



3 Company Start-ups, Development & Structure

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This chapter assesses the quality and performance of the BMW Region's entrepreneurial system and then examines company performance in comparison with the S&E Region. It concludes by looking at some 'best practice' examples and explores some opportunities in the BMW Region.

In assessing the position in the BMW Region, one must bear in mind that systems of innovation in other regions show marked differences that tend to be associated with their particular environment and mix of services and manufacturing capability and capacity. Such differences have implications for policy formulation. Policy interventions may be desirable or even necessary but they must be informed by local conditions and based on the study of innovation processes, organisations and institutions over extended periods of time. It is necessary to identify which elements of the system are subject to inertia or have become 'locked in' to inappropriate structures and trajectories, so that real deficiencies can be addressed and the economy launched on what Edquist (1997)³ has called "the dynamic co-evolution of knowledge, innovations, organizations and institutions".

3.1 The Entrepreneurial System

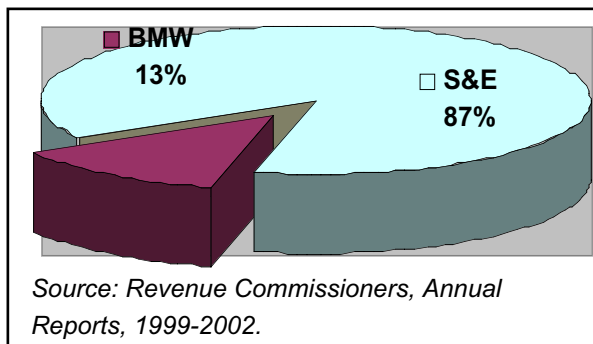
A key question for the BMW Region is how entrepreneurial is the region? To be successful, its enterprises must be both innovative and entrepreneurial. This section assesses its level of enterprise. To do this we looked at a variety of indicators of entrepreneurial performance including:

- The level of new company start-ups by region and county
- The performance of BMW Region companies on national Top Business lists including the Top 100 manufacturing companies in Ireland, Deloitte and Touche's Fastest 50 High Technology Growth companies and the Top 50 exporting companies

The number of new company start-ups for 1999-2002 comes from two sources:

- New companies registering with the Revenue Commissioners each year
- Private communication with Company Formations Ireland (CFI)

Figure 12. New Company Registrations, 1999-2002



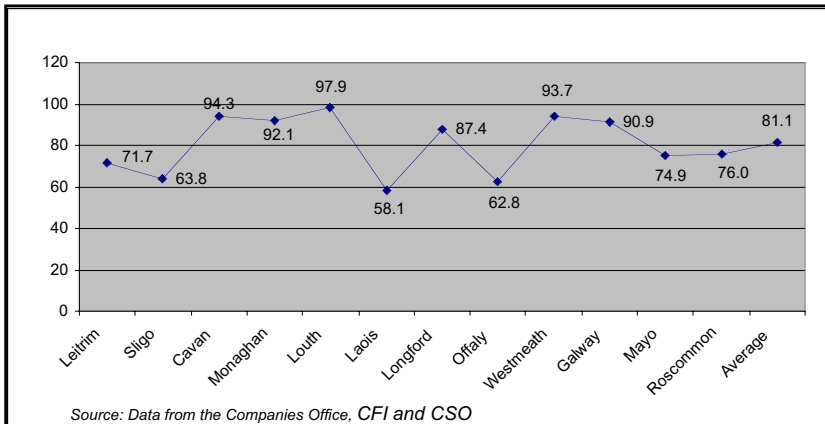
³ Edquist, C, Systems of Innovation: Technologies, Institutions and Organizations, London, Pinter Publishers, 1997.

Based on this data, Figure 12 shows that the BMW Region accounts for only 13% of the new company start-ups over the last four years. This does not take into consideration any new businesses start-ups, which were not registered as companies, i.e. self-employed owner manager businesses. This is considerably lower than the BMW Region's share of the national population. Over the four-year period, the total number of new national company start-ups was 62,889 and the number of new start-ups in the BMW Region was 8,415.

A more meaningful way to examine this data would be to normalise it on a population basis, e.g. per 10,000 of the population. The national average number of new start-up companies is 160.5 companies per 10,000 of the population based on the above data over four years (or 40.1 per annum). The equivalent BMW Region figure is 81.1 new start-ups per 10,000 of the population over four years or roughly 50% of the national average (or 20.3 per annum). Figure 13 shows new company registrations by county in the BMW Region for the four-year period 1999 to 2002, normalised per 10,000 of the population. All counties were lower than the national average of 160 new company registrations per 10,000. The four highest counties were Louth, Cavan and Westmeath and Monaghan.

It would provide a more complete picture if these figures included unregistered businesses as well as registered companies. Some indication of these can be obtained from the Revenue Commissioners Annual Reports. There are approximately 30,000 new VAT registrations each year, roughly half of which are new company registrations. But there is no breakdown of this data available either by sector, location or size. Thus it cannot be used.

