels' was highly relevant in addressing some of the finance problems faced by smaller firms in Wales, it was felt that there were not enough potential angels in Wales. This opinion is borne out by results of the Adult Population survey, where the participation rate in business angel activities was just 0.5 per cent, the lowest of all the GEM nations participating in the study. This contrasts strongly with the USA, where 7 per cent of adults claim to be investing in new companies.

This is despite the relative success of Xénos (the only business angel network in Wales), which has seen over £1 million of capital invested in thirteen projects throughout Wales. Whilst Wales gains just above the right 'share' of investment activity for its head of population, 'hotspots' such as London, Scotland and Eastern England, have a share of the amount invested in the UK which is almost 30 per cent higher than it should be (by population).

One of the problems cited by the key informants was that Xénos was not that well-known amongst businesses in Wales, and that there also needed to be a commercially-based network, with greater involvement by semi-retired entrepreneurs. Whether it is feasible, in a small country such as Wales, to have another business angel network in competition with Xénos is open to question. However, it is clear that private investors are a significantly under-utilised resource for finance for smaller firms in Wales and more needs to be done to engage such individuals in providing opportunities for investment in Welsh entrepreneurial firms.

Venture Capital

As the data from key informants demonstrate, venture capitalists are not seen as an important source of private support for new and growing firms in Wales. This is a surprising perception, given that data from the British Venture Capital Association (BVCA) indicates all-time record levels of investment were seen in Wales in 1999, with £234 million invested in Welsh companies (although much of this was due to one large deal). It is also notable that the number of companies backed by venture capitalists in 1999 increased by 27 per cent (although this was reversing the trend that saw a drop in the number of companies invested in from 44 in 1997 to 33 in 1998). The type of investment is also very interesting – there were only six early stage investments in Wales in 1999, as compared to twenty-seven expansion investments and nine management buy-outs.

In addition, over half of the investments in Wales in 1999 were to be found in basic industries, general industries or consumer goods. With regard to information technology, one of the fastest growing sectors of the economy, Wales attracted 4 per cent of the total UK investment in this sector in 1999.

If we examine investment relative to the number of VAT businesses in Wales in 1999, the venture capital investment per firm is still considerably less than the national average, although higher than regions such as Northern Ireland, the South West of England, the East Midlands and Eastern England. To some experts, this result is due to the size of demand for finance in Wales – most firms are looking for around £100,000 of investment whilst the majority of venture capitalists will not look at any investment below half a million pounds. Other key informants felt that there were specific problems with regard to the perception of the quality of management within firms, which could be a turn-off for potential investors.

Despite this, one leading financier interviewed felt that there was enough potential in Wales for the presence of about three venture capital organisations. There were also considerable opportunities for a significant number of middle-sized venture capital deals, especially if more advantage was taken of what could be produced within a new vibrant economy, and the potential in creating new technology-based firms from the university sector in Wales.

However, it is clear that there is a lot of venture capital available globally, and part of the solution to any financing problem is how Wales can access this finance, either through better-prepared business proposals to potential investors or through ensuring that venture capitalists or business angels can access these firms. As one leading entrepreneur indicated, 'the problem is the quality of business plans and the managers behind them – get those two right and there is enough money around.'

Perhaps the most significant event of 2000 in terms of venture capital in Wales was the decision by 3i, Europe's leading venture capital company, to close its offices in Cardiff. Whilst this was widely seen as a strategic rather than a locational decision – the company is now looking to make larger investments in new technology-based companies – it was nevertheless seen by some as a judgement on the economic potential of the region, although 3i has since made some notable investments in a number of medium-sized companies in South Wales.

Given this situation, it is interesting to note that the British Venture Capital Association (BVCA) has recently stated that the issue of location of venture capitalists' offices could be significant. In their annual report for 2000, they suggest that the variations in venture capital investment by region could be explained by a 'tightly knit' financial community in some locations, where venture capitalists are well-known by many companies and their



advisers, and venture capital as a type of finance is well understood and more companies are encouraged to make more use of it. For example, in Scotland (where a high proportion of registered companies succeed in raising venture capital each year), there is a higher number of venture capital firms' offices than in any other region and the financial community is renowned for its networking. This is clearly reflected in the responses from the key informants for that region regarding the importance of venture capitalists as a source of private support for new and growing firms.

Finance Wales

Although there has been no specific study undertaken within Wales to examine the problems of financing small firms in the region, recent policy reports have highlighted the issue of availability of capital and finance as a major issue. For example, the recent report by the Federation of Small Businesses examining barriers to survival and growth in Wales found that bank overdrafts and loans were still the predominant sources of finance used to sustain and grow Welsh businesses. Indeed, only 4 per cent of Welsh firms had used the sale of equity in their business to fund expansion.

In the Welsh Office strategy document *Pathway to Prosperity: A New Economic Agenda for Wales*, it was highlighted that small businesses in Wales frequently reported difficulty in raising finance (even where relatively modest amounts are required) and that the venture capital sector was less well developed, at least relative to the rest of the UK. As a result, it was not surprising to find three of the four political parties in Wales, prior to the first elections to the new National Assembly for Wales, promising the creation of a Development Bank for Wales in their manifestos to address the funding problems of Welsh SMEs.

As a result, the National Assembly for Wales in October 1999 resolved to establish 'an independently-managed development bank or similar fund ... to provide small and medium enterprises with flexible and sustained finance for development.' Later that year, a task group was established, comprising of representatives from the private and public sectors, to investigate the funding gap for SMEs. This group concluded, after considerable consultation, that a development fund for Wales - to be known as 'Finance Wales' - should be established.

Finance Wales will be an independently managed body that will work in partnership with other public and private sector organisations to close the 'capital gap' from which Welsh firms suffer in comparison with those in more prosperous parts of the UK. It will provide the guidance and expert advice that many new or small businesses need to achieve their potential through providing debt, equity and management support for growth orientated and potentially viable SMEs that are unable to raise the appropriate finance from commercial sources. As such, it will provide the critical additional funds and support that can turn a business into one that is both viable and an attractive proposition for private sector financiers.

As described earlier, Finance Wales will be sub-divided into a number of individual funds, which will be tailored to provide support to defined geographic areas and specific business segments within those areas.

It will subsume the Welsh Development Agency's existing suite of SME funding and support schemes, including:

- **Xénos Business Angels Network** - a business introduction service which brings investors to companies seeking additional funding and who are prepared in return to offer an equity share in the business.
- **The Wales Innovation Fund** - a new venture capital fund, aimed at technology based businesses (see box for more detail).
- **The Wales Small Loan Fund** - a loan scheme to improve access to capital for SMEs and community-based businesses and encourage entrepreneurial development. Loans can be made between £5000 and £50000.
- **Wales Spinout Programme** - helps new businesses spinout from Higher Education Institutions in Wales providing support and assistance to locate a successful new business in Wales.

- **Mentor Wales** - a scheme to provide long term support from very experienced business people who are available to work with participating companies up to a two-year period. Mentor Wales maintains a 'pool' of mentors - people with senior management experience, who have been recruited from the private sector, and who use their skills and work experience to help companies with growth potential.
- **Access to Capital Wales** - a venture brokerage service that assists companies to raise finance, particularly risk capital, by providing expertise to address areas within an investment proposal, that has been referred by potential investors, that may be deficient or under developed.

The private sector and European structural funds will provide additional funding. An initial fund of a total value in the order of £50 million is envisaged.

WALES INNOVATION FUND

The Wales Innovation Fund is a new venture capital fund, aimed at technology-based businesses. The Fund can invest sums of between £150,000 and £500,000 in Welsh based firms which demonstrate the capacity for rapid and profitable growth. The Fund, with committed capital of £5million, is a joint venture between National Westminster West Bank and the Welsh Development Agency (WDA) with support from the European Regional Development Fund (ERDF). The National Westminster Bank is the largest investor in the Fund having committed £3 million, with £1.5 million coming from the ERDF and £500,000 from the WDA.

Whilst the Fund has been established to invest primarily in the technology sectors, it has the ability to consider good quality investments from more traditional industries including small Management Buy-Outs (MBOs), although it will not invest in property based or retail situations. In terms of geographical focus, the ERDF funding element is restricted to the Industrial South Wales area, but the Fund is willing to consider investment opportunities throughout Wales. The Fund is happy to invest alongside other investors, both private and public sector (including business angels), and will seek to add value by leading investment syndicates and bringing in additional investment to early stage situations.

The Wales Innovation Fund is an equity investor so will, in nearly all cases, acquire a shareholding in those companies it supports. This would in all cases be a minority holding. It is not the Fund's intention to play a day-to-day role in the management of investee companies. However, the Fund would normally expect the right to appoint a director to the company's board.

As an equity investor, the Fund will seek to make the bulk of its returns through capital gain on the sale of its shareholding plus, where appropriate, a running yield on a portion of any investment made. This means that there needs to be a clear exit strategy for the Fund's shareholding in each investment. Realisations will be sought on a 3-7 year timescale primarily through trade sales though there may be some opportunities to participate in listings. Management charges and deals costs will be kept as low as possible. The Fund is managed through a joint venture company, owned 50:50 by National Westminster Bank and the WDA. The Fund will invest to make a commercial rate of return, commensurate with the risk profile of the investment. This will be the principle criterion for decision-making. However, the support of the WDA and the ERDF will enable investments to be made in cases where there may be a higher than normal risk profile than that acceptable to private sector investors or where transaction costs may be prohibitive.

The key informants broadly welcomed the development of an initiative such as Finance Wales. Most of the experts interviewed felt that there needed to be a more co-ordinated approach to finance in Wales that needed to be more than just gaining access to funding. Many favoured the creation of an integrated approach that reflected the different needs of firms as they grow and develop. Some of the ideas that could be taken forward by a co-ordinating body such as Finance Wales included the resurrection of small equity funds (such as those provided by British Coal and British Steel Enterprises). They also suggested the creation of a regional stock exchange in Wales, enabling firms reaching a certain size to 'float' and attract new investors.



FRAMEWORK CONDITION NO 2 - GOVERNMENT POLICIES

Government support for small firms - by providing the necessary funding or by supporting specific types of small businesses – was seen as the second most important issue by the key informants interviewed in Wales. This is not surprising, given the increasing interest in government in Wales (and its impact on economic development) following the establishment in 1999 of an elected devolved body – the National Assembly for Wales. As mentioned earlier, this body has the power to develop and implement policy in a range of areas, including economic development, agriculture, culture, education and training, local government and tourism. In practice, this means that the Assembly has the power and responsibility to make vital decisions such as the provision of business support and financial assistance to firms in Wales and through its education policies, the development of an enterprise culture throughout Welsh educational institutions. However, unlike the Scottish Parliament, the Welsh Assembly does not have primary legislative powers and therefore does not have the capacity to vary tax rates, which are still controlled by the UK Government.

As figure 13 demonstrates, all GEM countries (on average) were dissatisfied with their government's role in providing an environment that favoured the development of entrepreneurship, with a similar situation found in Wales, Scotland and the UK.

FIGURE 13
Government Policy - National & International Comparisons of Expert Opinions



Given the recent importance attached to developing an enterprise economy in the UK – as seen by the Chancellor’s budget statements - it is not surprising to find that most key informants at the UK level believe that support for new and growing firms is a high priority for the current Labour administration. This contrasts significantly with the situation in Wales, where key informants were largely neutral regarding the National Assembly’s policies towards creating an entrepreneurial Welsh economy.

This is surprising, given that one of the Assembly’s first policy statements on economic development was a commitment to entrepreneurship, noting that ‘a successful future for the Welsh economy depends on a strong culture of entrepreneurship and agrees that the relevant Assembly policies should reflect the importance of successful entrepreneurship and the need to increase the level of business start-ups in Wales and the rate of survival, innovation and growth rates among small and medium sized firms in Wales.’

More recently, as discussed earlier, the Assembly is in the process of adopting the Entrepreneurship Action Plan as one of the key strategies for economic development of Wales during the next decade.

However, opinions did vary tremendously amongst some of the experts questioned – whilst some felt that entrepreneurship and innovation has been recognised by the National Assembly, others were worried that entrepreneurship was currently only the ‘flavour of the month’ with politicians and that there was a lack of a coherent strategy for the development of small firms in Wales. Clearly, some of the new policies put forward under the new coalition partnership agreement between Labour and the Liberal Democrats, including a ‘business birth-rate strategy’ for Wales to increase the number of new businesses, may change some of these perceptions during the next twelve months.

A broadly similar situation was perceived by the key informants in Wales with regard to local government support for new and growing firms. Again, experts were largely neutral towards the role that the twenty-two Welsh unitary authorities could play in developing enterprise at a local level. This is a worrying trend given the key role that many of these councils will play in the delivery of specific support towards local SMEs via European structural funds (although the picture is very similar to that of the average for the 21 GEM countries examined in the study). Again, the perception may change over time if local initiatives are successful in developing the indigenous SME sector.

In examining legislative burdens on businesses, Welsh experts had one of the lowest opinions regarding the ability of new businesses to get the required permits and licences to establish their firm in about a week, although this reflects the general pessimistic outlook by GEM experts globally towards the legislative framework in helping the development of new firms.

The key informants’ opinions on the burden of taxation for new and growing firms is of interest given that the Welsh Assembly does not have the powers to vary taxation, unlike the Scottish Parliament. Currently, the UK (including Wales) has one of the lowest corporate tax rates in Europe – it currently starts at 10 per cent for businesses with less than £10,000 profits rising to a maximum of 30 per cent for businesses with profits greater than £1.5 million.

Despite this, and the fact that UK experts were ambivalent regarding taxation and its effects on small business, the key informants from Wales felt that the amount of taxes in Wales was a burden for the development of new and growing firms - only key informants from Brazil, Argentina and Sweden felt that the burden was higher. In fact, a number of Welsh experts felt that the current tax system did not encourage entrepreneurship and investment in business and that dynamic economies require lower tax regimes to encourage enterprise – as one stated, ‘if people are going to take risks, then we have to allow them to capture the rewards’.

FRAMEWORK CONDITION NO 3 - GOVERNMENT PROGRAMMES

According to a number of economic commentators, the provision of advice and information to the small firm sector is quickly becoming one of the major growth industries in the UK. The review of business support and development services in Wales recently undertaken for the National Assembly’s Economic Development Committee confirmed that there are more than 55 public sector agencies in Wales providing some form of services to business. Table 4 below categorises some of the more prominent organisations. This involves approximately £150 million per year of public expenditure, resulting in as many as 500 discrete products or services. More importantly, the emphasis of European Structural Funds on initiatives being concentrated on small-to-medium sized firms means that will be an ever increasing amount of government driven initiatives to support the development of enterprise at a local, regional and national level.

As Figure 14 shows, key informants in Wales are generally dissatisfied with the current situation regarding government programmes to assist new and growing firms. More worryingly, Welsh experts were less satisfied than their Scottish or UK counterparts on all five categories.

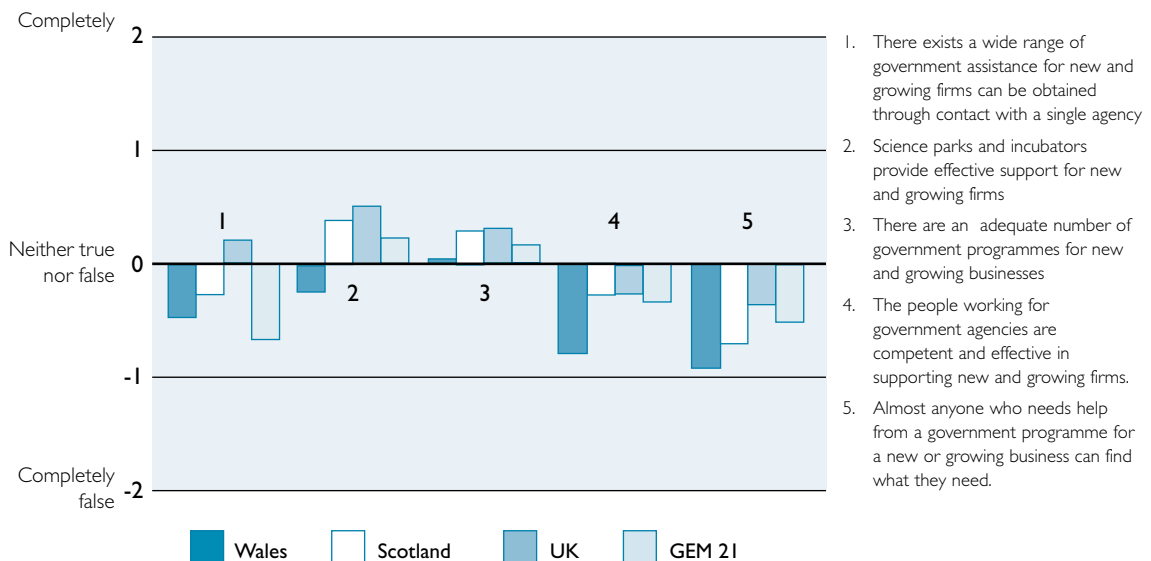


Table 4 - Business support organisations in Wales

Public sector	<ul style="list-style-type: none"> ● National Assembly for Wales ● Welsh Development Agency ● Business Connect ● Wales Tourist Board ● Training and Enterprise Councils ● Local Authorities ● Further and Higher Education Institutions ● UK Government Departments (Department of Trade and Industry, Department of Environment and the Regions, Inland Revenue and Customs and Excise).
Local Enterprise Agencies	<ul style="list-style-type: none"> ● Chambers of Commerce
Representative organisations	<ul style="list-style-type: none"> ● Confederation of British Industry ● Institute of Directors ● Federation of Small Businesses ● Employers' Federations ● TUC Wales.
Voluntary sector	<ul style="list-style-type: none"> ● Welsh Council for Voluntary Action ● Community Enterprise Wales ● Wales Co-operative Centre.
Commercial private sector	<ul style="list-style-type: none"> ● Accountants ● Consultants ● Banks ● Lawyers ● National telecommunications providers.

One of the worrying aspects for business support is that Welsh key informants were not satisfied that government assistance for new and growing firms could be obtained through contact with a single agency. This may not be surprising, given that various studies have shown that duplication and confusion are generally associated with the state of business support in Wales. However, it is nevertheless disappointing that this situation is still perceived as being a problem, given the funding provided for Business Connect to act as a 'first-stop' shop for small firms requiring business support.

FIGURE 14
Government Programmes - National & International Comparisons of Expert Opinions



The creation of new business incubators is seen as one of the primary property development priorities for the Welsh Development Agency during the next decade, especially in aiding the commercialisation of university technology from the laboratory into the market place. However, it is clear that the 'science park' approach is still in its infancy in Wales - whilst there are thirteen higher education institutions in Wales (the eight colleges of the University of Wales, the University of Glamorgan and four institutes and colleges of higher education), there are only four parks which are members of the United Kingdom Science Park Association (UKSPA):

- INTEC - the Bangor Innovation Technology Centre
- Cardiff Business Technology Centre
- Cardiff Medicentre
- Swansea University Innovation Centre

As a result, it is not surprising to find that Welsh key informants, relative to all other countries, do not believe that current science parks and business incubation centres provide effective support for new and growing firms in Wales. However, it is encouraging that new initiatives - such as the new £2 million 'TECHNIUM' technology centre in Swansea - are being developed to accelerate the growth of small businesses and stimulate and support the start-up of new innovative companies in Wales.

As in other GEM countries, a shortage of support programmes for new and growing businesses is not an issue. Indeed, the majority of key informants were of the opinion that there were too many organisations providing too many programmes, which led to general confusion for many entrepreneurs about the type of support that would be relevant for their business (a view reiterated by the National Assembly's Business Support Review). This duplication and fragmentation of business support was seen as one of the real problems facing the development of a strong enterprise sector in Wales.

It was also felt that many of the organisations providing support to businesses were driven by 'self-interest', with little co-operation between programmes where there was obvious duplication. It was also felt that many programmes were inflexible and had 'not been thought out properly', being driven more by the needs of specific funding mechanisms rather than the actual requirements of firms, particularly those at different stages of growth.

Whilst Welsh experts were largely ambivalent about the competence and effectiveness of the people working for government agencies in supporting new and growing firms, their opinion differed from similar experts in Scotland and the UK, who were more positive regarding the abilities of business support staff. However, it is worth noting that only the key informants from India and Argentina had a lower opinion than the Welsh experts of the support staff within their countries. The main reason given for this stance tended to be related to the occupational background of support staff in Wales in being able to deal with entrepreneurs as the main issue. A number of experts were of the opinion that the majority of support staff had little experience of the private sector; had not been in a risk situation, and could therefore not appreciate the realities of day-to-day business life.

However, others felt that there were too many semi-retired executives from large businesses advising the owner-managers of small firms, with skills that were largely irrelevant to the development of an entrepreneurial venture. It was also considered that some key skills were missing from the majority of business support staff, especially the ability to counsel people (even those who were experienced businesspeople). Indeed, as one business support expert pointed out, many potential entrepreneurs need a user-friendly business adviser to mentor and help them - an 'industrial social worker'.

One of the more disturbing elements from the interviews with key informants is the fact that whilst there is a belief that there are enough government programmes to help new and growing businesses, the relevance of these programmes are questioned. A number doubted whether any research had been undertaken for the development of programmes and that business support agencies were merely reacting to opportunities for funding of new initiatives.



It was also considered that the delivery of programmes were largely irrelevant to the needs of smaller businesses, with too many development initiatives offering shallow consultancy of about two days duration which were largely useless in improving the efficiency and productivity of small firms. Given the difficulties in accessing the SME market, the speed and cost of access were issues not really taken on board by support agencies. The importance of a 'gestation period' was emphasised, where support agencies need to spend time with business to assess their potential, their problems and to develop a relationship with the business, enabling that firm to improve against a set of agreed targets.

It was clear that there was a requirement, following the business support review undertaken for the Welsh Assembly, for a clearer strategy for business support in Wales. However, it was suggested that one of the main solutions to a more coherent and less fragmented business support system was the development of a proper evaluation system to assess the quality and relevance of business support initiatives. The current system tends to assess the level of use of service and whether users find that service helpful. However, very little assessment is made whether the service improves the performance of businesses in Wales.

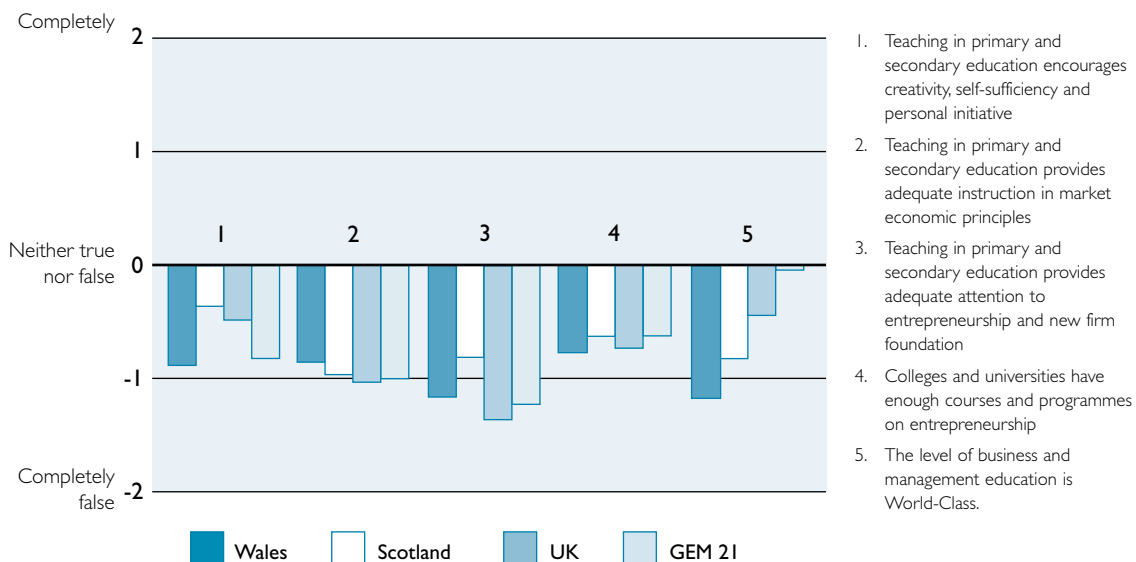
There was also a call for support agencies to learn from 'best practice' in terms of business programmes, although there has been a tendency for agencies not to undertake any real sharing of experiences within Wales or, more importantly, with other agencies in the UK and internationally.

FRAMEWORK CONDITION NO 4 - EDUCATION AND TRAINING

Figure 15 summarises the responses from key informants regarding education and training, which has been seen as one of the key influences on the development of an enterprise culture in the previous GEM study of 1999. There is clear dissatisfaction amongst all GEM countries regarding the quality of enterprise education within their countries. Despite this, only five key respondents perceived any aspect of enterprise education to be the main issue regarding the development of an enterprise culture within Wales.

FIGURE 15

Education & Training - National & International Comparisons of Expert Opinions



In fact, there was overall pessimism regarding the overall environment for the development of enterprise education in Wales. It was considered that there was very little enterprise and very few entrepreneurs in the education system, which was essentially geared towards developing professionals such as doctors, accountants, solicitors and teachers and not entrepreneurs. It was also felt that the embedding of enterprise into the curriculum of schools and colleges should be a priority and there should be a long-term strategy for enterprise education in Wales.