Figure 13. New Company Registrations by County per 10,000 Population, 1999-2002



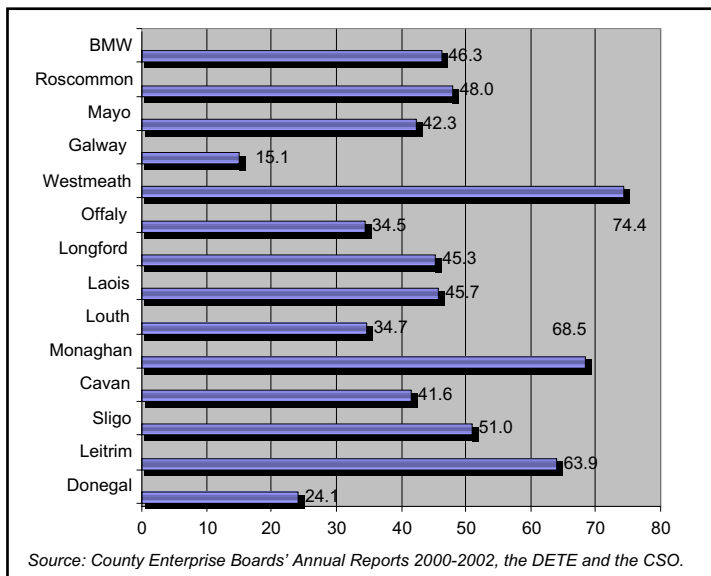
A high level of new start-ups is important for the well being of the BMW Region and is essential for its development. Otherwise it will not replace the firms exiting the system. However, creating a higher level of new start-ups is a most challenging task because:

- Setting up a new firm is a very high risk, yet the SFA estimates that 100,000 people are thinking of setting up a company at any one point in time.
- Very few make a decent profit.
- Of 14,100 new firms set up in 1993, only 4,230 were still operating in 2003 (30%).
- The highest rates of failure are at the end of years 1 and 4.
- A number of studies indicate that 33-45% have failed within 5 years, confirming c) above.
- Another 25% fail or are taken over in the second 5 years.

The average life of a new company in Europe or Japan has been estimated at 12.5 years. MNEs tend to last longer. Aries de Gues believes that the average life expectancy of a multinational company is 40 – 50 years⁴. For example, one third of the 1970 Fortune 500 list had disappeared by 1983. So there is a continuous need to start-up new companies and grow a percentage of them to replace those exiting, closing or taken over.

Figure 14 shows the level of jobs (full-time equivalents) created by County Enterprise Boards (CEB) supported companies expressed on a common basis, per 10,000 of the county population, over the last three years (2000-2002). The average number of jobs per county in the BMW Region is 46.3. Not all these jobs represent individual firms, but many of them are one or two person firms. A minority are larger, but the data does not specify the number of businesses set-up. It is important that the data be presented in a way that national and international comparisons can be made on a county and regional basis. Again there is quite a level of variability between the counties, with Westmeath, Monaghan, Leitrim and Sligo leading the 13 BMW Region counties.

Figure 14. Total Number of Jobs Created per 10,000 of Population over the Three Year period, 2000-2002, by the County Enterprise Boards (CEBs)



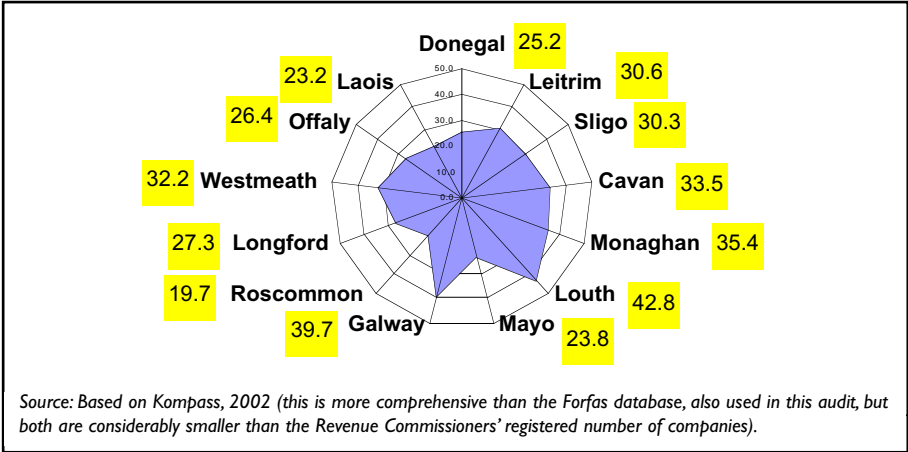
⁴De Gues, Aries, The Living Company, Harvard Business School Press, US, 1997.

So, upon what base are these new start-ups being built? The national average of existing companies is 293 per 10,000 of the population based on the Revenue Commissioner's Annual Reports and the national average of new start-up companies is 40.1 companies per 10,000 of the population per year or 160.4 over four years.

BMW counties should aim for an equivalent number of new start-ups. No county in the BMW Region has achieved this number of new company registrations between 1999 and 2002 (Figure 13).

Figure 15 is based on Kompass listed companies and it shows the variation in existing companies per 10,000 of the population by county. Louth and Galway have the highest number of existing companies per 10,000 of population, and Laois and Roscommon have the lowest.

Figure 15. Current Firm Intensity – Number of manufacturing firms per 10,000 Population, 2002



International data suggests⁵ that the number of companies should grow at 6% per annum, when new start-ups and company failures are taken into account. Further desk research and discussions and analysis suggested some of the reasons why the level is lower in the BMW Region (Figure 16).

⁵ European Observatory, various reports in the last four years.