More importantly, experts suggested that entrepreneurship should be an integral part of lifelong learning from primary through to post-experience training with enterprise developed as an integral part of education and training and not as an add-on to existing courses. However, given the political difficulties that may occur from introducing entrepreneurship as a core subject within the national curriculum in Wales, a number of experts envisaged no changes until after the next Assembly elections in 2003. This is an interesting viewpoint, given the Chancellor of the Exchequer's recent statement about wanting 'every young person to hear about business and enterprise in school and every college student to be made aware of the opportunities in business'.

This sentiment was reflected amongst a number of the key informants who felt that enterprise education would have the greatest impact if it were introduced, at the earliest opportunity, into the curriculum of schools. Therefore, whilst it was agreed that pupils from primary schools upwards should be encouraged to be entrepreneurial, the biggest obstacle in achieving this goal was perceived to be the lack of experience of many teachers with regard to enterprise education, with little awareness of what enterprise and entrepreneurship is all about. Indeed, one key informant questioned whether teachers could cope with developing entrepreneurship, given that most schools do not believe entrepreneurship can be taught as a subject and that people are expected to be naturally entrepreneurial. There was also the myth that most successful entrepreneurs were perceived to be failures at school and, as a result, schools did not consider going into business for oneself as a serious career option for their brighter pupils. As the adult population survey has indicated earlier, this is clearly not the real situation in Wales today.

In terms of primary and secondary education, the key informants from Wales were more positive than the average GEM 21 expert opinion, although slightly more negative than key respondents from Scotland or the UK. The most positive countries regarding their primary and secondary schools' abilities to develop enterprise education were Ireland, Canada and the USA (although again all of these were negative opinions overall).

With regard to the provision of enterprise education at a tertiary level, there is a general feeling that universities and colleges do not have enough courses and programmes on entrepreneurship. This is not surprising, given that many Welsh institutions have only recently begun to develop specific initiatives in this area. There was also the feeling that enterprise education within universities should be more practically oriented – lectures should not be 'chalk and talk' and should be active rather than passive.

Within Wales, there has been a recent explosion of enterprise development within the Higher Education sector, although much of it is largely fragmented with little co-operation between institutions. There are currently three professors of entrepreneurship or enterprise within Welsh universities – at Bangor, Swansea and Glamorgan – with enterprise now being taught at the majority of institutions, although not as a mainstream subject area.

The future impetus for the creation of an enterprise education system within Wales will undoubtedly come from the Funding Councils for Wales, which has recently established the Knowledge Exploitation Fund (KEF) as a vehicle for increasing the amount enterprise development within higher and further educational institutions (see below). Indeed, a number of key informants believed that every university should have to put forward a programme of how it should develop business/entrepreneurship within its curriculum.

The KEF development will be supported by individual institutional initiatives such as the e-college from the University of Glamorgan, the e-MBA development at the University of Wales Bangor and the Innovation, Creativity and Enterprise (ICE) Centre at University College Newport. However, it is depressing to find that Welsh experts are the most dissatisfied of all the GEM participants with the quality of management education within the higher education sector in Wales, especially as most entrepreneurship developments have tended to be driven via management or business departments in other countries.



KNOWLEDGE EXPLOITATION FUND

Following consultation in 1999, the Knowledge Exploitation Fund of £14million from the National Assembly of Wales was announced as a joint Further and Higher Education Funding Councils initiative in 2000. These funds have attracted an initial £4.6million from the European Social Fund in objective 1 and 3 areas. With further submissions planned, it is hoped to raise the total budget to at least £24million. The multi-million pound fund is aimed at strengthening the link between expertise in the Welsh further and higher education sectors, and the economy. Developed to complement the Entrepreneurship Action Plan, it is focused particularly on the 'new' economy, where exploitation of high skills, e-commerce, and technology are crucial to Welsh prosperity and growth in the 21st century.

Entrepreneurship activities under the plan will include:

- conducting a wide scale entrepreneurship 'audit' of further and higher education institutions in Wales, based on a specially developed model, to help them identify priorities for building an entrepreneurship culture;
- funding entrepreneurship 'champions' in each further and higher education institution in Wales, to embed an entrepreneurship culture throughout the institution, and enhance capacity to support new and growing businesses;
- funding to support staff training in further and higher education institutions to help them respond to the needs of industry;
- providing entrepreneurship scholarships to help new graduates or successful FE students plan and set up a new business.

In addition, various technology transfer initiatives will also be funded, including:

- funding to help institutions develop and enhance their ability to offer professional training and consultancy services (TACS) to local businesses, including in collaboration with other providers.
- supporting acquisition of intellectual property rights (IPR) by institutions to assist in the product development and commercial exploitation of Welsh owned IPR.
- supporting work to identify priorities for future technology investments.
- supporting the development of centres of expertise in research, product development and innovation in educational institutions.

Micro, small and medium sized businesses will stand to benefit most from such activities.

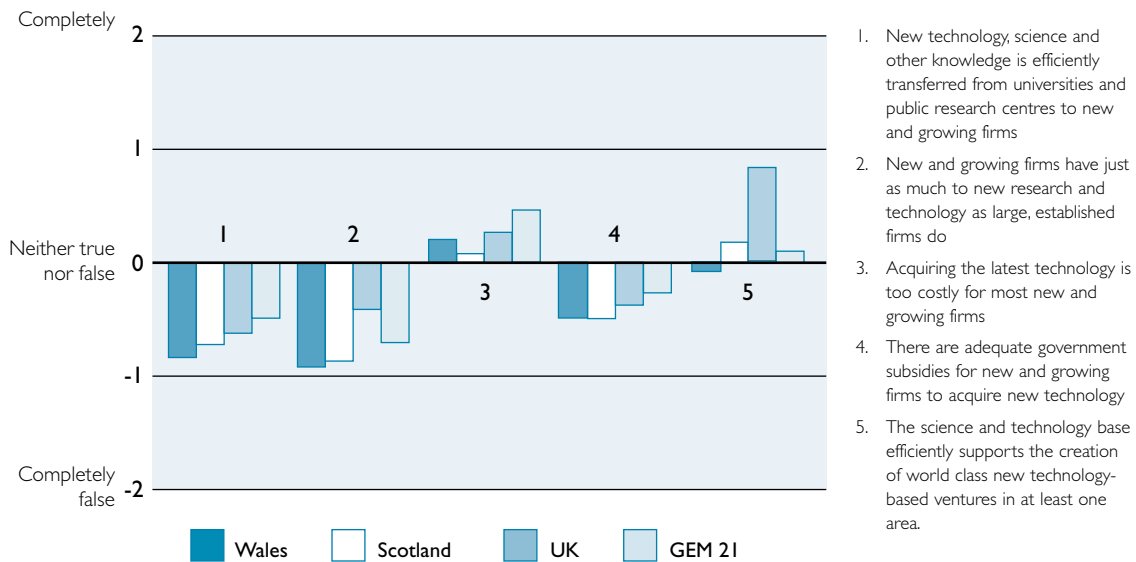
FRAMEWORK CONDITION NO 5 - RESEARCH AND DEVELOPMENT TRANSFER

Traditionally, R&D spending has been low in Wales. The latest Business Enterprise Research and Development figures for 1999 supplied by the Office for National Statistics shows that total R&D expenditure by businesses in Wales in 1999 was £203 million. Whilst this was a substantial increase on the figure of £125 million for 1998 (£113 million for 1997), Wales' share of the total UK R&D expenditure by businesses was only 1.8 per cent. This is higher than the previous figure of 1.2 per cent but still substantially down on the overall share of employment, which stands at around 4.5 per cent of the UK total.

Much of the research and development in Wales is carried out within the university sector. With the exception of IGER (Institute of Grassland and Environmental Research) at Aberystwyth, there are no government research laboratories in Wales. There are also very few scientists and technologists in the workforce in Wales, which restricts not only the flow of people between industry and academia but also curtails the opportunity for the development of high technology spin-offs from industry. This situation is supported by the Adult Population Survey, which found that the level of firm-sponsored spin-offs in Wales were amongst the lowest of all the GEM countries.

Not one of the key informants interviewed considered any aspects of research and development transfer to be one of the three key issues for the development of entrepreneurship in Wales. As figure 16 shows, in terms of comparisons with other GEM countries, Welsh experts questioned the efficiency and effectiveness of the technology transfer system in Wales. This is despite the increasing number of initiatives on offer including Know How Wales (four regional advisers to help link universities and industry in Wales), HELP Wales (a gateway through which the commercial expertise and resources of all Universities in Wales can be accessed by businesses) and the Teaching Company Scheme (see below), that are aimed at improving the flow of technology, science and knowledge from the universities to new and growing firms.

FIGURE 16
Research & Development - National & International Comparisons of Expert Opinions



In particular, experts felt that were significant bottlenecks in developing a strong technology transfer culture within Wales. First of all, there was the issue of a commercialisation culture within the university sector, which was seen to be lacking in Wales, which could be demonstrated by the low number of spin-off companies emerging from the university sector, and the relative lack of success in patenting technology successfully.

TEACHING COMPANY SCHEME

The Teaching Company Scheme (TCS) is a government funded scheme which enables businesses to access academic expertise and employ graduates to work in the company on projects of two years' duration under the joint supervision of company and academic staff. It is one of the most successful initiatives in linking universities and industry to promote business growth and improve the competitiveness of a region through innovation.

Using TCS, companies can gain the following benefits:

- A carefully selected graduate works full-time in the company for two years.
- University provides consultancy for the project.
- Equipment required for the work is funded by the scheme.
- Training in business skills is provided to the graduate at no cost to the company Additional training required by the graduate is funded by the scheme.
- Travel and subsistence for the project is funded by the scheme.
- A small company (less than 250 employees) pays only 40 per cent of the cost of the scheme.

The Scheme provides up to 60 per cent of the costs to support important developmental projects utilising and developing talented graduates who may become employees. For many small firms, the cost of this benefit is approximately £28,000 over two years (£14,000 p.a.).



There was also the issue of the shortage of good commercially oriented managers within universities and the lack of good facilities - such as incubators - to encourage technology transfer. However, one of the more serious problems was the low level of applied collaborative work going on between local businesses and academic departments in Wales, which meant that educational institutions were not close to the companies that could potentially exploit technology. Clearly, initiatives such as TCS, which was described earlier, have an important role to play in establishing the relationship between higher educational institutions and local firms.

The issue of intellectual property rights (IPR) was another major theme highlighted by the experts. In particular, there was a general lack of knowledge on IPR within Wales, with little evidence of a coherent policy at a university level towards intellectual property rights. As such, more action should be taken to protect the ideas of scientists within Welsh academic institutions. It was also felt that universities could be more proactive in transferring IPR across to smaller firms - one idea suggested was the establishment of an All-Wales IPR centre linking universities and businesses. Clearly, aspects of the KEF initiative described earlier aims to address some of the concerns regarding the commercialisation of technology from the university sector in Wales.

In particular, the key informants questioned the adequacy of government subsidies for new and growing firms to acquire new technology. A number stated that there was scope for more to be done in getting a higher proportion of R&D undertaken within Wales, particularly through the development of specific tax breaks for business undertaking R&D (although this development was recently highlighted in the Chancellor's 2000 budget).

Relative to the UK, most key informants in Wales do not believe that our current science and technology base supports the creation of world-class new technology ventures in at least one area. This is a worrying trend, given that 25 science, engineering and medicine departments at the Universities of Wales Swansea, Bangor and Aberystwyth, along with Cardiff University and the University of Wales College of Medicine, were recognised as having at least international excellence in their subject areas during the last Research Assessment Exercise in 1996. In addition, the Welsh Development Agency, in partnership with higher education institutions in Wales, has a programme of identifying and nurturing Centres of Expertise, where the criteria for recognition are a relevance to industrial activities, a track record of industrial involvement and a breadth of expertise in the sector.

FRAMEWORK CONDITION NO 6 - COMMERCIAL AND PROFESSIONAL INFRASTRUCTURE

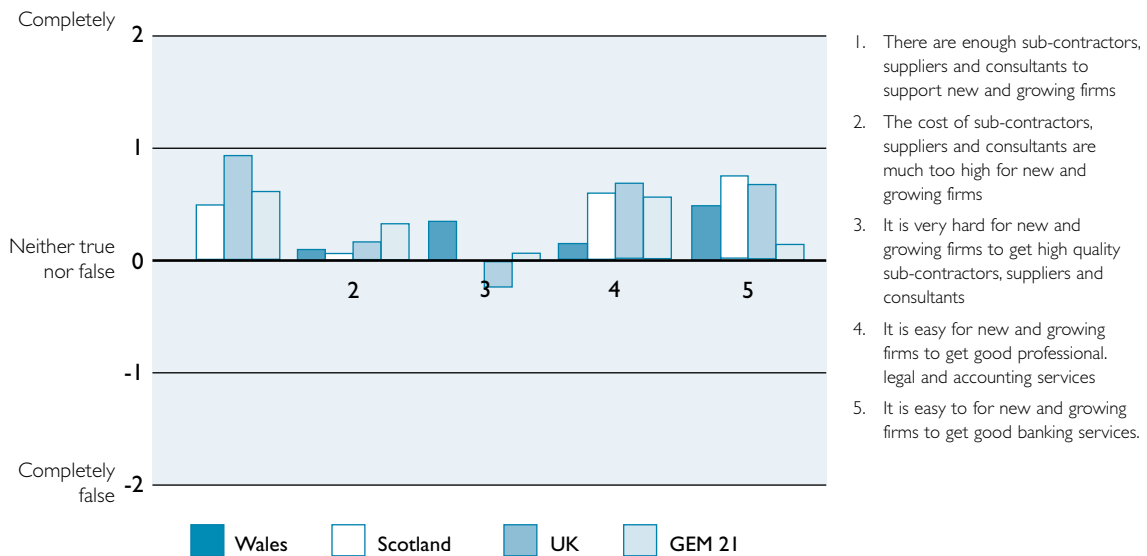
According to the key informants interviewed in Wales, the supply and cost of sub-contractors, suppliers and consultants are clearly not major issues when it comes to the development of an entrepreneurial environment in Wales (Figure 17). This is a message that is repeated across most GEM countries participating in the study.

However, the quality of such suppliers is seen as a more pressing issue, with a number of experts questioning the competence of providers, particularly in business training. As one expert suggests, the problem in Wales is simple 'there are too many consultants but too few that are any good'. There was also a call for attracting more 'visionary' consultants to Wales to address the strategic needs of business, an issue that is rarely seen as a priority by business development agencies.

In terms of other professional, legal and accounting services, the general opinion by Welsh experts is again ambivalence towards the sector. Despite this, some did have serious doubts about the ability of the professions in Wales, especially accountancy, to deal with the needs of 'aspirational' growth-oriented businesses, particularly outside of the major conurbations. In particular, there was perceived need to get the private providers of advice - such as accountants and consultants - to work far more closely with the public sector in Wales in developing the SME sector.

FIGURE 17

Completion & Legal Infrastructure - National & International Comparisons of Expert Opinions



The issue of centralisation of services was a strong theme that emerged throughout the interviews with the key informants. In general, it was felt that the commercial and legal infrastructure in the South East of Wales, particularly in Cardiff, was of a sufficient standard to deal with many of the requirements of growing businesses, although there were considerable doubts about the range and quality of services available elsewhere in Wales.

FRAMEWORK CONDITION NO 7 - BARRIERS TO ENTRY

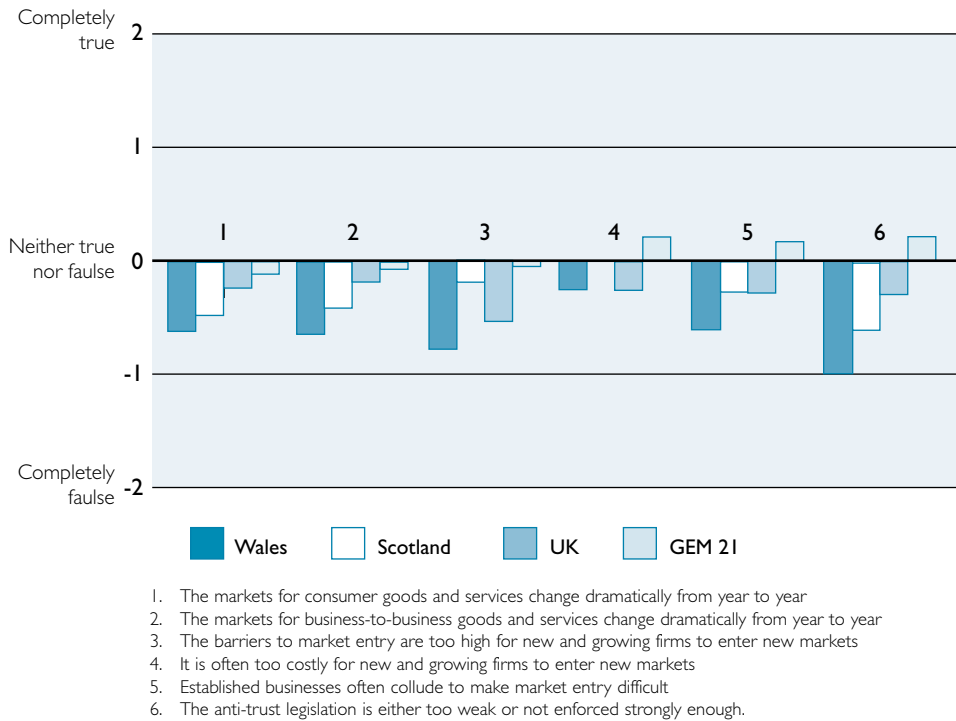
The barriers to entry framework (or the degree of internal market openness) deals essentially with the dynamism of industry within a region, as new firms come in to replace existing businesses. An examination of the data in figure 18 suggests that the markets in Wales, at least relative to other countries in the study, are not dynamic, which may reflect the general enterprise and economic environment within the region. Only Italy and Israel were perceived as having a less dynamic economy than Wales.

Nevertheless, this also means that the barriers to entry are relatively lower in Wales for new and growing firms to enter new markets. Indeed, Wales is perceived to have the easiest environment for firms wishing to enter new markets of all the GEM participants, with the evidence from key informants suggesting that neither costs nor competition are issues in starting a business in Wales.

This finding is supported by a detailed examination of the fastest growing Welsh companies, undertaken for the Wales Fast Growth Fifty initiative (described earlier), with many operating in mature industries where there is little competition domestically, and where firms can build up market share quickly. However, if barriers to entry are low, then this is clearly not a reason for the low number of businesses that are established in Wales annually.



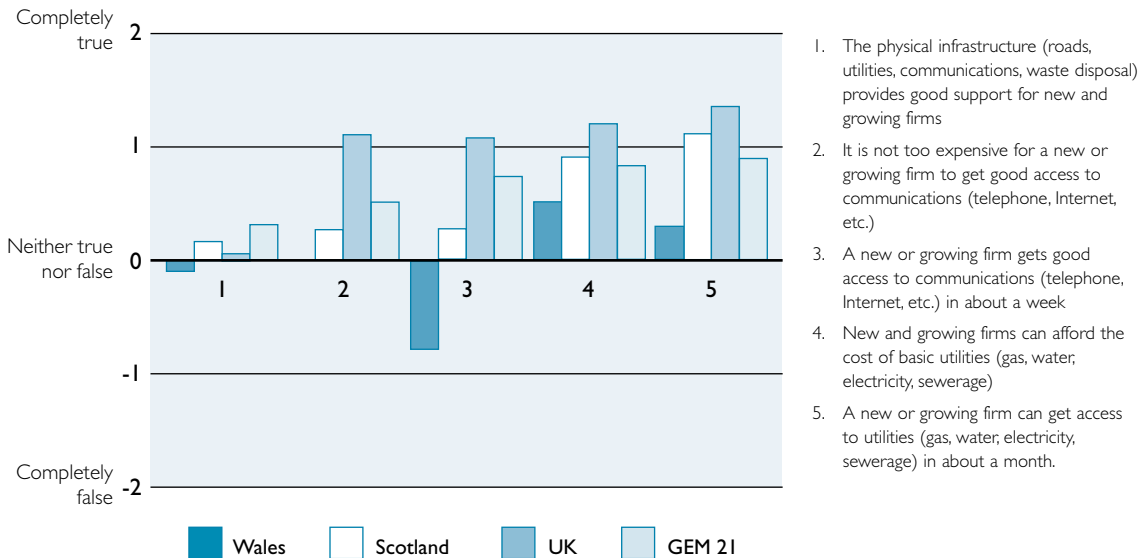
FIGURE 18 Barriers to entry (internal market openness) - National and International Comparisons of Expert Opinions



FRAMEWORK CONDITION NO 8 - PHYSICAL INFRASTRUCTURE

As figure 19 shows, in terms of access to physical infrastructure, Welsh experts are largely ambivalent towards provision in terms of roads, utilities, communications, waste disposal and communications (telephone, internet).

FIGURE 19 Access to physical infrastructure - National and International Comparisons of Expert Opinions



The main issue is that of accessing telecommunications in Wales, where experts consider that Wales has the worst record of any of the GEM countries in getting firms hooked on to telephone or internet access. A number of key informants felt that the IT infrastructure needed to be better attuned to the needs of businesses in Wales. Given the considerable presence of companies such as BT and NTL within Wales, this is an unexpected finding. Cost and access to utilities (gas, water, electricity and sewerage) is not perceived to be a major problem in Wales, although the affordability is less than for other GEM countries in the study.

As with access to the commercial infrastructure, perhaps the main issue that arises out of the discussion of this framework condition is the variability of provision across Wales. Again, the physical infrastructure was felt to be more than adequate within the confines of the M4 corridor in South Wales. This contrasts with much of rural Wales, where the lack of a rail or road infrastructure of any real quality is seen as a major barrier to the economic development of the region, particularly the growth and expansion of businesses.

FRAMEWORK CONDITION NO 9 - CULTURE AND SOCIAL NORMS

This section will examine what is one of the most complex influences on the development of entrepreneurship at a national level, namely that of cultural and social norms. This framework – which includes the value society attributes to entrepreneurship, the image of entrepreneurs in the society, and attitudes towards entrepreneurs – pervades all other eight previous frameworks examined e.g. the value of entrepreneurship in society can directly influence the financial infrastructure for new enterprise.

Therefore, the cultural and social norms framework is perhaps the most important of all the factors affecting entrepreneurship at a national level, as it clearly has an influence on all other framework conditions within the model described earlier. As a result, this section will draw on data gathered from both the key informant interviews for data and the adult population survey. This gives us the opportunity to examine the development of an enterprise culture in Wales from the viewpoint of experts and the general populace.

Key informant interviews

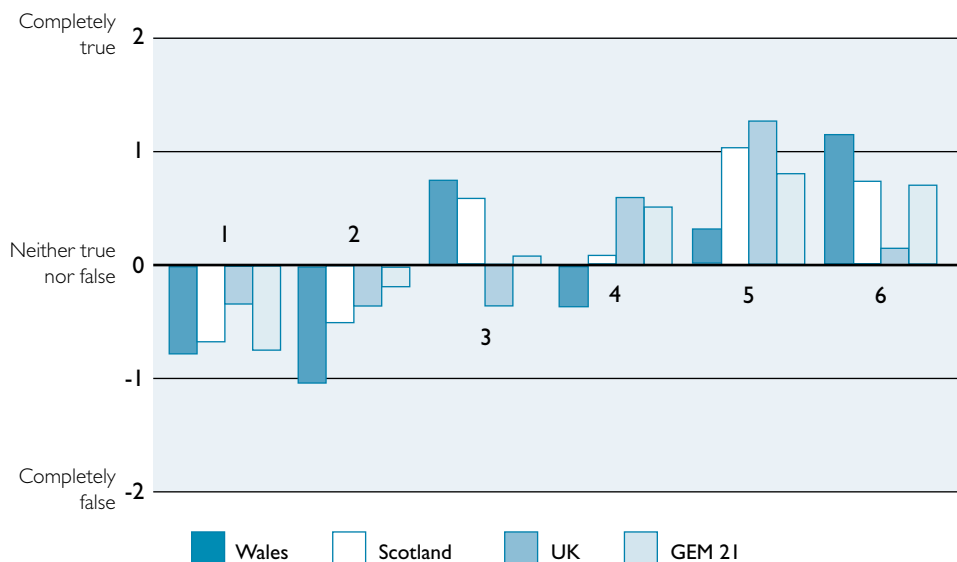
Not surprisingly, the key informants perceived cultural and social norms as the single most important item affecting entrepreneurship in Wales. Thirteen respondents – over a third of our experts – placed this as the number one concern for Wales.

There are considerable concerns over the culture in encouraging entrepreneurship within Wales. As figure 20 shows, the expert opinion in Wales is that the social security and welfare systems do not encourage people to be self-sufficient within Wales, although a similar result is found for the average of the GEM countries in the study. Indeed, only Ireland and Singapore are somewhat positive about this measure.



FIGURE 20

Cultural and social norms - National and International Comparisons of Expert Opinions



1. Social security and welfare systems provide appropriate encouragement for people to take the initiative and be self sufficient
2. A high value is placed on self-sufficiency, autonomy, individualism and personal initiative
3. Most people would prefer that everyone had the same standard of living
4. Most young people believe they should not rely too heavily on the government
5. Young people expect to change jobs and occupations many times before they retire
6. People work for well-established organisations rather than new firms

Perhaps, the most depressing result from the key-informant interviews is the opinion that Wales is a country that places a low value on entrepreneurial characteristics such as self-sufficiency, autonomy, individualism and personal initiative. Indeed, only Japan is lower than Wales in terms of appreciating the enterprising qualities of individuals. This is in sharp contrast to the USA, where such qualities are seen as an inherent part of American society. A considerable number of experts also pointed out that the Welsh had a tendency or natural envy towards successful businesspeople. Indeed, it was felt that there was a negative attitude towards people who are successful, with one expert suggesting that people resent success even within family circles in Wales!