Figure 16.
General and BMW Region Specific Adverse Influences on New Start-ups and Growing Companies

	General Influences	BMW Region Specific Influences
Macro level	Unfavourable economic conditions Level of competition Administrative burdens imposed by national authorities Favourable sector performance Technological development Insufficient demand, e.g., in ICT recently The operation of the labour market (skills availability, flexibility etc)	Distance from major Irish markets, mainly in the East, and international markets Current entrepreneurial culture Lack of use of venture capital – there is a real need to ‘educate’ local businesses on its value and on how to access venture capital Poor infrastructure – particularly telecommunications and roads
Micro Level	Ownership structure Shortage of capital Support services and advice	Management skills – lack of high quality relevant business development training programmes to assist the growing business Networking capabilities Wage rates – in traditional companies, minor role on innovative companies

Source: this figure is based on a combination of the Observatory of European SMEs and the Focus Groups and interviews undertaken in the BMW Region.

Two additional factors, in particular, are relevant here:

- *Experience from regions throughout the world and particularly in Europe strongly indicates that companies better react to regional assistance programmes than national programmes – they are usually nearer the needs of the regional companies and they are easier to communicate, uncomplicated as they are by either physical distance or different perspective.*
- *The very low level of international service and other service businesses points to the need to examine why this is so and determine how to stimulate more service enterprises, especially since the number of manufacturing companies is likely to decline while the number of service companies should continue to grow.*

On a separate issue, the IDA has commented that a lack of people is a further constraint on future development, particularly large scale FDI. But the evidence is that people are interested in working in the BMW Region and there is no evidence that any plant to-date has failed to attract adequate suitable staff for its needs.

3.2 Company Performance in the BMW Region

How well do existing companies work? This section looks at a number of measures of company performance.

Top 100 Companies in Ireland

According to the Irish Times/Business & Finance Top 100 companies in Ireland by turnover, these account for in excess of €100 billion of turnover per annum. Only five of these companies are located in the BMW Region and they account for 2.6% of the turnover and 1.2% of the people employed.

Table 12. Top 100 Companies in Ireland, 2002

	BMW Region	S&E Region	Total	BMW Region as a % of the total
Numbers of companies	5	95	100	5%
Turnover (€m)	2,632	99,011	101,643	2.6%
Numbers of people employed	2,940	250,056	252,996	1.2%
<i>Source: Irish Times/Business & Finance Annual Top 1000 Companies in Ireland, 2003</i>				

Deloitte & Touche - Ireland's Technology Fast 50 Winners 2002

According to the annual Deloitte & Touche listing of Ireland's fastest growing technology companies in Ireland in 2002:

- 11 of the companies were from Northern Ireland (22.9%)
- 35 were from S&E Region (72.9%)
- 2 were from the BMW Region (4.2%)

Two companies were untraceable (see Table 12). The annual growth rates varied from 40.6% per annum to 1,173% per annum. As one would expect the companies were predominantly telecoms or software companies with education and training, chemicals and medical and e-commerce also represented. This table shows the critical national importance of the Dublin area in the stimulation and growth of high technology companies, and the very low level of such companies in the BMW Region.

Table 13. Ireland's Technology Fast 50 Winners 2002

Location	Number of Firms	Sub-sectors (number in each area)
Northern Ireland	11	Software development (6), Communications (2) Financial services (1) and Electronics (1)
S&E Region	35	Software development (20), Communications & web (12), Education (1), Chemicals (1) and e-Retailing (1)
BMW Region	2	e-Solutions (1) and Medical equipment (1)
Untraceable	2	
<i>Source: Deloitte & Touche, 2003</i>		

Top 50 Exporters

The Top 50 exporters from Ireland in 2000 were headed up by DELL, Intel, Microsoft, Janssen Pharmaceutical and the Irish Dairy Board Co-Operative according to the Irish Exporters Association. The majority of the companies are located in either Cork (10 companies) or Dublin (21 companies). The top 33 companies accounted for 50% of total exports in the year 2000. There were 13 Irish owned companies in this top 33 and they accounted for 14% of total exports. The food and drinks companies dominated the Irish owned export figures accounting for 73% of this top 50% sector.

Table 14. Location of Top 50 Exporters

Regions	Number of Companies
S& E Region	40 (80%)
BMW Region: Border (2), Midlands (1) and Western (7)	10 (20%)
Total	50

Source: Irish Exporters Association, 2002

In order of importance, measured by numbers of companies, the major exporting sectors were: Office/Electrical etc. (12 companies), Food/Drink/Tobacco (11 companies), Chemicals (9 companies), and Software (8 companies). Together these four sectors account for 40 of the Top 50 exporters or 80%. The BMW Region has 20% of the Top 50 exporting companies in Ireland, but they account for only 10% of the exports, as they tend to be at the smaller end of the scale.

Top 30 Private Companies (SMEs)

Finally, the consultants looked at the Top 30 private SME companies (Table 15). The 30 companies analysed here were chosen from a database of 18,000 private Irish-registered companies whose accounts have been analysed by CFI Online and published by Business Plus in June 2003. They have been growing shareholder value at a rate of 14% per annum, considerably more than the 6-9% growth in GDP. The oldest company was started in 1907. Many of the other companies date from the 1950s, 1960s and 1970s. They know the secret of longevity.

Business Plus/CFI Online looked for companies with shareholders funds of between €6.4M and €19M. This parameter represents the leading players as it has been estimated that 80% of indigenous Irish trading companies have a net worth of less than £1M, while 40% have shareholders funds of under £100,000. Most of the Top 30 companies are medium rather than small companies, but most are privately owned and family run. Multinational subsidiaries, foreign owned companies and companies with accounts earlier than the year ending September 1996 were excluded. Unlimited companies could not be considered, as they are not required to provide any official information. Many of these companies are potential takeover targets.