The lack of a dynamic culture within the economy, via its labour force, is reflected elsewhere in the findings. In Wales, experts indicated that most young people in Wales believe that they should rely on the government, which is in sharp contrast to the results from all other GEM countries, particularly the UK and Ireland. In addition, it was suggested that young Welsh people do not expect to change jobs and occupations many times before they retire, and that they will expect to remain within the same companies for many years. This is in contrast to the more dynamic global economies such as Ireland and the USA.

According to the key informants, most people in Wales would prefer that everyone should have the same standard of living. This is opposite to the viewpoint expressed by experts in the UK. There is also a strong belief among the experts that people in Wales would rather work for well-established firms than new firms. Only Norway and France of all the other GEM nations feel more strongly about this issue. Again, this is completely opposite to the opinion of experts in the growth economies of Ireland and the USA.

Some of the comments emerging from the interviews from the key informants reflect many of the themes that have been discussed in the past regarding Wales' ability to develop as an entrepreneurial nation in the future. For example, the previous industrial history of Wales, with employment dominated by large firms, was a specific major barrier to overcome. Despite the decline of the dominance of traditional industries such as coal and steel, their legacy in discouraging enterprise and entrepreneurship in Wales is still strong.

However, there was also criticism for the highly paternalistic public sector in Wales, which dominates employment and demonstrates little enterprise in itself. The support of the public sector for business was also seen as a hindrance in that businesses were complacent due to the strong grant culture which exists in Wales and which was the opposite of the entrepreneurial ethos of 'doing it for yourself'.

It was also considered that there were few role models within Wales, apart from exceptional individuals such as Terry Matthews of the Celtic Manor who, although enormously successful, strengthens the viewpoint that 'all entrepreneurs are multi-millionaires'. However, as one informant suggested, the data shows that the vast majority of entrepreneurs are not wealthy individuals, with most owner-managers operating in businesses with a turnover of less than £50,000 per annum.

For the role models that did exist, they tended to be stereotyped caricatures of entrepreneurs (as well as businesspeople in general). In contrast to a number of the other GEM countries, business in Wales is seen as something that the middle class does, and that entrepreneurs are 'people in suits' driven by the need to make money instead of 'everyday people' who can perceive an opportunity and take a risk. In particular, it was felt the absence of positive female role models in entrepreneurship was a specific problem within Wales, with some of the opinion that the Welsh were quite bigoted against women in business, although this contrasts with our earlier findings from the Adult Population Survey regarding actual female participation in start-ups in Wales.

A number of experts felt that there was a need for a wholesale change in attitudes in the population to encourage responsible risk-taking. Welsh entrepreneurship was being held back by a 'Why bother' attitude i.e. if someone was in a good job, earning a good salary and having a good lifestyle, why should they risk it all by starting a new business.

The issue of business failure was considered to be a problem in encouraging enterprise in Wales. In particular, it was felt that there was a culture where failure was frowned upon, not only by society at large, but also by various support agencies, which were seen to treat failures as 'lepers' and not as someone who has 'had a go and not succeeded this time'. Indeed, someone who goes out of business was perceived as a poor businessperson or a crook and this is not always the case. Failure is branded and people are not applauded for having a go or viewed positively, although things are slowly changing.

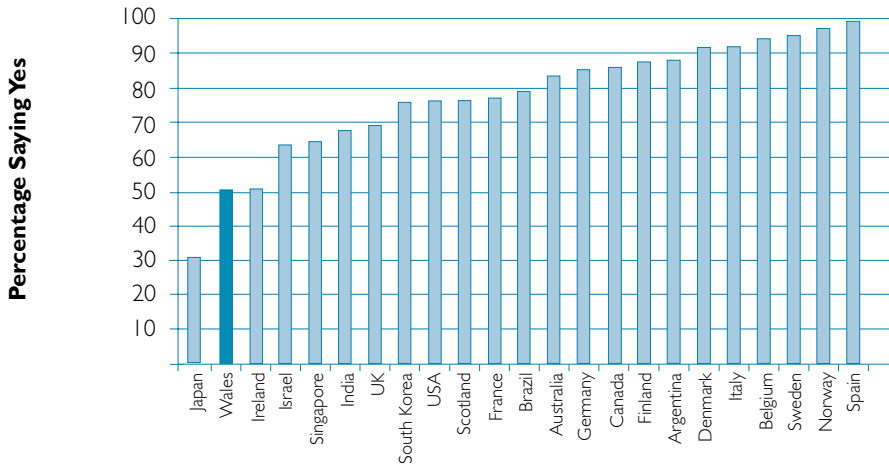
Adult Population Survey

A number of interesting results emerge when we examine the attitude of the Welsh population towards entrepreneurship. Relative to other GEM countries, it is clear that entrepreneurship is not respected in Wales, with only **50.3 per cent of the surveyed adult population believing that those who start businesses are respected within their community** (Figure 21). This reflects the opinions of the Welsh key informants.



FIGURE 21

Those who start new businesses are respected in my community



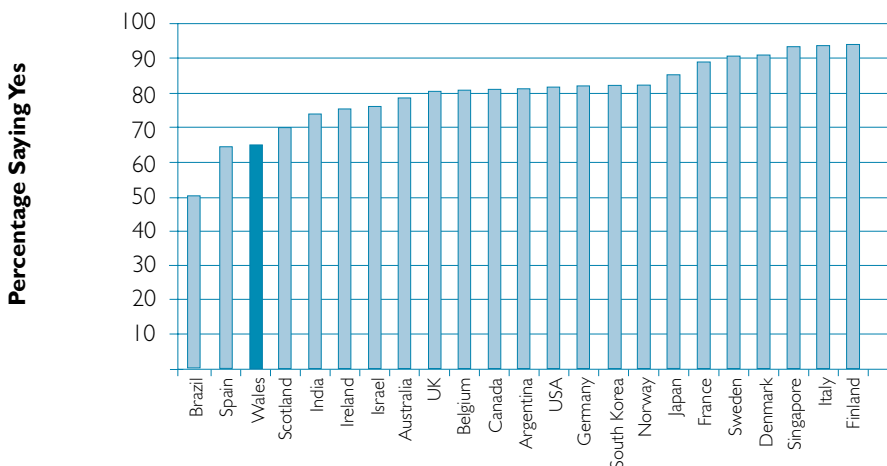
Only Japan ranks lower than Wales in terms of respect for entrepreneurs among the 23 GEM Nations. The top countries in terms of respect for entrepreneurship are Sweden, Norway and Spain – with a staggering 99 per cent of the Spanish working age population considered entrepreneurship to be a respectable career.

Envy towards success is often perceived in Wales as being a major obstacle to achieving an entrepreneurial economy. In the past, there has been often anecdotal evidence, which suggest that Welsh people resent successful entrepreneurs, although this has often been rejected as being unfair to Welsh culture. The opinions of our key experts in Wales also seem to strongly suggest that success is anathema to many in Wales.

This particular study supports this opinion – in Wales, **65.8 per cent of the adult population believe that successful entrepreneurs are not envied in their community.** As Figure 22 shows, only the populations of Brazil and Spain are more envious than Wales of the success of their entrepreneurs. This can be looked at in two ways – envy can be a driver towards encouraging those to start new businesses, as it has seemingly done within Brazil which (according to TEA rankings) is the most entrepreneurial of the GEM 2000 nations.

FIGURE 22

Successful entrepreneurs are not envied in my community

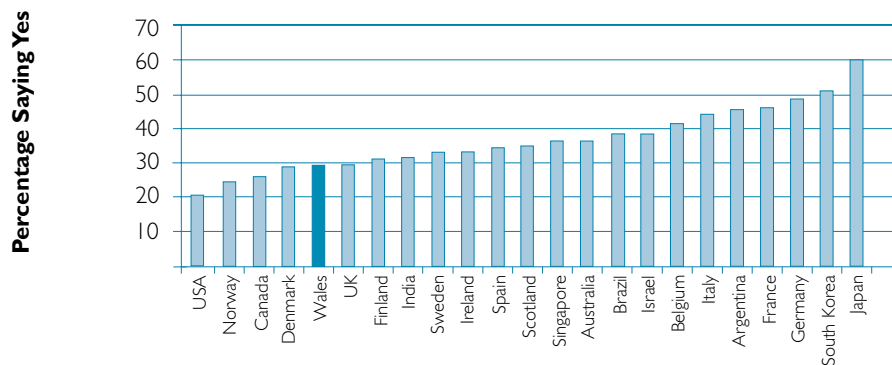


On the other hand, envy can lead to a societal resentment for enterprise, causing individuals to reject enterprise as a career choice out of possible loathing within their communities.

Whether this is the case in Wales clearly required more detailed research, but given other statistics within this study regarding Welsh attitudes towards entrepreneurship, there may be some truth in some of the past criticisms.

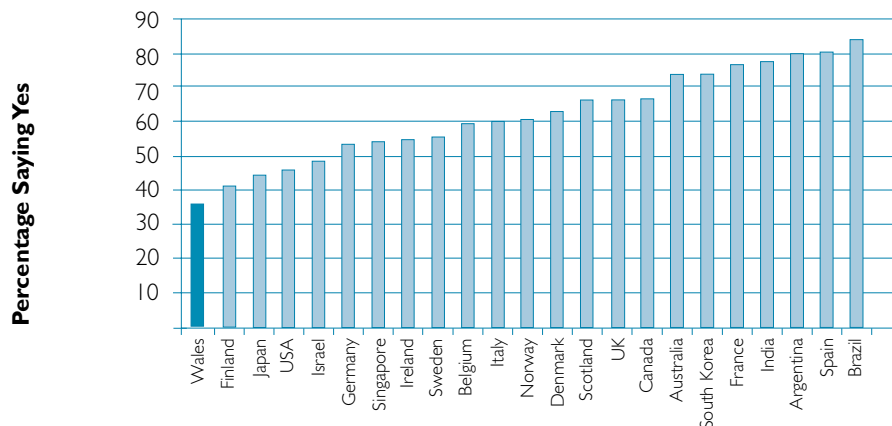
Given that there is a low prevalence of either nascent or actual entrepreneurial activity in Wales, it is surprising to find that **29.3 per cent of the population consider fear of failure as a barrier to starting a business** (Figure 23). This is an interesting finding, as the key informants felt that the issue of failure and society's attitudes towards failed entrepreneurs was a problem in encouraging enterprise in Wales. Therefore, Wales ranks 18th amongst the GEM nations examined, which suggests that fear of failure is a greater problem in the majority of other nations – only Denmark, Canada, Norway and the USA had a population which had a lower fear of failure than Wales.

FIGURE 23
Fear of failure would prevent me from starting a business



In terms of tolerating differences in standards of living, Wales comes top of all the GEM nations within the study (Figure 24), with **36.3 per cent of the population expressing the viewpoint that most people would prefer that everyone had the same standard of living**. This finding was quite unexpected, given the previous industrial history within Wales, the strong empathy towards a more equal society and the contrary opinion of our key informants. Interestingly, Brazil – the most entrepreneurial country – is least tolerant of differences in standards of living. Scotland and the UK rank in the middle of the GEM countries. Whilst this result does not suggest that Wales is a nation of closet capitalists, it may nevertheless demonstrate that there is a higher tolerance than expected for the development of entrepreneurship, despite results indicating that there is a strong envy within Wales, at least on the surface, towards successful businesspeople.

FIGURE 24
In my country, most people would prefer that everyone had the same standard of living



To summarise, there is quite a confused message emerging from the survey of the Welsh population. When compared to the other 22 GEM Nations, Welsh people do not respect those who start their own business and are envious of successful entrepreneurs. However, they are not afraid of the possibility of failure when starting a new business and are not against individuals becoming rich.



ENTREPRENEURIAL OPPORTUNITY AND CAPACITY

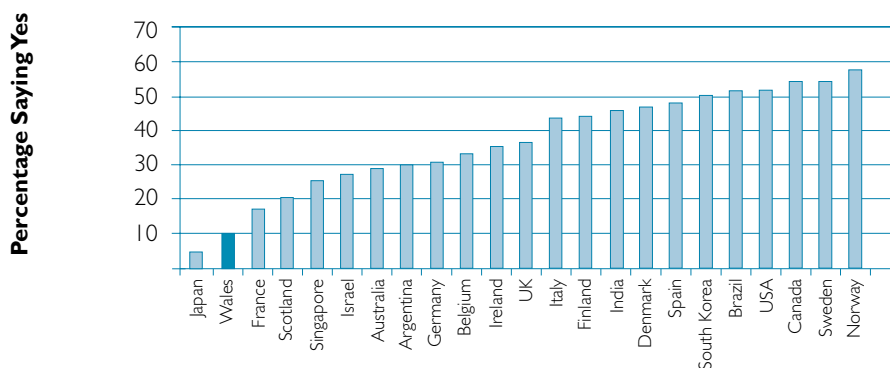
We have examined the entrepreneurial framework conditions in some detail. These nine conditions clearly influence the environment from which new firms are created and grown. However, this level of entrepreneurial activity is not in itself sufficient and requires individuals that can recognise the opportunities that are available to them and, more importantly, the skill and motivation to exploit them. As with the study of the cultural and social norms framework condition, the GEM 2000 study used the judgements of the key informants as well as selected items from the adult population survey.

Entrepreneurial opportunity

As figure 25 demonstrates, only **9.8 per cent of the Welsh population believe that there are good opportunities to start a business during the next six months.** This is considerably less than the 36.9 per cent for the average GEM nation, and is less than a fifth of the most optimistic country in the study – Norway. Only the Japanese population believes that their country will have less entrepreneurial opportunities in the immediate future.

FIGURE 25

There are good start-up opportunities during the next six months



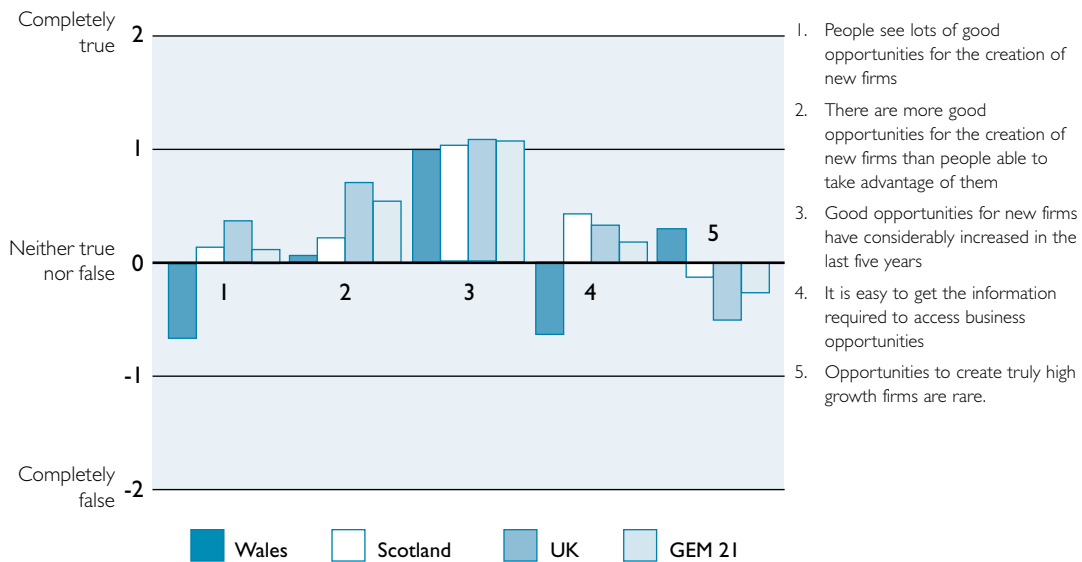
This lack of opportunity within Wales is confirmed by the interviews with the key informants. As figure 26 indicates, Welsh experts do not believe that there will be good opportunities for the creation of new firms in Wales, which is in contrast to the opinions of experts in Scotland, UK, the average of the GEM countries. Indeed, again only Japan is more pessimistic than Wales in terms of the key informants in the other GEM countries. However, it is interesting to note whilst the perception of entrepreneurial opportunity in Wales has increased considerably during the last five years (as much as in the average GEM country), it is not easy to get the information to access business opportunities in Wales, at least relative to other GEM nations.

In terms of opportunities to create high growth businesses, the Welsh experts were more pessimistic than most of the other GEM 21 countries. Only the French, Italian and Norwegian experts were less optimistic about the ability of their businesses to grow. This is quite worrying, given that research indicates that the majority of employment, over a period of time, tends to be created by a small number of fast growth businesses within an economy.

As the main GEM report indicates, countries where there is a widespread perception of opportunity will find a higher level of entrepreneurial activity during the next 16-18 months. Within Wales, we can expect a continued low rate of entrepreneurial activity in the near future, given the depressed perception of opportunity demonstrated by the population and the key informants in the study.

FIGURE 26

Entrepreneurial opportunities - National and International Comparisons of Expert Opinions

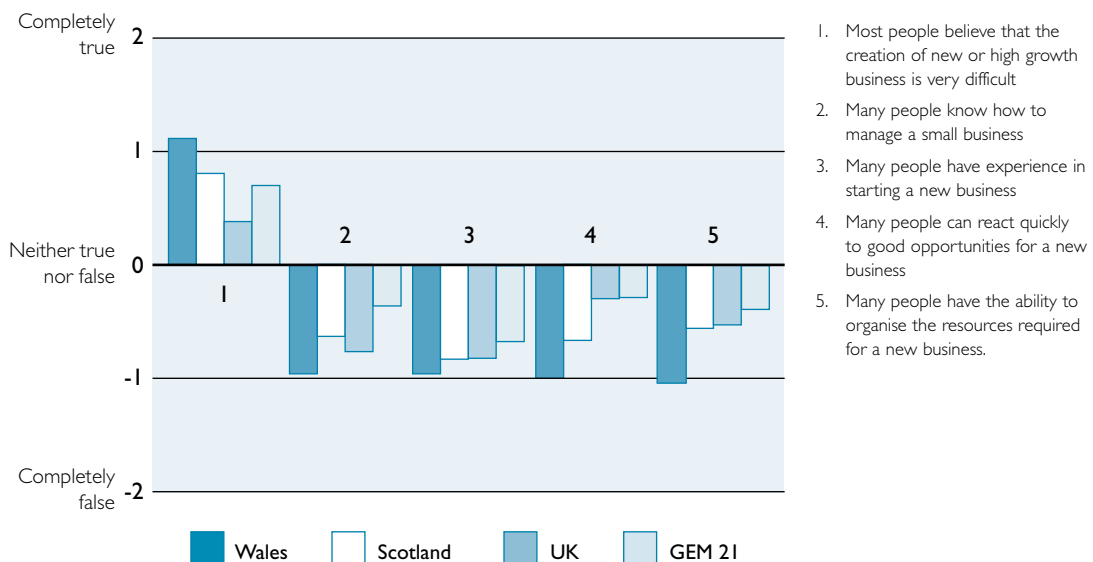


Entrepreneurial capacity

However, the perception of opportunity alone is not sufficient for entrepreneurship to take place. As we have described earlier, an individual must also possess the entrepreneurial capacity - both skill and motivation - to start a business. As Figure 27 indicates, the assessment of the key informants in Wales is considerably below that of the other GEM countries (even though the overall opinion was largely pessimistic, with the USA being the only exception).

FIGURE 27

Entrepreneurial capacity (skill) - National and International Comparisons of Expert Opinions





Indeed, the opinion of the key informants suggest that:

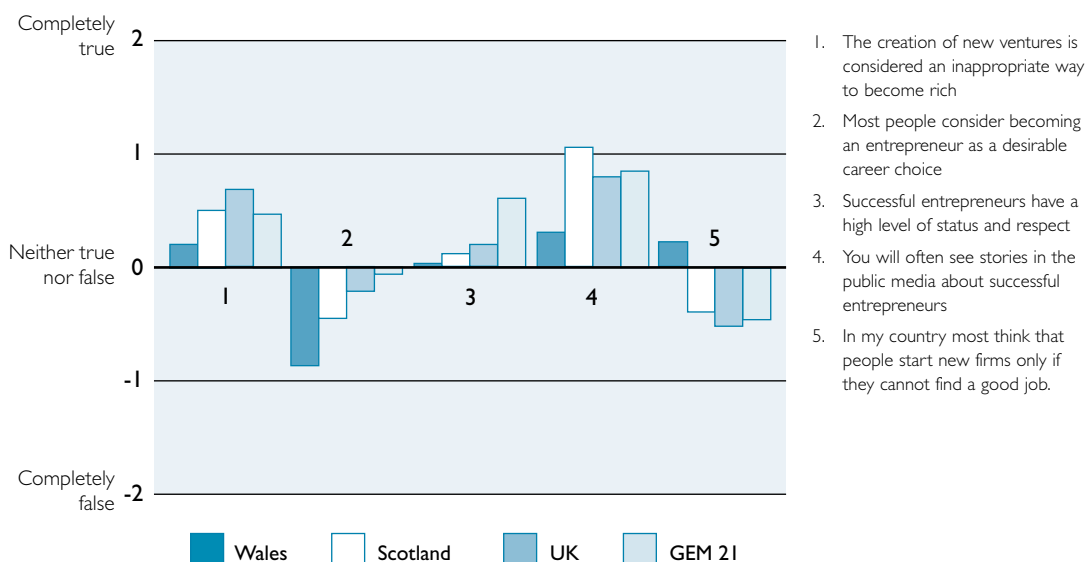
- Most people believe the creation of new or high growth businesses is difficult (only Japan, Argentina and Italy were more pessimistic about growing small firms).
- Fewer people know how to manage a small business in Wales than all other GEM countries apart from Japan, France and Denmark.
- Apart from Germany, Denmark, France and Japan, fewer people have experience of starting a new business in Wales than in the other 23 nations studied.
- There are few people in Wales that can react quickly to good opportunities for business (with only Japan being worse at this).
- Few people have the ability to organise the resources required for a new business (only Japan and France are worse).

This indicates that a considerable programme of education is needed within Wales to build up the skills required to start up a new business.

As figure 28 suggests, the opinion of the key informants in Wales is that there is little motivation among the population to become entrepreneurs. They suggest that the creation of new ventures is a largely inappropriate way to become rich in Wales, with very few people considering entrepreneurship as a desirable career choice – only in Norway is starting a new business rated lower. Indeed, Welsh experts, in contrast to most other countries, felt that people only started new businesses when they could not find a good job elsewhere.

They are also largely ambivalent about the level of respect given to entrepreneurs within Welsh society. Although there is a similar attitude in Scotland and the UK, entrepreneurs in the majority of GEM 21 countries are given considerable respect. However, a number of Welsh experts felt that there is definitely a need to celebrate successful entrepreneurs and that the Welsh media were not doing enough to develop successful role-models of enterprise in Wales and, in particular, to celebrate Welsh business success. Only the media in Argentina are rated worse than the Welsh media in not giving due attention to entrepreneurs and their ventures.

FIGURE 28
Entrepreneurial motivation (skill) - National and International Comparisons of Expert Opinions



SUMMARY AND RECOMMENDATIONS

KEY FINDINGS FOR WALES

Total Entrepreneurial Activity

- In terms of entrepreneurial activity, only 2.6 per cent of the Welsh working age population are involved in either emerging or new firms. This would place Wales 18th out of the 23 GEM 200 nations.
- This would classify Wales, along with Ireland, Japan, Singapore, France and Belgium, as one of the least entrepreneurial nations in the study. The leading entrepreneurial nations in the GEM study - Brazil, South Korea, USA and Australia – have a TEA level of over 10 per cent of the working age population, four times the level in Wales.
- Wales has one of highest entrepreneurial activity rates by females of any GEM nation. The ratio of male to female participation in entrepreneurship activities is 1.3:1, with female participation being higher among the younger age ranges.
- Young people and those over 55 (third-age entrepreneurs) are the two age groups under-represented in terms of entrepreneurial activity in Wales.

Start-Up Activity

- With regard to the level of nascent entrepreneurship (or start-up) activity, only 1.4 per cent of the adult population in Wales were participating in start-ups in 2000.
- This ranks Wales 19th out of the 23 GEM nations, with only Japan, Ireland, France and Belgium having a lower start-up rate).
- The top ranked nations - Brazil (12.3 per cent), USA (9.8 per cent) and Australia (8.1 per cent), have experienced a start-up activity rate in 2000 which is 600% greater than Wales.
- The UK rate of 3.1 per cent is nearly two and a half times the Welsh rate, which suggests that the data from VAT registrations – which indicates that the region is currently at least 30 per cent behind the average for the UK in the rate at which it creates new businesses – underestimates the degree to which Wales lags the UK in terms of entrepreneurial activity.
- There seems to be very little start-up activity by the corporate sector in Wales. Out of the 22 reported start-ups, 21 were independent businesses. This contrasts with the UK situation, where 18% of new firms were being established by individuals trying to start a new business or a new venture with their employer.
- There were no new start-ups in Wales that could be classified as growth firms in 2000 (i.e. employing more than 50 people in five years time). Only six of the twenty two respondents classified as nascent entrepreneurs felt able to give employment estimates, which in total amounted to some only 46 jobs.
- the level of educational attainment in Wales seems to be positively correlated with the level of entrepreneurial activity - the higher the educational qualification, the higher the proportion of start-up activity by the working age population attaining that qualification.