Table 15. Top 30 Private Companies (SMEs) in Ireland

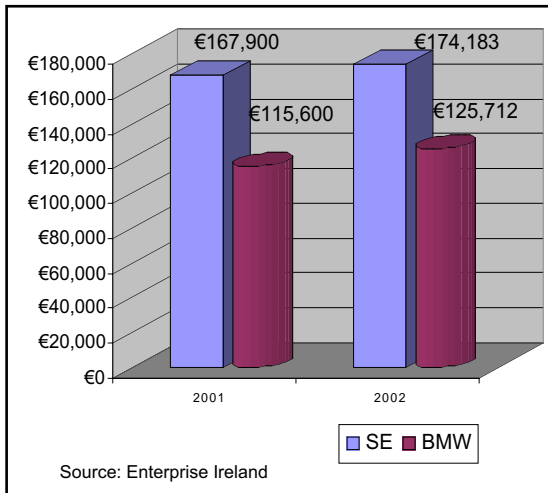
Business Sector	BMW Region	S&E Region	Total	%
Food	0	2	2	
Engineering and Electrical	1	2	3	
Computers	0	2	2	
Other	2	1	3	
Subtotal - Manufacturing	3	7	10	37.9
Wholesale & Distribution	0	3	3	
Retail	1	2	3	
Construction	0	4	4	
Financial Services	0	1	1	
Software Development	0	2	2	
Other Services	0	6	6	
Subtotal - Services	1	18	19	65.5
Total	4	25	29	100.0
Percent - %	13.8	86.2		

Source: Accounts analysed by CFI Online, 2003

Note: 1 company was untraceable.

The BMW Region only accounts for less than 14% of the top Irish owned SMEs in the country, while the S&E Region accounts for the balance (86%). The division between services and manufacturing would indicate a reasonably representative sample.

Figure 17. Productivity in the S&E and BMW Regions, 2000 and 2001



Three other important sources help identify the current state of BMW Region indigenous manufacturing industry:

- *According to a national study of supply chain management (SCM) undertaken by the National Institute of Transport and Logistics, the SCM capability of companies in the BMW Region is significantly lower than in the S&E Region.*
- *Enterprise Ireland's own assessment of productivity between BMW Region companies and S&E Region companies reveals that output per head is 30% lower in BMW Region firms than in S&E Region firms (see Figure 17).*
- *Discussions with a number of specialists, firms and State development personnel confirm that the majority of the engineering sub-supply firms are currently experiencing severe price competition from Central Europe, and growing competition from the Far East and China. Unless they can successfully move up the value added chain or develop their own product lines they will not survive.*

The data just presented indicates that there should be further opportunities for companies in the BMW Region to expand.

3.3 Company Size and Geographical Spread

The BMW Region has a higher proportion of workers in the Agriculture, Forestry and Fishing sectors than the S&E Region. Only one county, Louth, has a lower proportion than the national average, while seven counties have more than double the national average and a further three counties have 50% more than the national average.

In the manufacturing sector, Louth has the highest proportion of manufacturing workers in the Region (over 50% above the national average). A further six counties have more than the national average, while a further two are marginally below the national average. This gives the Region a higher average employment in the manufacturing sector than the S&E Region. The counties with the highest proportion of commercial enterprises (manufacturing and services) are Galway, Louth and Donegal in that order. Together these three counties account for nearly 40% of enterprises and nearly half of the companies employing more than 500 people in the BMW Region. One difficulty encountered as the audit progressed was the change in industrial structure and employment – companies have been reducing their number of employees and a number of companies have closed. Thus the following table (16) is indicative.

Table 16. Firm Size by County in the BMW Region, 2002

County	1 –10	11-99	100-249	250-499	500 +	Total	%
Donegal	194	131	18	1	2	346	10.7
Leitrim	50	26	2	1	0	79	2.4
Sligo	98	69	6	1	2	176	5.4
Cavan	103	73	8	4	1	189	5.8
Monaghan	88	80	17	1	1	187	5.8
Louth	238	177	10	9	2	436	13.4
Mayo	155	112	7	3	2	279	8.6
Galway	459	317	41	7	5	829	25.5
Roscommon	57	45	2	1	1	106	3.3
Longford	36	41	7	1	0	85	2.6
Westmeath	137	75	15	3	2	232	7.1
Offaly	95	63	8	1	1	168	5.2
Laois	76	56	3	0	1	136	4.2
Total	1786	1265	144	33	20	3248	100
Percent - %	55.0	38.9	4.4	1.0	0.6		100

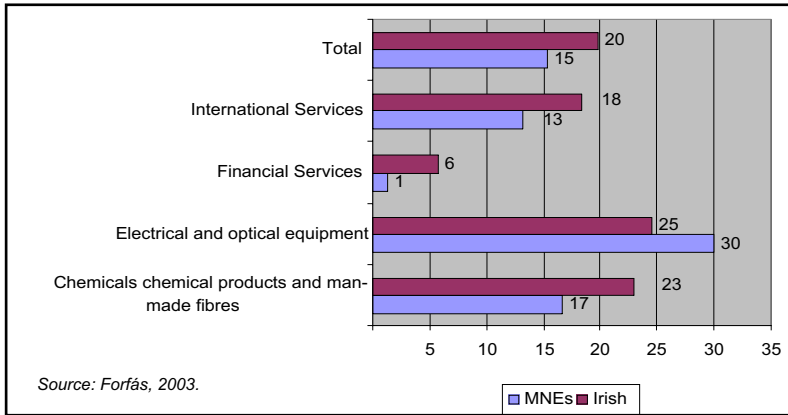
Source: Kompass, 2002

For analysis purposes the Forfás database is used, which is based on 2,643 manufacturing and service companies in the BMW Region, a smaller number of companies than Kompass. Both databases tend to be less accurate at the under ten employees level, where the rate of entry and exit is very high and difficult to track.

According to Forfás, the BMW Region had a 30.7% share of national enterprises, slightly higher than its share of population. From an ownership perspective its share was 20.5% of MNEs and 32.5% share of indigenous companies. This means that the BMW Region has significantly less than its national share of MNEs, who generally pay higher wages, are more efficient and more modern than Irish companies.

The picture is less positive when one assesses the ownership of high-tech manufacturing and internationally traded services. Except for electrical and optical equipment, the BMW Region's share of the national sectors is low to extremely low (financial services). Note: under 20% is very low.

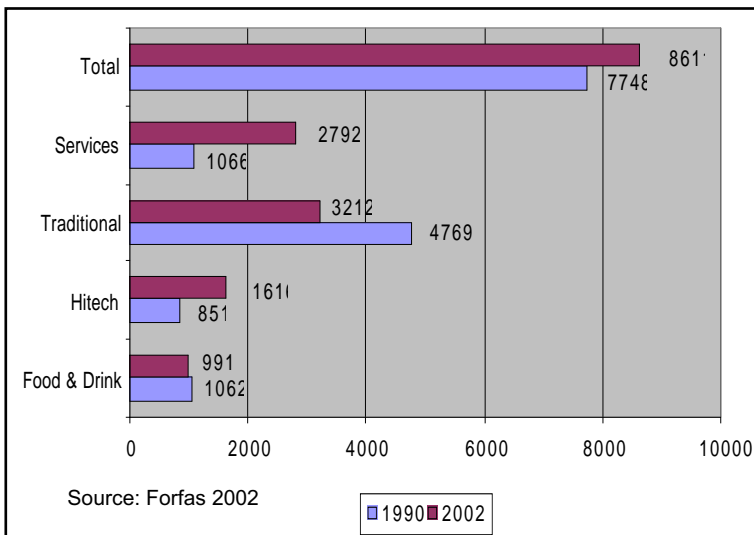
Figure 18. BMW Regional Share (%) of the Companies Nationally by High Tech Sectors, 2002



This analysis when coupled with the high share of agricultural employment in the BMW Region helps to explain why wages and disposal income are lower in the BMW Region than in the S&E Region. It also identifies the potential risk the BMW Region faces in being more dependent on traditional industry (some of which is in terminal decline) and shows the real difficulties in attracting international direct financial investment (DFI) to the region.

Figure 19 shows how Irish industry has developed over the last 12 years. The number of companies, nationally, has increased by over 11% between 1990 and 2002, and employment has increased by 41.4%. Roughly half the people employed in manufacturing industry are now employed in MNEs. (153,368 people).

Figure 19. The Change in Irish Industry, measured by numbers of companies in 1990 and 2002



These broad figures hide the real changes, such as:

Sector	Increase (decrease)	Change by ownership
Food & Drink	(6.7%)	Over 22% of MNEs have left Ireland due primarily to the international concentration of the sector; while the Irish owned companies have decreased by 5%.
High Tech	+8%	Both MNEs and indigenous companies grew at roughly the same rate, but the employment levels in the MNEs are considerably higher.
Traditional	(32.6%)	Both MNEs and indigenous companies declined at approximately the same rate but from different bases, i.e. this meant that MNEs declined by 95 companies while indigenous companies declined by 822 (this ignores the positive effect of all new start-ups during this period).
Services	161.9%	Mainly in the area of international traded services (led by indigenous companies) and financial services (led by MNEs).

But what was happening in the BMW Region?

The following table (17) shows that the Western Region grew quickest (particularly in high tech and services), while the Midlands Region declined (but it also had the highest growth in services and the highest decline in traditional companies). As the base of service companies was so low the percentages are a bit misleading. The region needs to grow many more service companies.

Table 17. Rate of Change by Sector, from 1990-2002

	Border	Midlands	Western	BMW	National
Food & Drink	-2.3	-7.4	-2.0	-3.0	-6.7
High Tech	12.4	0	35.0	19.4	89.9
Traditional	-20.8	-21.7	-12.7	-18.5	-32.6
Services	120.5	360.0	140.1	139.8	161.9
Total	-1.6	-9.2	24.7	6.4	11.1

Source: Forfás, 2003

Table 18 shows that the S&E Region grew significantly quicker than the BMW Region particularly in the high tech and services sectors, where the S&E Region grew at over twice the rate of the BMW Region. Also the S&E Region's rate of change from the traditional sector to knowledge-based sectors was more rapid and it is better positioned to face future competition.