New Firm Activity

- In 2000, 1.4 per cent of working age adults in Wales were actively involved in new businesses (up to 42 months old), ranking Wales 16th out of the 23 nations in the GEM study. This is less than 60 per cent of the UK participation rate in new business.
- In Wales, there is exactly the same proportion of adults involved in firms already established as there is trying to start a new venture. This contrasts with the majority of GEM countries, where the nascent prevalence rate exceeds the new firm prevalence rate by a factor of approximately 2:1.
- The job growth aspirations of new firms in Wales were low, with the average number of jobs created/firm being two employees over a period of five years.



Business Angel Activity

- In Wales, only 0.5 per cent of the adult population had invested funds in new businesses started by other individuals during the last three years, giving Wales the lowest ranking (equal with Scotland) of all 23 GEM 2000 nations. In comparison, the USA rate of business angel participation is 1400% that of Welsh investors.
- In terms of demography of business angels in Wales, women are far less likely to become involved with business start-ups as providers of risk capital.
- All the business angel activity in Wales is activated through personal relationship with either family or friends, with no funding provided to persons or ventures with which the investor had no previous relationship.

Enterprise culture and attitudes towards entrepreneurship

- The attitudes of the adult population in Wales towards entrepreneurship are amongst the least favourable of all the GEM nations. Overall, entrepreneurs have a very low standing within Welsh society, with only half of the Welsh population believing those who start businesses are respected within their community. This is considerably lower than the average for other GEM countries, with only Japan ranking lower than Wales in the study.
- Similarly, two-thirds of the Welsh adult population believe that successful entrepreneurs are not envied in their community – only the populations of Brazil and Spain are more envious than Wales of the success of their entrepreneurs.
- This ambivalence towards entrepreneurs is not driven by a general attitude towards wealth-creation, as 36.3 per cent of the population, more than any other GEM nation, expressed the viewpoint that most people would prefer that everyone had the same standard of living.

Opportunities and barriers to entrepreneurship

- The perception of an opportunity in the market place often leads to the creation of a new venture. Given the low rate of start-up in Wales, it is not surprising that there is a general pessimism towards prospects for establishing a new firm, with only 9.8 per cent of the Welsh adult population believing that there are good opportunities to start a business during the next six months. This is considerably below less than the 36.9 per cent for the average GEM nation.
- However, it is clear that the reasons for this unenthusiastic attitude are not related to concerns about the possibility of any future business venture going to the wall. Indeed, only 29.3 per cent of the adult population in Wales consider fear of failure as a barrier to starting a business, with only Denmark, Canada, Norway and the USA having a population with a lower fear of failure than Wales.

KEY POSITIVE AND NEGATIVE ISSUES FOR WALES

- In terms of the main economic indicators, Wales does not perform well. With regard to GDP/head, economic activity, income and expenditure, employment, earnings and regional competitiveness, Wales is well below the average for the UK as a whole.
- There are also major challenges for Wales in developing its rate of entrepreneurial activity. Official figures for VAT registrations suggest that Wales is 30 per cent behind the rest of the UK in the rate at which it creates new businesses. This is supported by the data in this study, which shows entrepreneurial activity lagging well behind that of the UK and other GEM nations. In addition, the type of business created seems to be 'low growth' lifestyle firms rather than high growth wealth creators. This clearly shows that there is a considerable effort required to transform the economy of Wales.

- The National Assembly for Wales and the Welsh Development Agency have begun this process. Through initiatives such as the Entrepreneurship Action Plan for Wales, the Knowledge Exploitation Fund and Finance Wales, entrepreneurship and small business development is slowly becoming recognised as an important economic issue. In particular, the targeting of structural funding priorities under Objectives 1, 2 and 3 towards SMEs and enterprise development will help to boost entrepreneurial activity, particularly within the more deprived areas of Wales.
- The review of business support in Wales, if fully implemented, will help to streamline the provision of advice, information and training to smaller firms. This will hopefully end the confusion, duplication and fragmentation of business support which still exists in Wales and which is seen as a major barrier to the development of the small firm sector. Despite this, there are considerable doubts about the quality of providers and their programmes, particularly in terms of quality of delivery, applicability of initiatives, and learning from 'good practice' elsewhere.
- There has been an increase in the number of initiatives to raise the profile of Welsh enterprise and Welsh entrepreneurs – including the Western Mail Fast Growth 50 initiative, various 'small business of the year' events, and increased coverage of entrepreneurs in the press, although clearly more could be done to improve the image of entrepreneurs in Wales, which remains low among the general public.
- Access to capital remains a major issue regarding the development of entrepreneurial businesses. There clearly needs to be a closer and better working relationship between the traditional funders of small firms – the High Street Banks – and Welsh businesses. In terms of equity and loan funding, which is seen as a specific problem for the expansion of growth-oriented businesses, the development of Finance Wales will be keenly observed over the next year to see if a single provider of funds to small business can make the difference required to boost the sector.
- Whilst some equity funding is finding its way to businesses within Wales, it is clear that the availability of finance from either business angels or venture capitalists has yet to be fully exploited within Wales. A major blow was the closure of 3i's Cardiff offices in 2000, which signalled the withdrawal of the only major venture capital organisation in Wales.
- There have been significant improvements in the provision of enterprise education and training during the last twelve months at all levels. The increasing success of Young Enterprise within secondary schools in Wales, along with various developments such as KEF within the Further and Higher Education sectors, means that educational institutions at all levels are taking enterprise seriously for the first time. However, a longer term view needs to be adopted that embeds enterprise in education into the curricula of schools and colleges and into the strategies of our universities. Given the data that indicates that graduates and postgraduates are pre-disposed towards entrepreneurial activity, Wales must grasp this opportunity and develop a full entrepreneurship programme for colleges and universities to create a new entrepreneurial class in Wales.
- The low level of R&D undertaken in Wales, coupled with the few scientists and technologists in the workforce, is seriously restricting the ability of Welsh organisations to develop a strong technology-based spin-off culture, similar to that found in Cambridge.
- There seems to be a low perception of opportunity for entrepreneurship in Wales. However, countries where there is a widespread perception of opportunity will find a higher level of entrepreneurial activity during the next 16-18 months. Therefore, within Wales, we can expect a continued low rate of entrepreneurial activity in the near future.
- Entrepreneurship and entrepreneurial characteristics are not valued amongst the Welsh population. More importantly, the various support systems do not encourage individuals to become entrepreneurial, with a strong belief that people in Wales would rather work for well-established firms than a new venture. In particular, the lack of suitable role models is a serious drawback to the development of an entrepreneurial culture.
- There is widespread perception in Wales that individuals do not, as a whole, possess the skills and motivation to start a new venture. This is a serious indictment on the education and training system in Wales, given the amounts of funding that have gone into developing small businesses during the last twenty years.
- In Wales, there are very few high growth businesses (or new start-ups with high growth potential), which seems to be related to the general attitudes towards growth - people think the growth of a new business is difficult and that there are very few opportunities to create high growth ventures.



POLICY RECOMMENDATIONS

- The fundamental aim of this project is to provide a strong foundation for an informed policy debate. For policy-makers in Wales and elsewhere, the question that matters is what can be done to enhance entrepreneurship and create a genuinely entrepreneurial society given, as indicated in the GEM research, that entrepreneurship and economic growth are closely linked.
- This GEM Wales 2000 current study is merely a 'snapshot' of the current situation in Wales, although it does provide us with an important baseline for a longitudinal analysis of the changing nature of entrepreneurial activity and, possibly, the effect of specific enterprise policies on the Welsh economy.
- Whilst an increase in entrepreneurial activity may not be a panacea to all the economic ills of the Welsh economy it can, nevertheless play a crucial and important role in the economic regeneration of Wales. For this to happen, it is clear that politicians and policy-makers need to take the whole area of entrepreneurship more seriously than they have in the past, especially as much of the future wealth and employment in Wales will inevitably come from this sector.
- As we have discussed earlier, in developing entrepreneurship at a regional level, the Welsh Development Agency, via a private sector led steering group, has created the Entrepreneurship Action for Plan for Wales. This plan, which is currently before the National Assembly for Wales, recognised that there are serious problems in developing an enterprise culture in Wales; that the rate of entrepreneurial activity is low, and that there are few growth-oriented firms in Wales.
- These general assumptions are clearly supported by the GEM Wales 2000 study. Indeed, prior to this study, the extent of these problems was relatively unclear, at least compared to other nations in the world. Therefore, the results of the adult population survey, as well as the key informant interviews, suggest that the difficulties facing Wales are far more serious than originally considered in terms of developing a more entrepreneurial economy and society.
- Given this situation, it is clear that the adoption of the Entrepreneurship Action Plan for Wales will be a crucial step forward in addressing the serious issues of creating an enterprise culture, developing entrepreneurial activity, and encouraging growth amongst indigenous Welsh businesses. The findings of the GEM Wales 2000 study therefore support the general aims of the Entrepreneurship Action Plan for Wales in creating a greater awareness of the opportunities and benefits of entrepreneurship, in creating a greater number of sustainable start-up businesses in Wales and in increasing the number of businesses in Wales that grow.
- However, it is clear that, in addition to supporting the general aims of the EAP, the detailed research undertaken in the GEM Wales 2000 study have raised particular issues that are of importance to developing entrepreneurship in Wales. As a result, a number of key policy findings emerge from the adult population survey with respect to demographic targeting, the role of large firms, and the survival and growth of existing ventures. In addition, four main areas of policy development were highlighted by the key informants as being crucial to Wales, namely enterprise culture, access to finance, government policy and education. Each of these issues will be discussed briefly.

Demographics and entrepreneurial activity

- As the GEM study indicates, there is an urgent need to raise the level of entrepreneurial activity in Wales. If implemented properly, the EAP's strategy to increase the number of viable new businesses could be an important part of the solution to the economic ills of the nation.
- Whilst the global GEM report suggests that the relative participation of women in entrepreneurship would account for as much as two-thirds of the variation in entrepreneurial activity between countries, this is not the case for Wales. In terms of entrepreneurial activity, women are not an under-represented group in Wales, with the proportion of female:male start-ups in Wales being amongst the highest of all participating GEM countries.

- This may suggest that main concern of the EAP should be to increase the total number of entrepreneurs in Wales, irrespective of gender, and there may be no need for a separate business birth rate strategy for women in Wales, as suggested in the EAP, which is specifically targeted at raising the proportion of women involved in entrepreneurial activity. However, given the very low sample size in the study, more research is probably required to test this finding.
- This is not to say that we cannot have specific business start-up programmes that ensure that women continue to contribute, as they should, to new business activity rates in Wales, taking into account their particular needs as a demographic group. In the EAP implementation strategy, a number of initiatives are proposed including the provision of women only pre-start-up business training support and advice; support for women's business networks; entrepreneurship experience and training opportunities; mentoring programmes and awareness-raising events; and gender-specific business finance
- This report would support the development of such initiatives to take into account the specific characteristics of female-based entrepreneurs as an important sector of the Welsh enterprise economy.
- Interestingly, the women who are least involved in entrepreneurial activity are those aged between 35-54, who may, or may not, have common characteristics. Further research may be required to examine whether this group could be encouraged to contribute more to entrepreneurship in Wales.
- Therefore, whilst helping more women to start-up new businesses may not close the gap in entrepreneurial activity we have with other nations, the encouragement of more young people and those over 55 (third-age entrepreneurs) is an important issue for the EAP, as those are the two age groups under-represented in terms of entrepreneurial activity in Wales.
- As suggested in the global GEM report, the greatest potential for a long-term impact on enterprise in Wales is the development of specific policies geared towards the two extremes of the age spectrum. In Wales' case, this would be those individuals younger than 25 and those aged over 55, both of which show rates of entrepreneurial activity below the average.
- There are no specific initiatives geared at the older age group in Wales - the so-called potential 'third-age' entrepreneurs – who could provide a potential source of enterprise, particularly in the rural and coastal areas of Wales where such individuals tend to cluster after retirement. For those younger than 25, there are organisations such as the Prince's Youth Business Trust (PYBT) which, although successful, is woefully under-resourced in achieving a major breakthrough in increasing the entrepreneurial activity of young Welsh people.
- Clearly, a major priority for the EAP would be to commit more resources towards these two specific demographic groups in Wales to encourage further entrepreneurship. Currently, the EAP implementation strategy does not target either of these groups specifically, and this needs to be rectified immediately, with targets set for enterprise stimulation activities aimed specifically at increasing entrepreneurial activity amongst the under 25s and the over 55s in Wales.
- There also needs to be a greater targeting of resources towards raising the awareness of enterprise amongst those with little or no qualifications in Wales. As the research shows, this group demonstrates a below average rate of entrepreneurial activity, and yet represents a pool of talents as yet untapped in terms of developing enterprise, and one that could make a significant difference to the economy of Wales.
- The various initiatives to stimulate entrepreneurial behaviour within local communities throughout Wales may be the first step in encouraging greater participation in enterprise from all parts of Welsh society, although there seems to be very little resource geared towards this as part of the EAP, a situation that clearly needs to change. However, it is clear that any initiatives must clearly take into account the specific problems of encouraging this part of Welsh society to engage fully in entrepreneurial activity.
- Within the EAP implementation strategy, a budget of 4.8 million has been suggested towards improving entrepreneurship within the social economy. Given the low amount of entrepreneurship that exists within this sector in Wales and the untapped potential in creating new businesses, it is clear that the resources allocated towards improving entrepreneurship amongst the socially excluded in Wales needs to improve dramatically.