Table 18. Comparison of changes between the BMW Region and S&E Region, 1990-2002

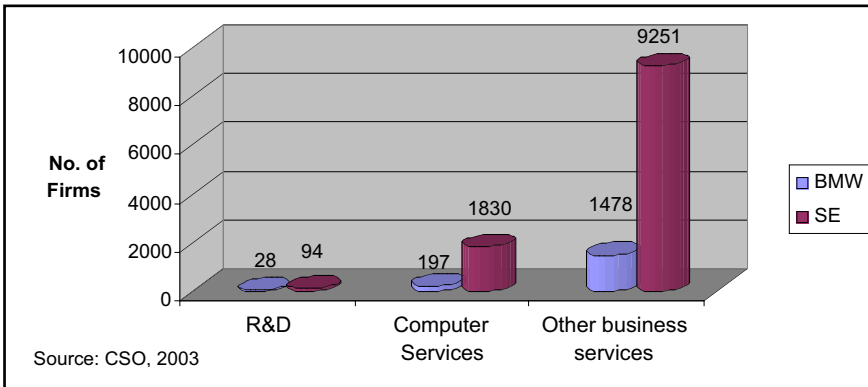
	Border	Midlands	Western	BMW	National
Food & Drink	-2.3	-7.4	-2.0	-3.0	-6.7
High Tech	12.4	0	35.0	19.4	89.9
Traditional	-20.8	-21.7	-12.7	-18.5	-32.6
Services	120.5	360.0	140.1	139.8	161.9
Total	-1.6	-9.2	24.7	6.4	11.1

Source: Forfás, 2003

3.4 Service Companies in the BMW Region

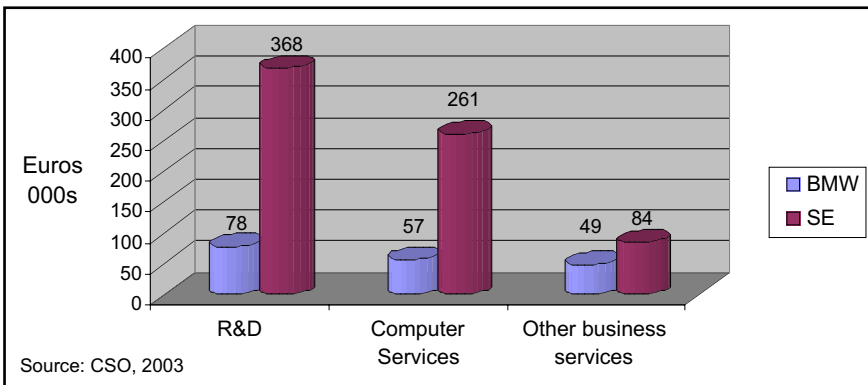
Figure 20 shows that the majority of service companies are in the S&E Region. The major influences on this situation are the location of the Financial Services Centre in Dublin and the fact that most service businesses' head offices and staff are located in Dublin, such as banks, insurance companies and professional services (e.g. auditors, large consultancies, engineering and architectural practices). Thus most senior management are located in Dublin.

Figure 20. Number of Service Firms in the BMW Region and S&E Region, 2000



Interestingly the one area with a more equitable share of companies is R&D. The BMW Region has 23% of R&D companies. But in all cases the total turnover in the BMW Region is very low in comparison to the S&E Region. The BMW Region has only 9.3% of the total number of employees in these three service sectors. Figure 21 indicates the wide difference in productivity between the BMW Region and the S&E Region. It shows gross output (in Euros) per employee or turnover per employee.

Figure 21. Turnover (excluding VAT) per Employee, 2000 (€'000s)



3.5 Good Examples and Opportunities in the BMW Region

While the above analysis is fairly negative, on the positive side there are some excellent companies and business opportunities in the BMW Region.

A Model for Natural Resource Production: Salmon Farming

The fishing industry is a very significant natural resource-based sector in the BMW Region. It has only developed since the middle of the last century and its main ports are Killybegs, Galway and Rossaveal. In 2001:

- Exports were €433.4 million of pelagic & white fish, farmed fish and inland species
- Landings were 65% wild, 34% farmed and 1% inland
- Employment was 4207 (in 2002)
- There are 132 small processing plants, many part-time with over 60% of exports from one company
- The industry also consists of a small number of sub-supply companies and a few high tech suppliers e.g. data recovery etc.

The continued success of the industry is dependent of producing a consistent, high quality food product. Which in turn is based on the provision of good technical services and responsive monitoring systems. The industry's technical resources (RTI) include the Marine Institute, which recently moved to Galway, the Martin Ryan Institute in NUIG, St Angela's College in Sligo and private test laboratories. The Marine RTI measure committed €4.5 million to desk studies, fellowships and strategic projects, and 72% of the Marine Institute's applied industry measure was allocated to the BMW Region (€241,720). Given EU restrictions on wild fishing, potential growth in the marine sector is limited. However, one sub-sector can and will grow is fish farming. There are also some opportunities in services and sub-supply, such as new high-tech instrumentation/equipment but this will probably remain a small niche market. Tourism and leisure are traditionally strong economic activities in the BMW Region but they must be continuously maintained or improved, e.g. rod fishing was an important attraction in the past but is currently in decline and could be important again, provided restocking, water level control and water treatment measures are undertaken.

The fish-farming sub-sector is primarily dependent on salmon farming. Current production is 61,000 tonnes, worth €115 million and employing 1,005 fulltime equivalents, 13% of whom are female. The main species are salmon, mussels and oysters, the competitors Scotland and Norway. Major issues are difficulties in obtaining licenses, cyclical prices affecting the European salmon market and the constant need to drive production costs down and improve quality. Aquaculture is a natural resource based industry that suits very peripheral areas in the west and northwest. As part of the evolution of the salmon-farming sector, the Irish Salmon Growers Association (ISGA) set up a marketing organisation some years ago. It now successfully markets most of the salmon output. BIM set the quality standards and Irish salmon is now the premium product in Europe. In Cill Chiaráin a cluster of service and supply enterprises has grown up – divers, fish feed, nets, transport, etc. The growers have come together and are expanding according to a common plan that will increase output from 3,000 tonnes p.a. to 9,000 and then to 21,000

tonnes while improving the environment. ISGA employed a professional company to determine how to achieve this using three bays and it now employs an experienced food brand manager to develop Irish salmon branded products for Europe. With Údarás na Gaeltachta's support the cluster will be expanded to include a new salmon and trout packing plant, a shellfish packing plant, net mending and washing facilities, marketing offices, etc. This model allows the producers to control and influence the whole supply chain.

This approach illustrates a viable model of co-operation and joint ownership for any natural resource based sub-sector, such as organic food, forestry etc.

'Best Practice' Production: Connaught Electronics Limited (CEL)

CEL was established in 1982 by Dr. Joe McBreen and Mr. Frank Clancy in Tuam, Co. Galway. It is Ireland's leading supplier of electronics to the luxury automotive sector. By 1991 it had extensive expertise in RF (radio frequency) technologies and by 2000 almost all its sales were to the Original Equipment Manufacturer (OEM) automotive sector. CEL had 200+ staff in 2003, having grown steady since 1993. CEL recently established another company "Celtrak" in Tuam, which now employs 15 staff specializing in systems for vehicle tracking and fleet management. CEL products are targeted at the luxury end of the market. Through a network of partners such as Donnelly, Magna, Dynex and Sumitomo, CEL supply to a range of OEM's including Volvo, Saab, Ford and Toyota. Sales remain healthy, but there are always major pressures on price.

The supplier network in the automotive industry operates on two distinct levels: Tier 1 operators supply products directly to vehicle OEMs. Tier 2 operations sell to an integrator which then sells to the OEMs. In 1999 CEL was a 100% Tier 2 supplier. Tier 1 is a more secure position, given the continuous reduction by car companies in their number of suppliers. CEL took a strategic decision to move from Tier 2 to Tier 1. There is stiff competition from multinationals, e.g. Bosch and Siemens. Through continuous R&D and close market contact, CEL offered a complete solution to OEMs and Tier 1 customers from market and design concept to volume manufacturing. CEL is currently a Tier 1 supplier to a number of manufactures: BMW, MG Rover, Land Rover, Mercedes and Thermo King. Currently it makes 60% of its sales in Tier 1. The five-year business plan is to reach 80% by 2007. To achieve this CEL continuously creates efficiencies and cost reductions in its business and operations. System automation and streamlining supported by IT help CEL achieve its goals and continue to move into new markets. It has completed installation of 1D and 2D bar-coding systems. For traceability and tracking, it uses wireless pocket PCs with built-in scanners feeding directly to computer databases. If a component fails it can trace where all components, from the same batch, ended up. CEL has received numerous awards and statements of recognition for its record of innovation. Key features of CEL's success are:

- *Willingness to continuously invest in the development of the company - €2 million per annum (used 2 BES and received EI investment)*
- *Commitment to R&D - process R&D of equal or greater importance to product development. Maximised patents value and continue to develop products in R&D. A successful company requires a stream of such innovations. CEL meets these requirements, having a record of 6 to 8 new products per annum*

- *Commitment to business efficiency - continue to upgrade their marketing, sales, operations and IT capabilities (particularly automation, control systems and administration, including supply chain management) and reduce operating costs*

This case study shows how an Irish SME successfully developed value-added products and services. Consequently, the company has continued to grow and prosper through both good and bad times over the last 21 years.

Tourism: Waterways – The Ballinamore Canal

Originally constructed in 1860, the Ballinamore canal had fallen into disuse by 1900s. In 1961, the Inland Waterways Association of Ireland (IWA) called for a survey of the canal but it took ten years before public support secured political interest and a further 20 years before work commenced. The canal took five years to reconstruct and it was finished in 1994. It connects the Shannon with Lough Erne and opens up very scenic waterways on both sides of the border. The work cost €30 million and was sponsored by the Irish and British Governments, the European Regional Development Fund, the International Fund for Ireland and the ESB.

Since 1994 over 3,500 boats have gone through the link each year. The number of boating tourists is about 15,000 per season (worth about €14.25 million and creating 300 sustainable jobs in the locality). Each boat tourist is worth 2.5 times more than other visitors to the economy. Approximately 70% of boats are from hire companies; 30% are privately owned. The Irish boat hire fleet is the third largest in Europe with over 700 boats. Unfortunately, the number of anglers has declined recently, but they are still a significant tourist category (the decline appears to be due to low catches, occasioned by ineffective stocking, according to local commentators). There have been significant private capital and structural investments in the area - estimated at over €45 million directly related to the waterway (primarily new cruisers, marinas, holiday homes, apartments and a 50 seat waterbus).

This development illustrates the continuing improvement required even in tourism and shows how permanent and temporary jobs can be created from tourism. It also emphasises the importance of investment in enabling infrastructure.

Dundalk Institute of Technology (DKIT) - Incubator Centre

The Incubator Centre was established 1989. It has 25 units (1,800 sq.m.) and was funded by EI, IFI, IDA, and INTERREG. It is targeted at high-tech new start-up companies and offers a three-year tenancy, interactions with DKIT and the use of its support facilities. It is currently 90% occupied and current expenditure is funded from rents. Performance to date is:

- *40 companies and 200 entrepreneurs were supported*
- *It has accommodated 5 academic spin-offs*
- *11 current occupants have 41 employees (average: 3.7 employees per company)*
- *156 SMEs were involved in support initiatives*
- *70 major R&D projects were undertaken with the companies*

- 22 companies (76% of the original number of companies) are still operating after five years and they employ 74 people
- DKIT takes no equity in the company or any interest in any royalties from Intellectual Property (IP)

The key driver was one person with a vision, supported actively by DKIT. The public agencies' support and funding was essential to provide finance and technical advice. The local authorities were very positive and the location near the college was crucial for interaction. There was significant academic scepticism and the current requirement in teaching load has prevented more interaction. The future will see a new Drogheda centre with seven units, an expansion of the Dundalk centre by 750 sq.m with a focus on niche markets in multi-media and more collaboration with Irish and foreign Third Level institutions. There are no inherent limitations on its development. One specific target is to set up a "Creative Digital Centre". The centre is now making a significant contribution to the development of Dundalk itself.