The role of large firms in entrepreneurial activity

- The contribution of the existing corporate sector in Wales to entrepreneurship is extremely low, at least compared to other GEM countries. The GEM Wales 2000 study indicates that, relative to other countries, there has been very little start-up from the corporate sector in Wales. This is probably reflected by the 'type' of large business we have in Wales, which does not encourage the creation of 'spin-offs' because of the nature of the work undertaken within many firms, particularly inward investors.
- There needs to be an increase in the number of corporate spin-offs emerging from Welsh businesses. Using funding available from the EAP, the WDA therefore needs to identify greater resources that will target a specific number of existing Welsh businesses where such spin-offs could be encouraged and help support such a development.
- In the long term, the National Assembly needs to reconsider its inward investment attraction strategy if we are to create an entrepreneurial society in Wales. An over-dependence on low skill businesses such as call-centres will not create the Welsh 'Cwm Silicon'. It must be recognised that much of the entrepreneurial activity of Route 128, Silicon Valley and similar developments have been as a result of entrepreneurial individuals perceiving an opportunity in the market-place and leaving their existing large corporate employer to pursue that opportunity. Therefore, the National Assembly must target specific key sectors of the knowledge-based economy where the potential to create corporate ventures by companies operating in such sectors is high.

Survival and Growth of Existing Business

- The GEM Wales 2000 study indicates that the survival rate of Welsh businesses may not be a problem. Unlike other nations, the start-up rate in Wales is roughly the same as the rate for those that have been involved in new firm activity for the last 42 months. This suggests very little 'churning' in the Welsh economy, with 'lifestyle' businesses being the norm.
- More importantly, it could be part of the explanation for the low rate of growth of businesses in Wales, as growing firms are usually associated with a dynamic and competitive enterprise environment. Therefore, it is clear that there is a need to change the business environment to help create more growth businesses in Wales. However, trying to identify growth firms – 'picking the winners' - is fraught with difficulty and cannot usually take place until 2-3 years into the lifetime of the company. Nevertheless, it is crucial that businesses with growth potential are supported and developed because of the higher amount of wealth and employment they create as compared to the average small business.
- The quandary facing the Welsh economy is that we have to increase the entrepreneurial activity of the nation whilst also increasing the growth potential of the 15% or so of Welsh businesses that have the ability to grow further. Clearly, whilst both aims are important to the economy of Wales, they may nevertheless be incompatible with each other, in that policies aimed at the majority of small businesses, as currently is the case, will have very little relevance to 'high growth' entrepreneurial firms.
- Therefore, the GEM Wales 2000 study wholeheartedly endorses the support of growth firms as one of the most important aspects of the Entrepreneurship Action Plan for Wales, and the funding allocated within the EAP towards developing entrepreneurial growth firms in Wales – 40% of the suggested proposed budget – which reflects the importance of this sector to the Welsh economy. Given that the development of the growth potential of Welsh businesses is crucial to increasing the wealth and prosperity of the nation, this key action of the EAP should be fully supported by the National Assembly for Wales.

Development of an enterprise culture

- Out of all the entrepreneurial framework conditions in the GEM model that can influence entrepreneurial opportunities, capacity and lead eventually to national economic growth, cultural and social norms is perhaps the most important to Wales. The data from both the key informant interviews and the adult population survey suggest that Wales seriously lacks an enterprise culture or, more importantly, an entrepreneurial population with the skills, motivation and abilities to identify opportunities in the market-place that can lead to the creation of new businesses.
- This situation could be explained by a variety of reasons, ranging from Wales' traditional industrial heritage, the development of a branch plant economy driven by inward investment policies, or the greater relative dependency on the public sector. However, regardless of the explanations, it is clear that policies to address the development of an enterprise culture in Wales are probably the MOST IMPORTANT AND CRUCIAL ASPECT of any future strategy to develop the economic potential of Wales and the foundation of any successful revitalisation of the Welsh economy.
- If, as the global GEM results suggests, the promotion of entrepreneurship, its role in society and the opportunities it presents for personal gain play an important part in facilitating economic growth, then the National Assembly for Wales, in partnership with other bodies in Wales, needs to do more to introduce the Welsh population to the opportunities that can be created through entrepreneurial activity.
- This will not be an easy task, as Wales is currently bottom of the 'opportunity league table', in the proportion of the adult population that perceive an opportunity to establish a new venture in the next six months. However, entrepreneurial opportunity is nothing without the relevant entrepreneurial skills and motivation, which clearly are low within the Welsh context.
- Without changing the culture of the Welsh population to one that nurtures, appreciates and supports the concept of entrepreneurship, it is clear that entrepreneurial (and economic) activity will not increase in Wales. As a result, the target for economic and entrepreneurial growth within Wales will not be achieved. The fact that the least favourable attitudes for entrepreneurship are to be found amongst the Welsh adult population is a serious problem for the development of new businesses in Wales in the near future. Unless there is an improvement in the potential pool of entrepreneurs in Wales, then the ambitious targets of the EAP for increasing the number of new businesses by 21,000 in the period 2000-2007 will not be achieved.
- For any profession in any society, the opportunity, skills and motivation to pursue that profession is as important as the respect of one's peers and one's community for that profession. This is equally true of entrepreneurs as it is for doctors, accountants and teachers. As the global GEM study showed, the social legitimacy of entrepreneurship is a major factor in explaining the differences in entrepreneurial activity, with high rates in nations where success in entrepreneurship was not resented and entrepreneurs were socially valued. In Wales, it is clear that there is little evidence of a strong culture that supports entrepreneurship and values the contribution of entrepreneurs to society.
- There seems to be a widespread misunderstanding in Wales of what entrepreneurship is and who entrepreneurs are. It was surprising to find that a higher proportion of graduates were involved in business start-ups in Wales than those with little or no qualifications. This finding, supported by a number of other GEM nations, should abolish, once and for all, the image of the entrepreneur as the uneducated 'wide-boy' going straight from school into self-employment because no other business would employ him. However, it is crucial for the development of enterprise in Wales that this message is widely disseminated amongst the population from which future entrepreneurs will emerge, and that individuals such as Arthur Daley, Del Boy and Mike Baldwin are the extreme exceptions of entrepreneurship, rather than the norm.
- The adoption of 'role models' of successful Welsh entrepreneurs is crucial in demonstrating the benefits of entrepreneurial success. Clearly, whilst highly successful individuals such as Terry Matthews, Laura Ashley and Sir Christopher Evans should be used, there should also be more positive role models developed of 'local' entrepreneurs, helping to overcome some of the barriers and prejudices that exist towards enterprise in Wales. Therefore, the approach to be undertaken by the EAP in creating an enterprise culture is fully supported by this study. Changing attitudes is probably the most important aspect of all, and there clearly needs to be better role models of Welsh entrepreneurial success, and a greater awareness of the potential and possibilities of an entrepreneurial career.



- Therefore, the findings of the GEM study support the intentions of the Entrepreneurship Action Plan's implementation strategy to allocate 24% of its proposed budget (or £57.6 million) during the next three years towards the creation of an enterprise culture in Wales. Of this amount, £20.1 million is targeted directly at a National Awareness Campaign to promote an entrepreneurial culture in Wales. Clearly, the campaign needs to concentrate its initial efforts on combating the negative attitudes that exist amongst the adult population in Wales towards entrepreneurs. There is widespread misunderstanding of what entrepreneurship is and who entrepreneurs are amongst the general population.

Finance for enterprise

- The importance of finance for the development of entrepreneurship in Wales was rated as one of the most important issues by the key informants. This is not surprising, given that policies to encourage the development of formal venture capital and the creation of incentives for private individuals to invest directly in early-stage finance is a major conclusion of the Global GEM study.
- There are specific problems for this in Wales. First of all, there are no formal venture capital providers of any major size in Wales. Secondly, the rate of investment in private firms by individuals is the lowest of all the participating nations, and, given the current powers of the National Assembly for Wales, new tax-related incentives cannot be developed to increase this rate.
- These are both crucial issues that the new body responsible for developing policies and initiatives for financing Welsh enterprises - Finance Wales - will have to address as one of its first tasks in supporting enterprising Welsh firms.

Education

- Education is clearly an important aspect in developing entrepreneurship at all levels of society. As the GEM 2000 study suggests, if access to post-secondary educational opportunities were the only factor used to predict entrepreneurial activity, then it would account for 40% of the cross national variation. In other words, a greater investment in education by the National Assembly for Wales will pay direct economic dividends in the future.
- The findings regarding educational achievement and entrepreneurial activity are a mixed blessing for Wales. Starting a new business has become accepted amongst graduates and postgraduates in Wales, and there is a clear role for the university sector to play in encouraging a greater awareness of enterprise amongst their students and also to help those individuals who wish to start a business to do so.
- However, it must be noted that development of a strong entrepreneurial education system is crucial not only in creating the next generation of owner-managers, but also in developing a more creative, enterprising and innovative workforce – not all pupils leaving school or students leaving university will become entrepreneurs. Many will become employees in the public sector, large firms and, most importantly, SMEs, where entrepreneurial skills will be vital in developing the competitiveness of that organisation.
- The amount of funding provided for enterprise education, at primary to secondary to tertiary levels, equates to 12.2% of the total proposed EAP funding in Wales over the next three years. This clearly demonstrates the importance of enterprise education in overcoming some of the barriers which restrict the development of an enterprise culture in Wales.
- Given the prevalence of enterprise amongst postgraduates in Wales, the concentration of the KEF initiatives initially on the development of an educational programme in enterprise geared specifically towards postgraduate students could be one way of developing short-term gains in terms of entrepreneurial activity (particularly for those postgraduates in science and technology disciplines) but that could have long term consequences for the development of a knowledge-based economy in Wales.

Government policies

- The policy situation in Wales has improved considerably during the last twelve months, which have seen the development of the EAP, Finance Wales and the Business Review. However, such policies need to be translated into practice as quickly as possible for any real impact to take place in the immediate future. We cannot, as a nation, afford to reinvent the wheel, in our pursuit of initiatives that will increase the entrepreneurial activity rate in Wales.
- Whilst it has identified its implementation strategy for the EAP, the new Entrepreneurship Unit within the WDA must pursue a proactive strategy of identifying the best entrepreneurship initiatives and adapt these for Wales. The EAP has started this process, but far more work needs to be done to ensure that we have the best support structure for small businesses that we can possibly develop as a nation.
- Part of this process means understanding the whole area of entrepreneurship better. One of the side-effects of the introduction of a 'new' concept such as entrepreneurship into the Welsh policy arena is that, because it seemingly deals with something as 'simple' as small firms and their development, everyone is suddenly an expert on entrepreneurship, forgetting that it is a formal academic discipline, with its own history, theories, traditions, methodologies and policy approaches.
- How many politicians, academics or policy-makers would take advice from the ham radio enthusiast who suddenly professed to be an expert on semiconductor physics? Indeed, as the Australian GEM report memorably points out, it is clearly not legitimate for commentators and policy-makers and their advisers, no matter how well motivated, to enter into the entrepreneurship debate without having read and understood the relevant literature and body of understanding at the leading edge of world research.
- There is a wide body of expertise available for Welsh politicians and policy-makers to utilise in the area of entrepreneurship and small business management, and full advantage should be taken of this to develop the best policies and practices for Welsh enterprise.
- An interesting issue that emerges from the GEM study is the finding that any government committed to sustained economic progress must ensure that all aspects of its economic system are conducive to and supportive of increased levels of entrepreneurial activity. In other words, countries with high level of entrepreneurial activity are characterised by lower levels of corporate and personal taxation, more flexible labour markets, lower non-wage labour costs, fewer regulatory burdens and greater ease of doing business with government.
- The major drawback in Wales is that the majority of such policies, and their influence in developing an entrepreneurial environment, are in the hands of the national UK government at Westminster. Therefore, despite having a lower entrepreneurial activity rate than the UK, the National Assembly for Wales cannot, at the present time, develop fiscal or regulatory policies specific to the Welsh situation, that could reduce much of the burden of regulation and taxation on Welsh business.