The main lessons arising from the Dundalk experiences are:

- *An incubator centre must have a champion*
- *Importance of contacts with local firms to prepare the company for leaving the centre*
- *Open plan design to facilitate co-operation*
- *Should be on campus to foster industry/Third Level interaction*
- *Close and easy interaction with DKIT staff*
- *Close monitoring of firms' progress*

This example shows the importance of developing incubator infrastructure in the Third Level sector to better link Third Level institutions with firms and to stimulate new enterprise from the Third Level staff and graduates as well. EI is funding this investment and it has adopted a similar approach in developing incubator centres in communities.

Cluster and Network Development

Two areas were explored as potential sub-sectors for cluster development, both in the Galway area: medical devices and ICT (information and communications technologies). In addition, a training network, part of the Skillnets Network Training Programme, was reviewed.

The **medical devices sub-sector** exports goods in excess of €3 billion per annum. It directly employed over 22,000 people by the end of 2003. It creates total direct and indirect employment amounting to approximately 36,000 jobs and employs a highly skilled workforce. Over 40% of employees in the medical device and diagnostic sector have Third Level education. It includes 13 of the world's top 25 medical devices and diagnostics companies. Although primarily located in Galway (10 companies) and Mayo (4), the sector has companies in Sligo (2), Donegal (2), Roscommon (1), Offaly (2), Westmeath (2) and Louth (2) (see map in Chapter 2). There is currently little interaction between them and few opportunities for the staff of the companies to meet except through their IBEC committee. The other elements of a cluster are not in place such as specialized services and intellectual support or regional support. But it is a latent cluster and it does present an opportunity to develop an unique Irish cluster.

The **ICT sector** in the BMW Region has long established centres of excellence (e.g. Xerox, Ericsson, HP, Nortel) which provide world-class role models and experienced resources (see map in Chapter 2). A recent new wave of successes and award winners have arrived in the region (e.g. MBNA, AmBeo). Evidence of benefits from the local professional association (IT Association Galway- I.T.A.G.), such as industry-Third Level sector and customer-vendor co-operation, is emerging. But “critical mass” in the ICT community has not yet been achieved outside Galway. The infrastructure is still in a “catch-up” mode, e.g. broadband, transport, power in the N.W. Apparent remoteness and lower profile are not helping in attracting either new companies or new investment to the BMW Region. A legacy of non-ICT awareness and parochial perspectives are leading to missed opportunities. However there are opportunities:

- *ICT work is increasingly location-independent (for supply and demand)*
- *Experience of developing and supporting multilingual, multi-channel markets in Europe can be applied worldwide*
- *More ICT people could be attracted from Dublin to Galway.*

The ICT sector has some of the initial attributes of a cluster, but it has a long way to go and many countries are trying to establish similar clusters. However any modern private industrial sector (manufacturing and services) should have more ICT employment than the BMW Region currently has. Future growth stimulation and expansion could lead to some cluster development.

The Skillnets **Training Network Programme** is a series of enterprise-led networks with the objective of providing training for people in work at all levels. It is a competitive scheme part-funded by the State, but run by an independent specialist agency. It is a temporary programme. Skillnets Limited now has detailed knowledge and experience in promoting and assisting industry networks. One example is the North Mayo Skillnet centred on Ballina. It has members varying from MNEs with 150 staff to SMEs, and small firms with less than 10 employees. Over the first three years of its existence, it has developed 88 courses, trained 306 people, and provided 995 training days. It is the only mechanism for developing a highly skilled workforce in a largely rural area. This network is now investing cash in the network so that it will continue after the support ceases. Networks with agreed objectives and committed partners could be very powerful ways of overcoming size disadvantages for smaller firms.

3.6 Conclusions

The key conclusions in this chapter are:

- 1) The volume of new start-up businesses in the BMW Region is only half that in the S&E Region. Therefore the BMW Region, in general, is less entrepreneurial than the S&E Region. This situation needs to be addressed to ensure long-term development.
- 2) Across a range of indicators, companies in the BMW Region do not perform as well as companies in the S&E Region. Part of the discrepancy in efficiency is due to differences in their industrial structure, as influenced by the following factors:

- *There are slightly more manufacturing companies in the BMW Region*
 - *The BMW Region has more traditional and fewer high-tech firms than the S&E Region*
 - *It has proportionally fewer MNEs*
 - *It also has smaller companies generally*
 - *Operational capability needs improvement to upgrade performance*
- 3) The BMW Region has few internationally traded service companies, and the majority of service companies are in the S&E Region, particularly in the Financial Services Centre (FSC). Companies in the FSC are more productive than other service companies and there is no equivalent to the FSC outside Dublin. Service companies are a critical part of future development and the BMW Regional Assembly must identify processes for stimulating more of them to set up in the region.
- 4) Despite the above conclusions there are many examples of high quality entrepreneurship and successful indigenous companies and MNEs in the BMW Region. There are also many opportunities for further development in the future including medical devices and biotechnology.